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ÄGYPTEN UND ALTES TESTAMENT

Band 13

**THE GENESIS OF THE ALPHABET
AND ITS DEVELOPMENT
IN THE SECOND MILLENNIUM B.C.**

by
Benjamin Sass

In Kommission bei
OTTO HARRASSOWITZ · WIESBADEN

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Studien zu Geschichte, Kultur und Religion Ägyptens
und des Alten Testaments

herausgegeben von
Manfred Görg

Band 13

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PREFACE

DURING a survey of the Serabit el-Khadem plateau in Sinai in February 1977 I discovered two Proto-Sinaitic inscriptions. While assembling background material for the publication of these inscriptions it came to my mind that a comprehensive new study of the alphabet in the second millennium B.C. would not be out of place. Consequently I first wrote at the Hebrew University an M.A. thesis entitled "The Proto-Sinaitic Inscriptions", submitted in 1982 to Professors Trude Dothan and Joseph Naveh. Subsequently Professor Anson F. Rainey of Tel Aviv University supervised the preparation of a Ph.D. thesis, submitted in 1985, which after revision and updating now forms this book. Professors Dothan and Naveh and Professor Rainey were always ready to share their extensive knowledge with me, both during the writing of the theses and during the preparation of the book.

In the winter of 1985, when the Ph.D. thesis had just been submitted, I met in Jerusalem with Gordon Hamilton of Harvard University, who was preparing a thesis under Professor Cross on exactly the same subject as mine. After overcoming the initial shock (we knew nothing about one another until then) we found much mutual interest. Dr. Hamilton was kind enough to send me a copy of his dissertation which, as I expected, is a thorough and far-reaching study. In spite of the inevitable overlap, there is no little difference in the approach and conclusions. And if the reader misses a critique of Hamilton's work in the following chapters, it is because I made it a point not to refer to his work as long as it is unpublished.

My warm thanks go to the following individuals and institutions for supplying information and photographs: the Israel Department of Antiquities and Museums; A. Spaer, Jerusalem; Z. Radovan, Jerusalem; the Institute of Archaeology, Tel Aviv University and especially Professors I. Beit-Arieh, M. Kochavi and D. Ussishkin; the Egyptian Museum, Cairo; the Departments of Egyptian and Western Asiatic Antiquities of the British Museum; the Institute of Archaeology, University of London; the Petrie Museum, University College; the Palestine Exploration Fund; the Egypt Exploration Society; the Ashmolean Museum; the Musée du Louvre; Mr. J. Mariaud de Serres, Paris; the Archaeological Museum, Iraklion. Detailed acknowledgements may be found in the appropriate places.

Special thanks are due to Mrs. Ruth Hestrin, until 1983 Curator of the Israelite and Persian Periods at the Israel Museum, who placed at my disposal the Proto-Canaanite inscriptions displayed in the Pavilion of Hebrew Script and Inscriptions, and always had words of advice and encouragement for me. The Memorial Foundation for Jewish Culture, New York, gave me a grant in 1984 that greatly facilitated the preparation of the Ph.D. thesis. The Dorot Foundation, New York, enabled me to travel to Cairo twice in 1981, and in 1985 awarded me a generous grant that covered the cost of the translation of the Hebrew text and the preparation of the manuscript for publication.

I am most grateful to the Israel Exploration Society and its Honorary Secretary, Mr. J. Aviram, and to Janet Amitai for their indispensable assistance in preparing this book; to Lindsey Taylor, who with great skill translated and typed the text; to Prof. B. Mazar for his advice and help; to Prof.

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Dr.Dr. M. Görg of Munich University, for his kind offer to publish the book in this series, of which he is the editor; and to my friends Tallay Ornan and Israel Finkelstein, who helped me more than I can tell.

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CHAPTER 1: INTRODUCTION

THE invention of the alphabetic script in the first half of the second millennium B.C. is one of the most important cultural achievements made in the Old World, second only to the invention of writing itself by the Sumerians and Egyptians about a millennium and a half earlier. It was the invention of the alphabet that brought literacy potentially within the reach of every man, even if this potential was not realized until much later. The Greek and Latin scripts developed from the Phoenician alphabet, which in turn originated in the Proto-Sinaitic/Proto-Canaanite alphabet. The main object of this book is to arrive at a better understanding of the palaeographical, archaeological and chronological issues associated with the Proto-Sinaitic and Proto-Canaanite inscriptions.

The material studied consists of about thirty Proto-Sinaitic inscriptions, found near the Pharaonic turquoise mines of south-western Sinai and about thirty Proto-Canaanite and Early Phoenician inscriptions, mostly found in Palestine and Phoenicia.

The importance of careful collation of the original for the study of an inscription cannot be overemphasized. Apart from all those in Israel or still *in situ* in Sinai, between 1979 and 1982 I collated several of the inscriptions now in Europe. During two visits to Egypt in February and May 1981, I studied the Proto-Sinaitic inscriptions exhibited in the Cairo Museum with the assistance of the former director of the museum, Muhammed Ahmed Mohsen, and his staff. Unfortunately I was not able to collate those Proto-Sinaitic texts which are stored in the Museum basement. Altogether I examined about two thirds of the Proto-Sinaitic inscriptions, and over half the Proto-Canaanite texts; I had to resort to photographs of the other inscriptions.

As expected, study of the inscriptions revealed that many results of past research remain valid. It goes without saying that the conclusions of others with which I agree are credited to their authors; if such credit has been omitted, it is merely an oversight.

A complete decipherment of the Proto-Sinaitic and early Proto-Canaanite inscriptions is still unachievable because of the paucity of texts and their fragmentary nature. It should thus not be surprising that this book's contribution to the decipherment is largely indirect: a critique of Albright's decipherment (section 3.3), new facsimiles and transliterations of the inscriptions, and suggestions dealing with the contents of the inscriptions in sections 3.2.1 and 4.2.1.

The role of Frank Moore Cross in the study of the Proto-Canaanite inscriptions and alphabetic origins is prominent. It is his far-reaching work, especially his pioneering papers of 1954 and 1967, that put Proto-Canaanite palaeography on firm foundations. I have referred and reacted to his researches more than to those of any other scholar. Disagreement over both details and issues of more general nature should not obscure the debt this book owes to Cross' work.

The Proto-Canaanite inscriptions have been arranged in a relative chronological sequence following a palaeographic analysis of all the material. The archaeological context and the inscribed objects' typology have likewise been discussed in order to provide as much of an absolute chronological framework as possible. In most, though not all cases, the results of this approach match the relative chronological conclusions reached through palaeographic analysis.

I thought it best to deal with the development of the Proto-Canaanite letters and with their relative and absolute chronology consecutively. For this reason, the discussion of these issues (chapters 5 and 6) is presented separately from the catalogue, description and archaeological discussion, which appear in chapters 3 and 4. Thus, for instance, in chapters 3 and 4 disputed letter forms are discussed and, if possible, clarified, but all the relevant parallels are treated in chapter 5. The proposed datings are briefly mentioned in chapters 3 and 4 and are fully discussed in chapter 6. I am not unaware of the disadvantage of this arrangement – the discussion of a single text in three or four chapters – but the advantages of a treatment of the palaeography and chronology of all the inscriptions together seem to me to outweigh this.

The Proto-Canaanite inscriptions are presented from the earliest to the latest on the basis of chronological data summarized in sections 6.2 and 6.3. The Proto-Sinaitic inscriptions are placed at the beginning of the sequence for reasons explained in section 6.1. They are discussed in the order of their discovery and numbering, since no line of internal development can be discerned. In most cases there seemed to be no need for cross-references between chapters, since these are self-evident.

Apart from a summary of the study, chapter 7 deals with subjects not discussed in the main text, such as the adoption of the alphabet by the Greeks.

With a few exceptions, papers and books that came to my attention after 31 December 1987 were not dealt with.

Most of the chapters (3–6) have also been condensed in the form of lists and tables, in order to facilitate the reader's orientation and to enable a quick grasp of the main elements of the data and their interpretation. All the inscriptions are illustrated in drawings and photographs; many of the drawings are new, or were copied from existing drawings and modified in accordance with the results of the collation of the inscriptions. Published drawings which I consider to be accurate were not redrawn.

The scripts of Tell Deir ^cAlla, Balu^c, the pseudo-hieroglyphic texts from Byblos and other undeciphered second-millennium scripts, most of which are not alphabetic, were excluded. Even so, the subject of the pseudo-hieroglyphic inscriptions did arise indirectly, and some evidence has been presented which suggests that they should be dated to the second half of the second millennium (see notes 48 and 58). The Ugaritic cuneiform alphabet has been touched upon almost only in connection with its implications for the Proto-Canaanite script.

CHAPTER 2: HISTORY OF RESEARCH

UNTIL the beginning of this century, the Mesha stele was the earliest known alphabetic inscription, and explanations of the origin of the alphabet were no more than theoretical.¹ A new chapter in the history of research into the development of the alphabet opened in the winter of 1904–1905, when Petrie discovered in Serabit el-Khadem the inscriptions later known by the name of "Proto-Sinaitic". Petrie (1906, 130–131) guessed that the inscriptions were alphabetic, but did not then regard the script as the direct ancestor of the Phoenician alphabet.² Several of the inscriptions were shown in London in an exhibition of the finds from Sinai, and were mentioned in the exhibition catalogue (Petrie and Currelly 1905) and a year later, in the expedition's report (Petrie 1906). Almost immediately considerable interest was generated, as well as attempts at decipherment, some in the direction of Phoenician (first of all, Macalister in 1906), and some in other, rather exotic directions.

Gardiner's work (1916), based on the brilliant decipherment of the word *b^clt*, was a huge step forward for research into the Proto-Sinaitic inscriptions and the origin of the alphabet, and still remains the most important study ever done on these subjects. Gardiner concluded that the Sinai inscriptions were alphabetic and that the letters came from Egyptian hieroglyphs which were borrowed on an acrophonic basis, and this is still the foundation of our knowledge of the genesis of the alphabet. The date proposed for the inscriptions – the nineteenth–eighteenth centuries B.C. – was accepted in the 1920s and 1930s, but today the Proto-Sinaitic inscriptions are assigned a date in the fifteenth century B.C. In section 6.1 I have attempted to show that Gardiner's dating is not entirely impossible.

Sethe (1916; 1917) arrived independently at conclusions concerning the origin of the alphabet which were not very distant from those of Gardiner.

If the publication of the Proto-Sinaitic inscriptions in 1905–6 led to a trickle of reactions, Gardiner's article caused a veritable flood. Dozens, if not hundreds of books and articles were written in the 1920s and 1930s about the origin of the alphabet. The enormous interest in the inscriptions encouraged other expeditions to travel out to Sinai; thus a Harvard University expedition reached Serabit el-Khadem in 1927, on its way back from St. Catherine's monastery, and brought the inscriptions left by Petrie to the Cairo Museum (except for one which was never rediscovered). The expedition also discovered three new texts (Lake, Blake and Butin 1928). A Finnish expedition to the monastery, including the scholars Hjelt, Lindblom and Saaristo, also passed

1. On the history of research into the origin of the alphabet prior to the discovery of the Proto-Sinaitic inscriptions, see Gardiner 1916, 1–12.

2. Later (e.g. 1931, 195–196), Petrie disassociated himself from the idea that the inscriptions were alphabetic: "The later discovery of highly developed Phoenician writing at Byblos of 1300 B.C. [Ahiram's sarcophagus etc., which actually dates from the tenth century B.C.], finally puts out of court that the Sinai writing was a precursor of the Phoenician. It is merely a local barbarism".

fragment of a previously known inscription (Leibovitch 1930, 11, 12; Lindblom 1931). A joint expedition from Harvard University and the Catholic University of America travelled to Serabit el-Khadem in 1930, 1931 and 1935 and discovered about ten inscriptions (Lake, Barrois, New and Butin 1932; Starr and Butin 1936).

Butin (1932; 1936) tried, with no great success, to decipher the inscriptions, basing his work principally on Hebrew, but his main contribution lies in his precise copying of many of the signs and in his systematic presentation of the material. Leibovitch collected the data in three publications (1930, 1934, and 1940), and developed the theory that the language of the inscriptions was Meroitic. His palaeographic tables (mainly 1934), although lacking in accuracy, are for the most part still of value today as a source for the comparison of the signs' forms. Towards the end of his life, Leibovitch abandoned the Meroitic theory (1961, 461, note 4).

The work of Herbert Grimme (1923; 1929; 1937 and other publications) is the most eccentric of all. This veteran Semitist caught the Proto-Sinaitic fever towards the end of his life. He identified all sorts of things – scratches on the rock, differences in the colour of the stone and shadows seen in the photographs of the inscriptions – as letters and in his system of decipherment dragged in Moses, Hatshepsut, Yahweh and Sinai (see fig. 28). Albright (1937–8) wrote in a review of Grimme 1937: "Grimme has been particularly active; the present book is his fourth on the subject since 1923, and will doubtless be his last, since he was seventy three when it appeared." Albright's prediction was not realized – see Grimme 1942, though he died in the same year.

Space is all too short to list all the books and articles, both general and specific, which were written before the Second World War about the Proto-Sinaitic inscriptions. Today, most of them are no more than curiosities. Among those which have retained their value to a greater or lesser extent Eisler 1919, Ullman 1927 and 1932 and Sprengling 1931 may be mentioned. In 1935 Albright published an article in which he emphasized for the first time the importance of comparing the Proto-Sinaitic inscriptions with contemporary West Semitic material containing 27–29 consonants (a preliminary version appeared in Albright 1926, 81–84, before the discovery of the Ugarit texts). He identified some letters correctly, but erred in the reading of others. The term "Proto-Sinaitic" itself appeared first in Albright's writings (1926, 75).

In the course of the 1920s and 1930s, Phoenician inscriptions predating the Mesha stele were discovered, principally at Byblos. The main obstacle to understanding the development of the early Phoenician script lay in the erroneous dating of Ahiiram's text to the thirteenth century B.C., and of the Shipitba^cal and ^cAbdo inscriptions to the seventeenth–sixteenth centuries (Dunand 1945), in spite of the similarity of the letters to the inscriptions of Abiba^cal and Eliba^cal written on the tenth-century statues of pharaohs Sheshonk and Osorkon. This situation also created difficulties for the correct placing of the Proto-Canaanite inscriptions which had meanwhile been discovered. The only scholars who from the very beginning proposed a low dating for Ahiiram's text were Spiegelberg (1926) and Lidzbarski (1927). In the course of time other scholars came over to their opinion, until at the end of the 1940s (Mazar 1946; De Vaux 1946; Albright 1947) the chronology which is more or less accepted today was adopted (Cross 1967, 11*).

The minute **Gezer sherd** discovered in 1929, which showed three letters that resemble the Proto-Sinaitic script, aroused interest in inverse proportion to its size. This provided the first real evidence of a link between the Proto-Sinaitic and Phoenician inscriptions – a link whose existence had been known in theory since the beginning of the century. Other inscriptions filled in the gap in the course of the 1930s: the **Beth-Shemesh ostrakon** (discovered in 1930), **Lachish ewer** (1934) and **Lachish bowl** (1935), whose script stands between the Proto-Sinaitic and early Phoenician inscriptions, and the **Shechem plaque** (1934) and **Lachish dagger** (1936) with problematic but definitely earlier texts. In the second half of the 1930s the first syntheses appeared and the studies of Albright (1936), Maisler (1938) and Yeivin (1939, mainly 89–115) laid the foundations of Proto-Canaanite palaeographic research.

The most important discovery in the field of alphabetic texts of the second millennium is obviously the Ugarit documents in alphabetic cuneiform, the first of which were uncovered in 1929. Dhorme, Virolleaud and Bauer deciphered the texts, which dealt with all aspects of life, almost immediately. Of most interest to us is the alphabet itself, which has 30 letters; 27 of these are original consonants, and there are two vocalized *aleps*, 'i, 'u, and an additional *samek*. This alphabet seems to have been invented in the fourteenth century B.C. under Proto-Canaanite influence, but cuneiform shapes were adapted to it to suit the requirements of the Ugarit scribes. The similarity of the shape of some of the letters to their Proto-Canaanite prototypes can hardly be considered a coincidence, while other letters seem to have been invented independently (see section 7.2.1).

In 1948, after a visit to Sinai and Egypt, Albright published his second work on the Proto-Sinaitic inscriptions. He corrected some errors in his 1935 article, and, after coming to the conclusion that the Proto-Sinaitic inscriptions were written not at about 1800 B.C., but three hundred years later, presented a decipherment of most of the texts based on comparisons with Ugarit and the el-Amarna letters. His dating was accepted by all scholars with the exception of Gardiner (see section 6.1). In 1966 Albright published a revised and expanded version of his 1948 study. He considered that there were 27 signs for consonants, as in Ugaritic (in other words, that a single sign designated both *š* and *ṣ*, while two signs represented *ṣ*, *š* and *ṭ*) and by 1966 he had identified 23 of them, though some of these were tentative. He proposed a linguistic-historical context for the inscriptions, and, using his method, deciphered most of the texts as dedicatory, invocational, supplicatory and funerary inscriptions. The fact that Albright's readings fit in with his proposed linguistic framework does not in itself confirm his decipherment, not least because much of the word division is conjectural, and the texts have been considerably reconstructed (see section 3.3).

Five more Proto-Sinaitic inscriptions have been discovered since the 1930s. Georg Gerster, a Swiss photographer, discovered two inscriptions at the end of the 1950s in Bir en-Nasb, not far from Serabit el-Khadem. One of these, much damaged, had already been noticed by Petrie, though he did not identify it correctly. In 1978 Itzhak Beit-Arieh discovered a text consisting of two letters in mine L at Serabit el-Khadem, and a year earlier I found two inscriptions incised on the wall of another mine.

The discovery of the el-Khadr arrowheads and their publication by Milik and Cross (1954) inaugurated the present stage of research into the early history of the alphabet. The script on the arrowheads is transitional between Proto-Canaanite and early Phoenician letters, but is closer to the latter. Cross (1954) took advantage of this discovery to classify the Proto-Canaanite inscriptions according to a system based for the first time on exact palaeographic analysis, and at long last to decipher the text of the Lachish ewer. This research was later updated (1967 etc.).

The precise and perspicuous works of A.R. Millard display the golden mean between prudence and boldness. If asked to single out a recent study about alphabetic origins that epitomizes the state of the art, my choice would definitely fall on Millard's article in *Ugarit-Forschungen* 1979.

After the Second World War various publications dealing with new discoveries in the cuneiform alphabet appeared. The first of these was Herdner's article (1948), in which she suggested that previously known problematic texts from Ugarit and Palestine which run from right to left are a southern variant of the Ugaritic alphabet. Virolleaud later (1960) showed that this is actually a reduced alphabet with perhaps 22 consonants, dating from the thirteenth-twelfth centuries B.C., resembling the process which took place in the Proto-Canaanite inscriptions. Herdner knew of two documents from Ugarit, a votive pottery axe from Beth-Shemesh and a knife from Nahal Tavor. In the meantime, additional documents were found at Ugarit, Taanach, Kamid el-Loz, Zarephath, Kadesh on the Orontes and Hala Sultan Tekke in Cyprus (see section 7.2.2). Several scholars attempted to sketch the lines of development and the overall picture (Weippert 1966, 1967; Dietrich, Loretz and Sanmartín 1974; Bordreuil 1979; 1983) but the length and number of the texts do not yet allow any final conclusions to be drawn.

In 1950 Gordon published a tablet from Ugarit with a complete list of the alphabet. A fragment of a similar tablet had already been discovered at Ugarit but was not correctly identified. Other Ugaritic abecedaries have since been found, and about ten of them are now known. It emerges that the alphabetical order is the same as that of the Hebrew alphabet, with the five extra consonants scattered between the other letters, and the two vocalized *aleps* and the second *samek* at the end. Gordon concluded from this – and most scholars accept his suggestion – that the Ugaritic scribes adopted the Proto-Canaanite alphabet of 27 consonants in its original order, and added on the three special letters. If the five extra consonants had been an addition, they too would have appeared at the end of the list. In the course of time, these five consonants were dropped from the Ugaritic and Proto-Canaanite alphabets.

In 1955 a fragmentary abecedarium which had monosyllabic Akkadian signs alongside the alphabetic letters was discovered in Ugarit. Cross and Lambdin (1960) demonstrated that the Akkadian signs probably represented the first syllable of the name of each letter, e.g. *'a(lp)*, *be(t)*, *ga(ml)* and so on. The text has its share of problems (for instance with *het* and *tet*) and is not complete, but this suggestion seems highly probable.

Among the Proto-Canaanite and Early Phoenician documents found during the last two decades, it is worth mentioning the ^cIzbet Sartah ostrakon (discovered in 1976; published by Kochavi in 1977), whose fifth line is

an abecedary. The ostrakon was written by an unskilled person, but in spite of this the alphabetic order is almost correct, with only minor mistakes (though the reversal of *pe* and ^c*ayin* may well be correct: cf. some of the biblical acrostics and the ^c*Ajrud* abecedaries). As would be expected of an approximately twelfth century B.C. inscription, the alphabet has only 22 letters. An early Phoenician inscription appears on a "royal" **arrowhead of the king of Amurru**, which was acquired from a Lebanese antiquities dealer. Following a long series of Babylonian arrowheads bearing the names of kings from the end of the eleventh to the beginning of the tenth century, we now have the first example of a Phoenician royal arrowhead from the same period, although the significance of "Amurru" and "king of Amurru" at the time are not clear.

Should they ever come to light, Proto-Canaanite inscriptions from the beginning of the Late Bronze Age and lists of the long Proto-Canaanite and the reduced cuneiform alphabets would undoubtedly clarify many intractable problems.

CHAPTER 3: THE PROTO-SINAITIC INSCRIPTIONS

(See table 1)

3.1 General notes

3.1.1 Introduction

THE number of Proto-Sinaitic inscriptions known depends on how one defines separate inscriptions. There exist three cases in which two or three texts are incised on the same object,³ and in other cases the identification of separate inscriptions is doubtful. I have listed 31 inscriptions as Proto-Sinaitic (section 3.2.1), while 17 others, excluded as being damaged, doubtful, or not Proto-Sinaitic (but at some time in the past considered to be so), are presented in section 3.2.2. The assignation of any particular object to one of these two groups is explained in the discussion of each inscription. In some cases this was decided somewhat arbitrarily,⁴ but in any event the system of numbering enables us to move an inscription from one group to the other if necessary. The number of letters varies between two and thirty four per inscription, with a total of approximately four hundred (see table 4).

3.1.2 Serial numbers

These were usually assigned according to the order of discovery of the inscriptions. Gardiner and Peet published the eleven Proto-Sinaitic inscriptions discovered by Palmer and Petrie at the end of the plates volume of the Egyptian inscriptions from Sinai (*Sinai* I, 1917, pls. LXXXII-LXXXIII, and Gardiner 1916). Their serial numbers run from 345 to 355, continuing the numbering of the Egyptian inscriptions in the same volume. Only one of Grimme's additional inscriptions – 347a – was accepted. The Harvard expedition, which in 1927 brought to Cairo most of the inscriptions left at Serabit el-Khadem by Petrie, discovered three new inscriptions, which were numbered from 356 to 358. This was followed by the Finnish expedition in 1928 (359), and by the joint expedition in 1930 (360–373) and 1935 (374–375), which discovered ten definite texts besides a number of problematic or doubtful ones.

Since more Egyptian inscriptions from Sinai have been published, the numbers up to 400 have been reserved for new Proto-Sinaitic texts (*Sinai* II, 202). Although Leibovitch, Grimme and others renumbered the inscriptions, most scholars have preferred to keep to the original system, as indeed have I. The five inscriptions discovered since 1935 have been given the numbers 376–380 (Sass 1982, 360).

3. The sphinx 345 bears Proto-Sinaitic inscriptions on both sides, though they are reckoned as a single text here, as is the writing on the block statuette 346, which bears two inscriptions – or even three, if the text on the front is divided in two. The little stone slab, 365, is inscribed on both sides, and has been counted as two inscriptions here. Busts 347 and 347a have also been reckoned as two separate inscriptions.

4. For instance in the case of inscription 355.

Eight items found by the joint expedition (366, 368–373) have been included in the group of doubtful or non-Proto-Sinaitic inscriptions, and I have numbered eight other previously unnumbered "inscriptions" according to the established system.

3.1.3 Distribution

One inscription (348) was discovered in Wadi Maghara, two more (376, 377; and see 46A) on a ridge near Bir en-Naşb, and the rest at Serabit el-Khadem. Of these, four were found in the Hathor temple, twenty in Mines L and M and in tumuli in their vicinity, one in Mine N, two at the entrance to a mine at the south-east of the Serabit plateau, and three in the tumuli fields at the west of the plateau (including two inscriptions on the same stone – 365). The doubtful inscriptions were all found at Serabit el-Khadem, except for one or two – 46A is at Bir en-Naşb and the provenance of 375d is unknown.

3.1.4 Museums and inscriptions *in situ* (see table 1 and museums index)

Among the finds taken from Sinai to England by Petrie were the four statuettes with Proto-Sinaitic inscriptions. After the London exhibition (Petrie and Currelly 1905, 18) the sphinx 345 was handed over to the British Museum, block statuette 346 was taken to the Cairo Museum, and the busts 347 and 347a were given to the Musées Royaux d'Art et d'Histoire in Brussels. The Harvard, Finnish and joint expeditions brought most of the inscriptions left by Petrie at Serabit el-Khadem back to the Cairo Museum, as well as the inscriptions they discovered themselves,⁵ with three exceptions. Of these three, 355 was lost at the site, while texts 357 and 358 remain *in situ* (see also inscriptions 373b, 375a–d). Of the five inscriptions discovered since 1935 (376–380), four are *in situ*, two at Serabit el-Khadem and two at Bir en-Naşb, and one (378) is kept at the Israel Department of Antiquities and Museums. The inscription from Wadi Maghara (348) has not been seen since it was copied by Palmer.

5. Inscriptions 346, 349–354, 356, 359 and 365 are exhibited in the Cairo Museum. According to the *Journal d'Entrée* (JE), inscriptions 360–362, 364, 366–369, 373 and 373a are in the basement storerooms, while 363, 370–372b and 373b were transferred (in 1956?) to the Desert Institute in Matariya, on the outskirts of Cairo (see also Martin 1961, 46, note 4). During my visits to Cairo in February and May 1981, Muhammed Ahmed Mohsen, then director of the museum, told me that this latter group of inscriptions was still at the Desert Institute (Mr. Mohsen mentioned that he had checked them in the early 1970s, and that they were stored in wooden crates). On the other hand, the retired director of the institute, Mr. Abd esh-Shatta, claimed that the antiquities at the institute had all been returned to the museum while he was in office, in the late 1960s. Employees at the Desert Institute told me in February 1981 that no antiquities at all were kept there. My efforts to examine at least those inscriptions which the museum did not dispute were in storage were also unsuccessful. I was not allowed into the basement, and searches conducted by the museum staff (which lasted an entire day, according to Dr. Muhammed Saleh, then deputy director) did not reveal anything, either in the place recorded in the JE or elsewhere. This is most unfortunate, since inscriptions 361, 363, 367 and 375 pose problems which only collation of the originals could perhaps solve.

3.1.5 Nature of the inscriptions

All the inscriptions are incised on local sandstone. Those at Bir en-Nasb and perhaps that at Wadi Maghara are inscribed on the mountain face (including No. 377 at Bir en-Nasb which is within a steliform panel). Of the Serabit el-Khadem inscriptions, five are carved on mine walls (two inside and three outside), and the others are engraved on detached stones. Most of the latter were almost certainly originally rock inscriptions which split off from the mountain when the mine entrance collapsed (Petrie 1906, 130). Four of the originally movable inscriptions – those from the temple – are engraved on statuettes, while of the others, one or two are on stelae, ten are within steliform panels,⁶ and seven or eight are on stone slabs (including the two inscriptions on Sinai 365), several of which are undoubtedly fragments of stelae or panels. The following table summarizes the nature and distribution of the Serabit inscriptions:

written on location	statue	stele or steliform panel on plaque	plaque	steliform rock panel	rock	?
temple	345 346 347 347A					
mine wall				349, 350 351, 352 353, 354 355, 356	357, 358 361, 379 380	359?
mine dump		375, 374?– 378?---	364 --374? --378?			359?
tumulus		360, 367	362, 363 365			
path				377	376	
?				348?-----	--348?	

6. Most of these are from the entrance of Mine L, and were originally rock inscriptions. Sinai 367 is the only text in a steliform panel which was not found near a mine.

There is some reason to believe that the inscriptions on the statues from the temple are votive in character, and that the inscriptions from the tumuli are funerary (Albright 1948, 11–12). But similar formulae can be found in inscriptions of various kinds – as in the rock inscriptions 351, 353 and 361 and on stele 360, discovered in a tumulus. Several inscriptions include other elements: 345 has an Egyptian text, there are some unclear engravings on 350, and 351 shows the god Ptah inside a shrine. Inscription 355 may also have some non-Proto-Sinaitic elements. See also Sinai 375a in section 3.2.2.

3.1.6. Collation

Scholarly disagreement concerning the Proto-Sinaitic inscriptions begins not with the identification of the phonetic values of the letters, but with the letter shapes. These are quite clear in the inscriptions with flat, smooth surfaces; in these cases the signs are plainly visible in photographs, and the copies made by different persons hardly differ from each other (for example, inscriptions 346, 347, 362 and 364). However, if the surface of the stone is not flat and smooth, each letter of the original inscription has to be examined with the aid of side lighting from different directions (particularly with inscriptions 349–354, 356–358, 361, 363 and 367). This does not mean that examination of the original inscription will solve all the problems in reading it; but, unlike the case of ink or painted inscriptions, photographs of rock inscriptions are never preferable to, and indeed are usually much less informative than, the original. To put it another way, disagreement over a particular letter shape can only be resolved – if at all – by using the original. Even squeezes and casts do not approach the original, since they do not reflect the differences in colour which sometimes exist between a man-made and a natural scratch. Occasionally a photograph will show an apparently clear letter where in the original something different is visible or nothing at all appears.⁷ Scholars who have studied the original inscriptions have warned against relying on photographs (for instance, Leibovitch 1934, 61–62; Butin 1936, 31).

The following description of the inscriptions is based on collation of most of the originals – 19 out of 31. For the remaining twelve I examined photographs, and in the case of Sinai 348 a squeeze, since the inscription itself has never been photographed. It should be noted that two of these twelve inscriptions – 348 and 355 – have been lost (see also the end of note 5). I was granted access to the registration entries for all the Proto-Sinaitic inscriptions in the *Journal d'Entrée* of the Cairo Museum (henceforth JE), and several details unpublished elsewhere were discovered in this way.

3.1.7 Literature

The principal publications, each of which deals with most of the inscriptions, are Gardiner 1916, Butin 1928, 1932, 1936, Leibovitch 1930, 1934, 1940 and Albright 1948 and 1966. In the discussion of each separate inscription which follows, no reference has been made to these works, or to other publications which discuss the inscriptions in order, such as Grimme 1923, 1929, 1937, Sprengling 1931, Cowley 1916, 1929 and so on (see also chapter 2).

7. For instance, the lowest sign in the vertical column of inscription 357.

3.1.8 Palaeography and content of the texts

The most salient feature of Proto-Sinaitic Palaeography is the clear differentiation between the letters. It is very rare to find different letters which have a similar shape. Most of the palaeographic discussions are included in chapter 5. The content of the inscriptions, and in particular an evaluation of Albright's decipherment, is treated in the discussion of each inscription. The linguistic structure, again principally in the form of a critique of Albright's theories, is dealt with in section 3.3.

3.2 Catalogue and discussion

3.2.1 Undisputed inscriptions

Inscriptions 345–355 (except for 348) were discovered by Petrie in the winter of 1904–5 at Serabit el-Khadem. Inscription 348 was found by A. H. Palmer in the winter of 1868–9 in Wadi Maghara.

Sinai 345 (figures 1–8)

Sphinx; dimensions of base 24 x 14 cm, height 15 cm

Found in the Hathor temple (exact findspot not recorded)

British Museum, No. 41748; exhibited in the Hall of Writing

Sources for collation: the original and Grimme 1923, pl. 5

Bibliography: Petrie and Currelly 1905, 18; Petrie 1906, 129–130; *Sinai* II, 202; Albright 1963; Leibovitch 1963; see also section 3.1.7

This inscription is the only example which also bears an Egyptian text. *Mry hthr /nbt/ mfk3t* – "Beloved of Hathor (lady of) turquoise" is written on the sphinx's right shoulder. A *serekh* is engraved on the base, between the front paws, with what may be the remains of a sickle sign – *m3^ct* – within it. For the significance of the *serekh* and the sphinx for the dating of the Proto-Sinaitic inscriptions, see section 6.2.

On the right side of the sphinx's base, written from left to right, is the text *m'hb^clt* while on the left side of the base is written *xxl^blt*.

The direction of this inscription is not clear, but its starting point is unmistakable.

Sethe (1917, 466) suggested that this was a bilingual text, and after Eisler (1919, 32–33) it was customary for many years to translate the right-hand line (*m'hb^clt*) as "beloved of Ba^calat". The same combination appears about ten times in the Proto-Sinaitic inscriptions, with slight variations.⁸ Albright came out against this interpretation (the first time in his work of 1948, 16) and suggested *m'hb^clt* – "swear to bring a sacrifice" (*lt* = "sacrifice" was suggested by Bruston as early as 1911), offering the following arguments: 1. A syntactical structure such as *m'hb^clt* is improbable; 2. The letters of the

8. *M'hbb^clt* (374 and perhaps 351), *m'hb^clt* (345 and perhaps 350), *mhb^clt* (348, 353, 354?, 356 and perhaps 361), fragmentary (365a).

inscription do not form the words *m'hb b^{clt}*; 3. "...there are other difficulties". Nevertheless, this syntactical structure does exist, and Albright himself quotes examples of it from the Bible and from Karatepe (*hbrkb^{cl}*). The phrase occurs once or twice with two *bets*⁹ and in most instances is written without *alep*.¹⁰ As for the spelling *m'hb^{clt}*, Albright ignores the possibility of haplography. The spelling without *alep* probably reflects elision. Donner (1967, 279) too casts doubts on the likelihood of Albright's reading, "*m' hb^{clt}*". See also the discussion of the dual masculine noun in section 3.3.3. The formula "Beloved of Hathor, lady of turquoise" is very common in the Egyptian inscriptions at Serabit el-Khadem, and is not only associated with the name of the king (for example, *Sinai* II, inscriptions 28, 30; in these cases of course it is meant as a wish rather than as an epithet). It seems likely that a similar formula should appear in the Proto-Sinaitic inscriptions,¹¹ and indeed the combination *m'hb^{clt}* and its variations are very frequent in these inscriptions, and always include the letters *b^{clt}*. In other words, decisive reasons for rejecting the translation "Beloved of Ba^calat" for all the above-mentioned phrases or parts of them have yet to be presented.

Albright reconstructs the line on the right as *ndbh lb^{clt}*. The signs he reads as *nun* and *d* (the latter in vertical stance) have been regarded by most earlier scholars as a single sign, which in the 1920s and 1930s was usually interpreted as *kap*. Cowley (1916, 18) already read it as *nun x*, and Sprengling was the first to suggest *nun d* (1931, 27; *nun zayin* according to his system) – a proposal adopted by Albright as early as 1935 (p. 338). No other example of a vertical *d* exists in either a vertical or a horizontal inscription, but no better suggestion comes to mind. The next two signs are even more problematic. The first was reconstructed as *waw* by most early scholars because of its resemblance to the early Phoenician and Hebrew letter, but after the Proto-Sinaitic *waw* was subsequently identified (see chapter 5), our sign was not given any alternative reading. One may try to identify it as it appears here with one of the letters still unknown in Proto-Sinaitic, thus leaving space for another letter between it and the next sign. The other possibility is to reconstruct an already known letter here (*bet* according to Albright), of which the sign in question forms one stroke, with the addition of some superfluous scratches.¹² The following sign has for many years been read as *dalet* (door), while the fish sign has been regarded as *samek*. Albright's reconstruction of this letter as *het* on its side is possible, though this would be the only known case of a Proto-Sinaitic *het* in this stance. The traces visible

9. See the preceding note and Albright's attempts (1966, 41) to avoid the problem. In inscription 351 he reconstructs two letters (*hb*), though there is room for three.

10. In two cases (354 and 356) Albright reconstructs the *alep* and deciphers in accordance with his method. In three other instances (348, 353 and 361; see also Albright 1969, 46), he joins the *mem* to the preceding word and reads the rest *hb^{clt}*.

11. The word "turquoise" is most likely to appear in the Proto-Sinaitic inscriptions, but it is absent from Albright's decipherment.

12. Butin (1928, 65–66) had already suggested reconstructing *bet*, for his own reasons, but changed his mind later (1932, 164).

on the stone render *n₁dbh* quite likely (see Albright 1966, 16, also on *t^c* - *dbh* in Ugaritic).

Sinai 346 (figures 11-17)

Block statuette; dimensions of base 22 x 17 cm, height 30 cm

Found in the Hathor temple at the entrance to the Hall of Sopdu

Cairo Museum, JE 38268; exhibited on the ground floor, hall 35 north, exhibit no. 6089

Source for collation: the original

Bibliography: Petrie and Currelly 1905, 18; Petrie 1906, 129-130; Macalister 1906; Ball 1908; Pilcher 1909; Bruston 1911; 1912; von Bissing 1920, 12; Cross 1967, 16, note 4 and fig. 1 (*yod*); Sass 1978, 184; see also section 3.1.7

The inscriptions are engraved on the top and front of the block and on its right side (for the significance of this statuette for the dating of the Proto-Sinaitic inscriptions see section 6.1.2). The front inscription was the first Proto-Sinaitic text to be photographed and published¹³ (Petrie 1906, fig. 139), and, before Gardiner's epoch-making 1916 paper, was the subject of several attempts at decipherment (see Bibliography) based on the supposition that the writing was an early variant of Phoenician. *Lamed*, *^cayin* and *taw* were even correctly identified by Macalister and Ball. Two lines of script run from the top of the block down its front, with the left-hand one curving round to the right at the base. A dividing line is engraved at the point where this line meets the right-hand one. The cramped space allowed for the *taw* at the bottom of the right-hand line indicates that this line was written last. The signs are so clear and schematic that several scholars have concluded that this inscription (together with the sphinx, 345) represents an advanced stage in the development of this script; however, this does not seem probable (see also the discussion of inscription 376).

The left-hand line runs *^cln[^cm]x(x?)mtlb^clt* and the right-hand line - *dldymr^ct*.

There are only two problematic letters, the *yod* and *resh*, in the line on the right. Examination of the original in the Cairo Museum revealed that the first of these closely resembles Leibovitch's sketch (first published in 1930, pl. III); the second letter was drawn correctly by Gardiner (1916) and later by Butin (1928; 1932) and Albright (1966, except for the added eye). This letter has usually been identified as *bet* because of a flaw on the left side of the stone which makes the letter appear larger, resembling the (reversed) *bet* in the left-hand line. Gardiner's and Albright's drawings show this flaw correctly (it should be remembered that the letter is engraved exactly on the angle of the block, and that it is different from the *resh* on its right-hand side).

In the left-hand line, three or four letters are missing, the upper two of which were *^cayin* and *mem*, as the text on the right-hand side of the

13. Except for Sinai 348.

statuette shows. The shape of the *nun* is as it appears in Gardiner 1916 and others, and not as in Albright 1966. A small line has been deeply engraved to its right. It appears in two of Leibovitch's sketches (1930; 1934), though not in the right place. Its significance is not clear.

The text on the right side reads *cln^cmrbnqbn*. The *resh* is damaged on its left (Gardiner, 1916, renders this correctly), but the reading is quite certain. The text is written in a sort of boustrophedon.

Albright offers the following interpretation:

d ldy mr^ct – O (thou) in whose care is the meadow
cl n^cm mt<n> lb^clt – on behalf of N[u^cmu], a gift for Baalath
cl n^cm rb nqbn[m] – on behalf of Nu^cmu, chief of the miner[s]

The translation of *mr^ct* as "pasturage" was first suggested by Eisler (1919, 46–47). Albright identifies the god mentioned in this line as Osiris, a very doubtful proposal: Osiris is one of the rarest deities in the Egyptian inscriptions from Serabit el-Khadem. He is mentioned twice during the Middle Kingdom (Sinai 121, 122) and once during the New Kingdom (Sinai 229). Osiris was the god of death and resurrection, and this aspect of his cult found expression in the inundation, in the growth of the crops and the fertility of domestic animals, but not in pasturage (see also Donner 1967, 276–277). *N^cm* is not necessarily a personal name. The division of the side inscription into four words and the translation have been generally accepted since Cowley (1916, 18), but see the discussion of *qop* in chapter 5.

Sinai 347, 347a (figures 18–22)

Two busts, 13.5 x 8.5 x 7 and 11 x 7 x 7 cm

Found in the Hathor temple (their exact findspot and whether they were discovered together were not recorded)

Musées Royaux, Brussels, Nos. E. 2428 and E. 2429¹⁴

Sources for collation: Grimme 1923, pl. 11 (347); 1929, pl. X (347a)

Bibliography: Petrie and Currelly 1905, 18; *Sinai* I, 1917, 16 (347 alone);¹⁵ Speleers 1923, 33 (347 alone); Ryckmans 1927; Cross 1967, note 27; Teixidor 1975b, 275; see also section 3.1.7

Inscription 347 reads *tnt*, and 347a *lb*?, which is usually reconstructed *lb^clt*.

Ever since Cowley (1916, 18) suggested that *tnt* is the goddess Tanit, rather than "gift", opinion has been divided on this point (see for example

14. Size and inventory number are according to a letter from the Egyptian Department of the Musées Royaux of 17 March 1981. Albright (1966, 17 and elsewhere) calls the busts "sphinxes".

15. Inscription 347a was first published by Grimme in 1923 as far as I know.

Teixidor's discussion in the work mentioned above).¹⁶ I prefer the second translation, since these busts were discovered in the temple of Hathor-Ba^calat. For additional evidence of a possible link between busts and the cult of Hathor, see Keith-Bennett 1981, especially p. 48. On the significance of the busts for the chronology of the Proto-Sinaitic inscriptions, see section 6.1.5. Although the reconstruction *lb^clt* seems logical, Leibovitch (1934, 66-68) has queried whether there would be sufficient space for this word, let alone *[tnt]lb^clt* suggested by others.

Sinai 348 (figures 23-26)

Rock inscription(?), about 30 cm long; maximal width of the letters 5 cm

Discovered by A.H. Palmer in the winter of 1868-9 in Wadi Maghara, 18 km south-west of Serabit el-Khadem

In situ(?), but never seen again; Palmer's squeeze no. 47 is kept in the British Museum

Source for collation: the squeeze and Palmer's hand copy¹⁷

Bibliography: Weill 1904, 154, No. 44; Martin 1962, 193, note 4; see also section 3.1.7

Weill published a copy of the inscription taken from the British Museum's squeeze under the title "Graffito d'époque inconnue", with no additional comments. Gardiner identified it as Proto-Sinaitic and added it to his publication of Petrie's Serabit el-Khadem inscriptions. It is his drawing upon which all later scholars have relied. The squeeze and photographs of it have never been published before, and examination of them has enabled some slight corrections to the shapes of the letters to be made, especially in the case of the *^cayin* whose shape is similar to that seen in *mr^ct* in inscription 346. The line above it may be an earlier attempt at an *^cayin*. The sketch from Palmer's notebook - which is also published here for the first time (figure 23) - includes two letters at the beginning of the inscription which do not appear in the squeeze. Unfortunately, they are not at all clear. Palmer's sketch strengthens my opinion on the shape of the *^cayin* (see above).

16. Cross (1967, note 27) has two arguments in support of Tanit. 1. The *nun* assimilates to *taw* in text 353 too (he reads this as *d gt* in contrast to Albright's *d gnt*, see also note 24). 2. "Gift" is *Mtn* in the Proto-Sinaitic inscriptions (346, 363). However, the reading of the relevant part of inscription 353 is doubtful (see the discussion of the inscription), and *nun* does not assimilate in a fairly certain word - *'nt* (inscriptions 349, 357 and perhaps 374). Albright (1966, 8, 32) defined the retention of the *nun* an "archaism". Both cases where Albright reads *mtn* are reconstructed.

17. Martin (see bibliography) notes that he looked for this squeeze in vain. The photographs (figures 25 and 26) were taken by the British Museum in the summer of 1981, and are published here for the first time. In September 1982 I examined the squeeze in the Egyptian Department of the British Museum. Tallay Ornan copied the sketch from Palmer's field notes (figure 23), for which I am most grateful.

The inscription reads: ?]ṁxttmhb^clt (*x* is definitely not another *mem*). Albright's 1966 reconstruction *m]ttm hb^clt*, is therefore no longer valid.

Sinai 349 (figures 27–32)

Rock inscription within a steliform panel, 32 x 24 cm

Discovered at the entrance to Mine L on a boulder that had split off from the mountainside, on which inscription 351 was also engraved

Cairo Museum, JE 52511; exhibited on the ground floor, hall 45 south-east, exhibit no. 6089

Source for collation: the original

Bibliography: Leibovitch 1938; see also section 3.1.7

The inscription runs from right to left in horizontal rows divided by lines. This is the inscription into which Grimme read his flights of fantasy – Moses, Sinai, Hatshepsut, Serabit el-Khadem and so on, thereby arousing at the time enormous interest on one hand and violent opposition on the other (see for example Leibovitch 1938, 673; Albright 1937–8). The inscription is badly damaged, particularly at its bottom and left side, and many of the letters are either difficult to identify or completely erased:

- 1 'ntdtx
- 2 rbnqbnmx
- 3 ^crkmlbxxx
- 4 xxx'hndxxx
- 5 xxt|
- 6 xxt^c|
- 7 xtxxl|

Line 1. The ^c*ayin* Albright marks at the end of the line (as does Leibovitch 1940)¹⁸ is a depression in the stone, not an engraved letter. Both Albright and Leibovitch place this "sign" too low. It is actually right on the upper edge of the inscription. If there was originally another letter at the end of the line, it has not been preserved.

Line 2. All those who copied the inscription, except for Gardiner, drew a t at the end of the line. Butin (1932, 161) and Leibovitch (1934, 106) were influenced by *mt* in other inscriptions.

Line 4. The ox's "muzzle" drawn by most of the copiers is actually a flaw in the stone. Only the upper edge remains of the sign drawn by Albright after the d, and after this there is a depression in the stone. The identification of the letter is not clear.

18. Albright's copy is identical to that of Leibovitch in most other details too, for he had examined the original in Cairo in 1948 with the help of Leibovitch.

Line 5. The sign to the left of the t, usually copied as 0—+ (like the sign in inscription 351), is mostly the result of the weathering of the stone. There is no way of knowing which of these markings were man-made; there seems to have been at least one letter, perhaps a *taw* which widened out.

Many other signs appear in Albright's drawing. I would willingly accept them but for the fact that most or all of them are natural hollows or flaws in the stone (see section 3.3.5). The drawing offered here (figure 27) is the result of lengthy examinations of the original with an electrical torch in March 1980 and February and May 1981, and of a comparison on the spot with all the published drawings and photographs of the inscription.

Albright's decipherment is possible for most of lines 1–3. Lines 4–7 are mostly reconstructed. For *rb nqbnm*, see the discussion of *qop* in chapter 5. The sequence *nd* (line 4) appears also in inscriptions 345(?), 353(?), 363, 365A(?) and 374.

Sinai 350 (figures 33–36, 54)

Fragments of a rock inscription within a steliform panel, approximate reconstructed size 40 x 30 cm

The fragments were discovered by Petrie in 1905 and by the Harvard expedition in 1927 near the entrance to Mine L, on stones which had split off from the mountainside

Cairo Museum, JE 52517–8, apart for two fragments lost at the site; exhibited in the same place as Sinai 349

Sources for collation: the original and Petrie's photographs (figures 34, 35)

Bibliography: See section 3.1.7

The Harvard expedition (1927) failed to find three of the fragments discovered by Petrie – the upper right, lower right and lower left pieces – but they did discover a new fragment, from the upper left of the inscription. The Finnish expedition (1928) which found inscription 359 rediscovered the lower right piece, and this is the reason for the inscription's two JE numbers (Leibovitch 1930, 11).

Disagreement about this inscription begins with the number of columns it possesses. In 1928 (pp. 52–55) Butin wrote of three and in 1932 (pp. 170–172), of two and a scene. Albright (1966) followed Butin's second proposal, seeing in the left-hand column a seated god wearing a long garment. Grimme (first in 1929, 129) thought he saw a *serekh* in the third column. Leibovitch (1930, 11; 1934, 70) sees, as I do, four columns altogether. It seems reasonable to suppose that there were no additional columns.

Column 1:	<i>'lš(x?)t̄x(x?)btċnqb</i>
Albright reconstructs this as:	<i>'l b lš n btknqb</i>
Column 2:	<i>m]hb[ċlt?</i>
Column 3:	unclear
Column 4:	<i>]nd[</i>

Column 1. On the third sign, Leibovitch (1930, 70) writes: "Il n'est pas étonnant que ce signe ait été lu d'une manière différente par tous que se sont occupés de ces inscriptions". The drawings made by Gardiner (1916) and Butin (1928 and 1932) are close to the shape I made out on the inscription, which however I decided not to draw. The sign is perhaps reminiscent of the letter identified as *šade* in inscription 352 (Cross, 1980, 12, may also hint at this). In any case, it is definitely not a *h*, as Albright suggests (1966).¹⁹ There could be room here for an extra letter. The next letter is quite clearly *t*, not *lamed* as read by Albright (see note 19). Of the letter after this only a small horizontal stroke remains. It is most probably not *šade* (Albright), since if this were the case we would expect to find two additional strokes beside the existing one. There may be space for an extra letter before the *bet*; the identification of the latter sign is generally accepted. After the *taw*, I see a damaged sign - "V" - which looks like an upright *ayin*; however, there is no other example of this in a vertically written Proto-Sinaitic inscription. In 1928 Butin drew a similar sign, which he read as *ayin* (pp. 52-55). He changed his mind in 1932 (pp. 170-172) and this time, influenced by Leibovitch, who saw an extra incision to the right, reconstructed *t*,²⁰ although he (Butin) was reluctant to abandon the *ayin* in favour of the reconstructed letter. Albright's proposal to read it as *kap* (in other words with an extra stroke to the right) has no basis in reality. The space after the lower *bet* seems to be empty. The words 'I at the top of the column and *nqb* at its bottom are all that remain of Albright's reading of the first column.

Column 2. This probably began with *mem*, but *m'hb'lt* is not long enough to fill up the whole column. One can discern some more marks on what remains of the lower part of the inscription, but I could not decide whether these were really traces of letters. This area is very smooth and has not been seriously damaged, and the marks here are smaller than the other letters of the inscription.

Column 3. The drawing shows the incisions that I saw, without any attempt at interpretation, and closely resembles what Butin sketched in 1932. Leibovitch also saw similar marks, even though this is not apparent from his drawings (a glance at figure 36 will clarify the discrepancy). There are traces of marks at the bottom of this column too. The entire column is unclear.

Column 4. Unclear marks. The reading *nd* follows Leibovitch (1934, 71) and is offered principally in order to indicate that the inscription contained a fourth column. In the lower left-hand part of the inscription, now lost (figure 35), traces of signs from the second and third (and fourth?) columns can be discerned.

19. Albright, though aware of its existence (1966, 19), did not take into account the incised marks on the right hand fragment, which is lost but known from Petrie's photograph. The dividing lines between the columns have been left out from Albright's sketch. See also note 84.

20. This line does exist, but seems to me to be natural in origin.

Sinai 351 (figures 32, 37–39)

Rock inscription within a steliform panel, 32 x 22 cm

Discovered near the entrance to Mine L on a block of stone that had split off from the mountainside, and which also bore inscription **349**

Cairo Museum, JE 52514; exhibited in the same place as Sinai **349**

Source for collation: the original

Bibliography: See section 3.1.7

The text consists of two columns of script separated by a line, with a depiction of the god Ptah in a shrine to the right (for the significance of this drawing for the chronology of the Proto-Sinaitic inscriptions, see section 6.1.2). This is the only Proto-Sinaitic inscription accompanied by a drawing (for the rather unlikely possibility that inscription **350** also has an engraved drawing, see the discussion of that text). This inscription was found on the same stone as inscription **349**, and they were both cut in the same direction.²¹

dtb̄tnmt̄nqbw̄x (*x* = *wt*?)

(*x*?)*mxxxx*^{*c*}_{*l*}^{*w*}*t*

Column 1. The first ten signs are either certain or have been reconstructed on the basis of inscription **360** and others. The first letter appears incorrectly in Gardiner (1916), with a vertical stroke connecting the two horizontals; this mistake has led to futile discussions on the origin and development of this letter. Butin was the first to discard this vertical stroke (1928, 55–58). (Albright thought he saw a *d* with a vertical stroke in inscription **358**.) The penultimate letter was identified as *waw* by Sayce (in Cowley 1916, 19) and the last sign was identified by Albright (1966) as a ligature of *waw* and *taw* (see below).

21. Lake and Blake (1928, 7) wrote that inscription **351** was written *tête bêche* to inscription **353**, on the same stone. It is hard to imagine how this error occurred since they saw the inscriptions just as Petrie had left them, before separating them in order to transport them to Cairo. Several scholars have repeated this mistake, e.g. Leibovitch (1930, 11). The photographs clearly show that **349** and **351** were inscribed on one stone (figure 32) and that **353** and **354** were written on another (figures 51, 54), all in the same direction. There is thus no basis for Lake and Blake's conclusion (*loc. cit.*) that the inscriptions were carved after the stone had become detached from the cliff face, and were intended to be transported, as stelae, elsewhere. It seems more likely that they were inscribed on the facade of the mine before it collapsed, as was the case with several Egyptian inscriptions at Serabit el-Khadem.

Column 2. There is enough space for a letter above the *mem*, and Butin (1932, 173) indeed saw traces of an almost completely erased sign there. The *mem* itself is certain, though its right-hand zigzag intrudes on the column to the right (as against Albright 1966). I could not discern the *alep* accepted by most scholars (except Gardiner 1916 and Butin 1928), in spite of my efforts to do so. Opposite the *nun* in column 1 is a sign which looks like *bet* when illuminated from below. The last letters closely resemble Albright's sketch of them, although the marks which led Gardiner to draw the penultimate sign as +o do indeed exist (my impression was that they are natural in origin). This sign was drawn by all other scholars without the cross-line, and has been identified as *lamed* in *m'hbb^clt*; actually it is identical to the penultimate sign in line 1 which is usually read as *waw*. If this is correct, then we have a radically different inscription here.

Any decipherment has to take into account the image of the god Ptah which appears to the right of the inscription (Leibovitch 1934, 72-74). Albright reads:

Column 0: [*d tb 't*]

Column 1: *dt b^tn m^t nqb wwt*

Column 2: *m' [hb] ^clt*

The string *dtb'tdtb^tnm^t* appears again in inscription 360, and perhaps in inscription 361. Hence there is some justification for reconstructing a "line 0" above the drawing of the god at the place where the stone is broken, although there is another text (353) which starts with *dtb^tnm^t*. For the equation *d tb* = *El* = *Ptah*, see Albright 1966, 12, 13 and Cross 1962b, 238-239, but there is no way of knowing whether this attractive identification has any basis in reality. Albright deciphered the last sign in column 1 as a ligature of *waw* and *taw* (see chapter 5 on this sign), and taking this with the preceding sign, reads *wwt*,²² Wawat in Nubia. He devotes more than half a page to a discussion of the mines of Wawat and their possible links with Sinai during the New Kingdom (1966, 20, etc.). The discussion makes no real contribution towards the understanding of *wwt* in our text; nor does it aid us in the dating of the inscription, since Egyptian activity in the Wawat mines went back to Old Kingdom times (Herihuf) and lasted down to the Third Intermediate Period. Also incorrect is Albright's contention that turquoise was mined at Wawat. The attempt to link the miners of Wawat and Sinai with the enslaved descendants of the Hyksos is quite unfounded (for this attempt and its supposed chronological significance see section 6.1.2). In other words, neither the identification of the sign as a ligature of *waw* and *taw*²³ nor the conclusions drawn from this *wwt* is based on anything more than guesswork. The sign itself is perhaps one of the hitherto unidentified letters (see for example the discussion of *tet* in chapter 5).

Albright's reconstruction of the second column as *m'hb^clt* is impossible, since there is room for an eighth letter. The choice is between *m'hbb^clt* (thus

22. The reading *wwt* was first suggested by Sprengling (1931, 32-35).

23. In any event this is not a ligature in the full meaning of the term (if at all), but rather two letters connected due to the lack of space. For an even more doubtful ligature suggested by Albright, see inscription 356.

Leibovitch, first in 1930, and Butin 1932; see the discussion of inscription 345) and a completely different reading of the end of the text (...|*xwt*, see above). In this case we cannot reconstruct the entire column, but it is possible that it too ends in *wwt*, though without a ligature.

Sinai 352 (figures 40–44)

Rock inscription within a steliform panel, 30 x 19 cm

Discovered near the entrance of Mine L on a block of stone which had split off from the mountainside

Cairo Museum, JE 52510; exhibited in the same place as Sinai 349

Source for collation: the original

Bibliography: See section 3.1.7

The inscription has four columns of text. The two fragments found by Petrie while still in one piece contain most of the inscription. A small piece in the middle is missing. While the inscription was being removed from Serabit el-Khadem the upper piece fell off a camel and was broken into several pieces (Lake & Blake 1928, 6); luckily the letters were not damaged further.

Column 1: '(x?)t(x?)*bnšr* (fish) *šn*
 Column 2: *mt*(x?)^c*xl*tlb (fish) *nn*
 Column 3: *mxxxx*(x?x?)*b^clt*
 Column 4: 'r|*ht*

In the first column, after the *alep*, the stone is damaged. It is possible that another letter was originally engraved at this point. The letters *bnšr* and the next *šade* were copied accurately by Albright (see in particular the discussion of *šade* and *resh* in chapter 5. The reading *bnšr* is fairly certain, following inscription 364. As to the sign appearing in both columns 1 and 2 there is no doubt that it was deliberately and deeply engraved, and that it is in the shape of a fish (as against Albright 1966, 21); however "indigestible", this is no reason to disregard it (see below). It could possibly be a *dalet* common to both columns, as Albright has suggested for the *cayin* (the third letter in column 2 here, see below).

After the first *t* in column 2 there is a space; if there was a letter there originally, it has been erased. The next sign seems to me to be of natural origin. The area within projects out in a sort of lump from the rock, and the incision surrounding it is made up of several cracks and scratches which hardly can be man-made (compare this sign to the clear *cayin* in column 3, figures 41 and 44). The continuation is broken, but there is room for another letter or two. The first letter after the break was drawn almost correctly by Butin. The horizontal stroke may be natural in origin, but I have no alternative suggestion to *lamed* read by most scholars. The *bet* is complete (as in Gardiner 1916 and Butin 1928). On the sign of the fish, see above. The final *nun* is clearer than the penultimate letter, but painstaking examination of the original shows that the latter is a *nun* too (thus Gardiner, Butin and Albright, as against Leibovitch).

The **lamed** in column 3 is written in the usual way; the continuation of the horizontal stroke to the right is either a naturally occurring scratch or a slip of the engraving instrument. Butin (1932) saw more signs on the upper part of columns 3 and 4, but this is quite impossible since the surface of the stone has flaked off at this spot.

The **taw** in column 4 is engraved in a small hollow. The reconstruction of **'rht** seems reasonable, following inscriptions 353, 375 and perhaps 365b.

Albright reads:

Column 1: $'t^c$ bn zr $[^c]zn$
 Column 2: mtt^c $l'tt$ lb $[^c]t(m)$ t nn
 Column 3: $m[nht(?)$ $m'h$ b $c'tt$
 Column 4: $...r]ht$

Column 1. There is probably room for another letter between **alep** and **t**. On the **ayin** see above. There is a space for an extra letter before the **bet**. On the **fish**, see above. The postulated second **ayin** does not exist.

Column 2. On the second **t**, Albright writes that it is clearly visible on one of the photographs – he undoubtedly refers to Petrie's photograph (in Grimme 1923, pl. 18, here figure 41). Comparison with the original proved that the photograph is misleading, a further reminder of the caution that needs to be exercised when investigating the Proto-Sinaitic inscriptions. The **ayin**, said to be common to both columns, is doubtful. From this point to the **lamed** there is space for two or three letters; Albright ignores this. His reconstruction $[^c]t(m)$ t is impossible; the space above the fish was originally left empty, so that the three or four letters would apparently have to be squeezed into the fish's tail.

Albright's reconstruction of column 3 fits the existing letters and the space left by the missing ones. To summarize: the upper half of the inscription cannot be deciphered. In its lower half, **bnzr** (or **bnzr**) in column 1, **b'lt** in column 3, and **'rht** in column 4 make sense (see also section 3.3.5).

Sinai 353 (figures 45–47, 51, 54)

Rock inscription within a steliform panel, 40 x 27 cm

Discovered near the entrance to Mine L on a block that had split off from the mountainside; inscription 354 was also engraved on this block

Cairo Museum, JE 52513; exhibited in the same place as Sinai 349

Source for collation: the original

Bibliography: Albright 1963, 204; Cross 1962b, 238–239; 1967, note 27; see also section 3.1.7

The three columns of script were written from right to left, as implied by the cramped end of the left-hand column. This text was originally attached to inscription 354 (see the discussion of inscription 351 and note 21).

This is one of the largest Proto-Sinaitic inscriptions, though also one of the most frustrating, since in spite of the fact that the stone is unbroken, its surface has been damaged both by nature and by man. This damage and the uneven surface of the stone make copying with the aid of a photograph – or even of several photographs – utterly impossible. Even prolonged examination of the original in the Cairo Museum has not solved all the problems.

Column 1: *dtb[tn]mtmhbc^clt*
 Column 2: *(x?)pn^udn^urht*
 Column 3: *dp(x?)ltmt^utlblzx(x?)*

Column 1 has been reconstructed on the basis of inscriptions 351 and 360.

In column 2, Gardiner and Leibovitch drew a beetle above *pe*. Butin on the other hand did not draw anything at this point, but wrote (1932, 176–177) that there was a sign there, perhaps *mem*. Studying the text under side light from the left, it seems to me that he may well be right (even though under light directed from a different angle, one might see the beetle too...~~or~~). The two parallel lines identified as *d* do exist, though the inscription is full of short, horizontal chisel marks which look just like this one. Butin (1928, 61–64) saw this as evidence that the inscription had been deliberately damaged. The *nun* is also doubtful, and more so the *taw* which precedes it. The entire inscription is criss-crossed with scratches and marks, and in almost every case one has to guess which, if any, of them actually form part of a letter. The *t* following the *nun* is also uncertain.

The second (and third?) sign in column 3 has been compared by most scholars to the first sign in column 2. Only Albright gave it (or them) a different interpretation (see below). The next "sign" is rather a flaw in the stone, which was perhaps originally *taw*. The *alep* is so indistinct that several different angles of lighting are necessary in order to make out its shape, and even then one cannot be entirely certain that this really is a letter. The best photograph of it is figure 46. The letters at the lower left of the column are relatively clear but problematic nevertheless. The sign which resembles an inverted ninth-century *kap* was identified by Albright as *yod*. It is definitely not *yod* (see Sass 1978, 184); it may be a *šade* whose left-hand stroke was unintentionally extended lower down to the right. The last sign (or signs?) is unidentified; it seems that the mason or scribe tried unsuccessfully to squeeze one or more letters in here.

Albright (1966) reads:

Column 1: *dt bt[n] mt<t>m hb^clt*
 Column 2: *[l]pn d tn šm 'rht [lpn]*
 Column 3: *d gnt šm t't lglyn*

Albright's decipherment requires the addition of a *taw* to column 1. The reconstruction of a *lamed* at the beginning of column 2 is impossible, see above. The proposed *mem* in this column, to the left of *alep*, does not exist, and with it disappears the proof Albright (1966, 32) sought for the rendering of *š* and *t* by the same letter, though theoretically this is not impossible. The reconstruction of *lpn* at the end of the column is incorrect. Although Albright shows in his drawing that this spot is damaged, this is in fact almost the only

part of the stone which is in its original smooth state, and nothing was ever written here.

The marks in column 3 that Albright read as *gimel-nun* (in his *d gnt*) resemble the sign at the beginning of column 2 identified as *pe*, but because of the damaged state of the inscription they can be interpreted in various ways (see for example note 16). Albright's version ignores one stroke, the one on the upper left.²⁴ *d gnt* should therefore be rejected, which also means that Proto-Sinaitic *gimel* is not securely documented (but see inscription 367). The identification of *g* is based solely upon imagination; it is most probably *bet*. On the identification of the *yod*, see above. The sign which follows it is quite clear, but does not resemble any letter. Albright's reading of the third column is quite impossible, if only for the identification of the letters.

Sinai 354 (figures 48–51, 53)

Fragments of a rock inscription in a steliform panel, 31 x 21 cm

The fragments were discovered near the entrance to Mine L on stones which had split off from the mountainside, some of which were joined to inscription 353

Cairo Museum, JE 52512²⁵ (except for some pieces which were lost *in situ*, see figure 49); exhibited in the same place as Sinai 349

Sources for collation: the original and Petrie's photograph (figures 50, 53)

Bibliography: See section 3.1.7

The inscription is damaged and fragmentary. At the top a large *mem* is engraved, with more unidentified marks beneath it. Further down, *m|hb^clt* has survived, as well as a *he* on the left-hand side.

Sinai 355 (figures 52, 53)

Two fragments of a rock inscription within a steliform panel, together 14 x 10 cm

Discovered near the entrance to Mine L, probably part of a block that has split off from the hillside

Lost at the site

Source for collation: Petrie's photograph (figure 53)

Bibliography: See section 3.1.7

24. The main support for reading *d gnt* was the supposed appearance of a similar name on the Lachish prism, but the prism text was later identified as Egyptian (see Hestrin, Sass and Ophel 1982).

25. JE 52510 appears by mistake in Albright 1966, 22.

These pieces are part of an inscription of which the rest is lost, not part of another known text. The traces of the signs are difficult to interpret, and Albright (1966) even doubts that they are Proto-Sinaitic; the fact that the signs are written within a steliform panel and were found together with other Proto-Sinaitic inscriptions makes it probable, however, that this inscription too belongs to this class. It seems that the inscription contains two *hs*, a *bet*, a *pe* (or two *nuns*), and perhaps a *dalet*. I was, for some time, of the opinion that the top right-hand sign is the left half of a Hathor head. I am now not certain of this. Cowley (1916, 20) suggested the reading *hbd[d]*, the name of the brother of the Prince of Retenu known from the Egyptian inscriptions at Serabit el-Khadem in the time of Ammenemes III (Sinai 85, 92, 112 and others). If this reading were correct, it would have solved the problem of the dating of the Proto-Sinaitic inscriptions (see section 6.1).

The next three inscriptions were found at Serabit el-Khadem in 1927 by the Harvard expedition.

Sinai 356 (figures 55–58)

Fragment of an inscription within a steliform panel; present dimensions 23 cm wide, 13–20 cm high

Discovered at the entrance to Mine L on a block of stone that had split off from the mountainside

Cairo Museum, JE 52515; exhibited in the same place as Sinai 349

Source for collation: the original

Bibliography: See section 3.1.7

The fragment contains a large part of the original inscription. Butin (1928, 36) considers that the left-hand side of the stone is broken along the line of the frame. Letters are missing at the bottom. The text, in two vertical columns, is more widely spaced than in most other Proto-Sinaitic inscriptions. It is also one of the most problematic texts. The letters are shallowly engraved, and the stone's surface – which was not sufficiently smoothed off in the first place – was also later damaged. In this case too, a single photograph is not enough to reproduce the shapes of the signs faithfully. Leibovitch (1934, 82), who emphasized this, also stressed the need to study the text under lighting from various angles. Almost every scholar has given a different reading for the right-hand column, as will be seen below (the transcription of the letters has been corrected where necessary):

Butin 1928:	<i>t n š^c n b b n[</i>
Cowley 1929:	<i>' n š h r b n[</i>
Butin 1932:	<i><u>t</u> n š h r b n[</i>
Leibovitch 1930 etc.:	<i>' r š h r b x[</i>
Albright 1948, 18:	<i><u>t</u><^c> n š h r b n[</i>
Albright 1966:	<i>š n š l n rb n[</i>
Sass:	<i>' n š x r b h[</i>

The *alep*(?), *nun* and *sade* may have been correctly drawn by Butin (1932), but as far as the first two are concerned, they are in fact almost illegible. The next sign looks like *Q* or like *Q* under different lighting. Most scholars have identified it as *h*, but the space here is too narrow even for a letter with *two* loops. A *lamed*, or less likely a *waw* on its side, would fit in. The signs identified as *resh* and *bet* are incomplete, and their traces are not quite right; the *resh* is too small and the *bet* too big. The *nun* is as it appears in Leibovitch's drawing. The rock surface seems to have flaked off from the last incised letter downwards (Albright 1966, 23).

mhb^clt is written in the second column. The *lamed* was originally left out, and then written in on the left. Although I had difficulties in checking the text in this column,²⁶ it is certain.

Remarks on Albright's reading *šnšln rb nqbnm*:

There are no grounds for identifying the first letter as *shin*. The damaged letter resembles an *alep* (or less likely, a *resh*), but is completely different from the letter identified as *shin* in inscription 357. The sign after the *sade* is probably *lamed*, but is not as Albright drew it. The next sign is definitely not a *nun*, and the identification of the sign following that as a ligature of *resh* and *bet* is best forgotten. Thus, only the letters *rb n[qbnm]* of this reading remain, though not according to Albright's identification.

Sinai 357 (figures 59–62)

Inscription on a partly smoothed rock surface; height of the vertical column 71 cm, length of the horizontal line 62 cm (end broken away)

Discovered in Mine L

In situ

Sources for collation: the original and a plaster cast in the Israel Museum

Bibliography: Rainey 1975, 111–114; 1981, 93–94; Beit-Arieh 1978, 179–182; see also section 3.1.7

The letters in the vertical column are larger than those in the horizontal line. The space between the bottom sign in the column and the first letter of the line shows that the latter begins a new word, if not a new sentence.

The copies made by Butin and Beit-Arieh are the most accurate, and indeed these two scholars devoted a great deal of time to this inscription; Beit-Arieh's drawing is preferable to the earlier one, since it depicts the shape of the signs exactly as they appear on the rock surface. As far as identification of the signs (and copying of unknown signs) goes, the two differ only on one sign, which Butin adds to the end of the inscription.

26. The left part of the inscription is obscured by a showcase. Either one's head or a hand holding a torch can be inserted into the remaining space with considerable difficulty, but there is no room for both.

Vertical column: 'nttpndkml'bbmlk
 Horizontal line: šm^cmr'rb^c

Remarks (the numbering of the signs is according to Beit-Arieh, figure 59 here):

Signs 8 and 16. These are the most faintly engraved in the inscription (see also Beit-Arieh's note, 1978, 179 on sign 16). I have examined them both with and without the use of an electric torch, and am convinced that in photographs they appear quite different from the way they look in reality. I would suggest replacing sign 8 with a question mark; if however **kap** is insisted upon, this should be the four fingers variant, as drawn by Beit-Arieh (not with three, as Albright sees it, or with five, as Rainey 1975 has it). Actually in Rainey's photograph (1975, pl. 11:B = figure 60) the **kap** seems to have three fingers – but as mentioned before, the photograph is misleading. As for the lowest letter, if I had worked from photographs alone, I would have had no doubts about the **kap**, but the original is ambiguous.

Sign 17 looks better without the small stroke that Beit-Arieh added to its base. For the likelihood of its identification as **shin**, see chapter 5.

Sign 26 resembles the definite **ḥayin** from inscription 365a. There are no other examples of a **nun** with such a large head (Rainey 1981, 94). The basal stroke of the **ḥayin**, with pupil, in inscription 353 is also straight.

Sign after 26. Butin attempted to squeeze a **lamed** in here, but in fact in the original nothing is preserved.

Signs 27 and 28 (Beit-Arieh 1978, 180–181) are probably not letters, but see Rainey 1981, 93.

Albright examined this inscription *in situ* in January 1948, and it served as a starting point for his decipherment. He read (1966):

'nt tⁿpn dkm l'bb mn 8
 šm^cmr'rb^c[prm?]

Only the strings 'nt and rb appear in other inscriptions (the latter in quite a different context), and thus we cannot be certain even about the division of words. There is thus no way to evaluate Albright's decipherment or Rainey's corrections (see also Rainey 1981, 94). An example of an alternative decipherment is that of Cowley (1929, 216), who reads the in the horizontal line šm^cmr...

Sinai 358 (figures 63, 64)

Fragmentary rock inscription; maximal dimensions 27 x 18 cm

Discovered in Mine M

*In situ*²⁷

Sources for collation: the original and a plaster cast in the Israel Museum

Bibliography: Lindblom 1931; Cross 1962b, 238; 1984, note 3; Rainey 1975, 114–115; 1981, 92; see also section 3.1.7

Right-hand column: ?|'d^clm|?

To the left: ?|škl|?

The form of the *alep* in the right-hand column is unusual, but I have no alternative to suggest. The *dalet* is clear; already in 1930 Butin (1932, 148) recorded the opinion of the members of his expedition that this sign is in the shape of a fish. It is interesting to note that the closure of the fish's tail was not recognizable in the photographs until the beginning of the 1970s (compare Rainey 1975, pl. 12:B, photographed in 1970, to Rainey 1981, p. 93 and pl. 16:A. In a slide that I took in 1974 the tail is already closed). All that happened was that a visitor to the site cleaned a layer of dust off the closure, or chalked it in. It seems that before this the incision was the same colour as the rock beside it. The next sign may not be a letter at all but a chisel mark, or else it was added as an afterthought, hence its cramped shape. But if a letter, it must be d. Rainey (1975, 114–115 and slightly differently in 1981, 92) thinks that a *nun* is inscribed between the *dalet* and the d, and Cross accepts this. Rainey admits that if it is a letter, it should be regarded as an addition to the original text. I do not think that this *nun* exists.

Of the three signs on the left-hand side of the inscription, two are fragmentary and unclear – *šade*(?) and *kap*(?). The latter is made up of three strokes. Rainey's drawing (1975) includes an extra line to the left, following the misleading photograph.

27. For some years after its discovery in 1927 there was considerable uncertainty about the inscription. Its discoverers, Lake, Blake and Butin, published a rough sketch of the letters (1928, 37). The members of the Finnish expedition were the first to photograph the text in 1928, and Hjelt gave a photograph to Gardiner, who was in Cairo at the time. He in turn showed it to Cowley. Cowley (1929, 216–217) did not realize that Lake and Blake's sketch showed the same inscription and thus gave the text in the photograph the number 359 (and to Sinai 359, for which see below, he assigned number 360). Cowley did not publish the photograph or a drawing made from it, though from his identification of the letters it is clear that he had looked at it upside down. Leibovitch, in 1930 (p. 12), also thought that there were two separate inscriptions, and he too inverted the drawing made from Hjelt's photograph. Sprengling (1931, 4–5, 44–45) was the first to realize that this was really only one inscription, though he too still inverted it. In the same year, Lindblom, a member of the Finnish expedition, published a report on the circumstances of the text's discovery, thus at last clarifying the nature of the inscription and its correct stance. Grimme had already realized this in 1929 (pp. 85–86).

Albright did not mention this inscription in his 1948 paper; he may not have examined it on his visit to Serabit el-Khadem that year, although he must have stood only a few metres away from it, near inscription 357. In 1966, he repeated Cross' (1962b) reading 'l d ^clm, changing the second letter from *dalet* to *lamed* (incorrectly, see above). Albright interpreted the signs reading *lamed* and d in a different way (1966, fig. 9), and invented a d resembling Phoenician *zayin*, composed from the fish's belly and fin and a horizontal (random?) scratch beneath it (the same scratch that forms part of Rainey's supposed *nun*). On the other hand, the d(?) which I see in the inscription is interpreted by Albright as a flaw in the rock. Cross (1962b) sees in part of the fish's belly the upper stroke of the d, while interpreting the two strokes of my d(?) as forming the lower stroke of his d. Cross ignores the *kap*(?) at the left-hand side of the text, Albright is dubious of its value, and Rainey accepts it (see above).

'l d ^clm does not fit the letters on the stone; the proposed *lamed* is in fact a *dalet* (see above). 'dn d ^clm (Rainey, and also Cross 1984) is similarly implausible (see above, on the *nun*). Rainey's alternative, 'd d ^clm (1975, 115), seems to me the best suggestion available, although it should be stressed that it is uncertain how much of the top and bottom of the inscription is missing.

Sinai 359 (figures 65, 66)

Fragment of a stone slab (rock inscription?), 15 x 19 cm

Discovered in October 1928 by the Finnish expedition, probably near the entrance to Mine L

Cairo Museum, JE 52516; exhibited in the same place as Sinai 349

Source for collation: the original

Bibliography: Cowley 1929, 217; Grimme 1929, 132–134; Lindblom 1931, 90; see also section 3.1.7

It is unclear exactly where this inscription was found, but it seems likely that it was near the entrance to Mine L. This is Grimme's opinion (1929, 132), and he probably heard it from Hjelt. Cowley (1929, 217) assigned this text the number 360 because of his error concerning Sinai 358 (see note 27), reading *l'bm* on the basis of Hjelt's photograph which Gardiner had in Cairo. It seems unnecessary to follow Albright's speculation (1966) that part of the inscription has since been broken off; Cowley obviously interpreted the crack in the stone (see figure 66) as a *lamed*.

The text, ?]'bm[?, is quite clear and Albright has suggested a personal name such as *'bm'l*.

Next to the inscription in the Cairo Museum someone has written in chalk "perhaps part of 52515" (= Sinai 356, B.S.). This is definitely not so. The ox's muzzle drawn by all the copyists is actually a flaw in the stone.

The following inscriptions, up to Sinai 367, were discovered by the joint expedition in its first season (1930), while Sinai 374 and 375 were found in the

second season (1935),²⁸ all of them at Serabit el-Khadem. Paper squeezes made from the texts by Father Butin were housed in the Catholic University of America in Washington (Albright 1966, 8).

Sinai 360 (figures 67, 68)

Stele, 45 x 33 cm

Found in a tumulus on the saddle between Wadi Qaṭar and Wadi Umm Themaim, near Sinai 371 (Butin 1932), 150 m SE of Mine K (as recorded in JE)

Cairo Museum, JE 53816; basement (not located)

Source for collation: Butin 1932, pl. XIX

Bibliography: see section 3.1.7

A roughly worked stele, damaged in several places, bearing a single column of text on its right-hand side. It seems that it was intended to continue the text on the left-hand side (Albright 1966, 24, but against this see 1948, 18). Comparison with other inscriptions shows that no letters are missing in the column itself,²⁹ despite the uneven spacing. Butin's suggestion (1932, 186–187), upheld by Albright (1966, 24), that the surface of the stone was not smoothed off and thus the writer of the inscription was avoiding the roughest spots, seems plausible. The photograph fortunately shows all the letters, and the reading, *dtb'tdtb'tnmt*?, is clear, and can be compared to inscriptions 350 and 361.

Sinai 361 (figures 69, 70)

Fragments of a rock inscription, 28 cm high and 39 cm wide

Discovered near the entrance to Mine N, part of it on the rock face and part on a fallen block

Cairo Museum, JE 53817; basement (not located)

Source for collation: Butin 1932, pl. XIX

Bibliography: see section 3.1.7

The broken and damaged inscription has four columns.

Column 1: *dtbb'tnmt* (perhaps a complete column)

Column 2: ?*dtmħḥ*

Column 3: *tnxm*

Column 4: *b*

The photograph does not show all the letters clearly, and I could not gain access to the original, which is in the basement of the Cairo Museum. On the basis of inscription 360, Albright (1966, 25) supposes that the person who

28. For other stones discovered by this expedition, see section 3.2.2.

29. My earlier suggestion (1978, note 2) was incorrect.

inscribed the text forgot to write *dt* in column 1, and subsequently added it to the top of column 2. In fact, there is room for 't before *dt*. The first *bet* in column 1 is written with a mark inside it, but according to the context it should not be read differently (see note 29). The last two letters of column 2 are not clear from the photograph, but both Butin and Leibovitch, who saw the original stone, drew them. If they are correct, the reconstruction of the rest of the column is clear, and it is possible that traces of the *ayin* and *lamed* can be discerned at the bottom. The doubtful *mem* from column 3 cannot be seen clearly in the photograph either, but has been included on the basis of Butin's and Leibovitch's drawings.

Albright changed not only the position of *dt*, but also that of the *mem* in column 2 in order to fit it in his reading.

Sinai 362 (figures 71, 72)

Fragment of a stone plaque, 15 x 14 cm

Discovered with Sinai 372a(?) in a tumulus on top of Mine L, some metres north of the entrance

Cairo Museum, JE 53819; basement (not located)

Source for collation: Butin 1932, pl. XII

Bibliography: see section 3.1.7

The letters]'h[? have survived on the plaque fragment. Above them can be seen the tail of a letter, and there may have been another letter below which has been erased. The stone was smoothed off thoroughly, and the photograph shows the shape of the letters correctly. It is a pity that the entire inscription has not been preserved, since the letters were inscribed with particular care – both the *alep* with "ear" and the *het*, which is the clearest example of this letter in the Proto-Sinaitic inscriptions. This latter sign is remarkably similar to the *het* of the Raddana handle (see section 4.2.1). An incised stone fragment was discovered in the same tumulus (JE 53827 = Leibovitch 1934, fig. 4?).

Sinai 363 (figures 73, 74)

Stone plaque (fragment?), 17 x 14 cm

Discovered in a tumulus, 50 m south of Mine L

Cairo Museum, JE 53820; basement, or else in the Cairo Desert Institute (not located)

Source for collation: Butin 1932, pl. XX

Bibliography: Grimme 1939; see also section 3.1.7

The plaque has four columns of text. The surface of the stone has flaked off in the upper right-hand area of the stone, and several letters have disappeared. The surface is covered with black patina and is well smoothed, and the photograph is accurate. The letters are unusual in shape, and some of them are unique. The disagreement between copyists is limited to the shape of only one letter.

The text reads, from right to left:

Column 1: $xx(x?)'$
 Column 2: $xx(x?)t\dot{n}x\dot{n}t\dot{n}$
 Column 3: $'ht'$
 Column 4: $k\dot{n}\dot{d}'$

The signs in column 2 which have been read as doubtful *nuns* do not resemble the definite *nun* in column 4 (though it should be noticed that each of the four *aleps* differs from the other, and see below). Between the two *nuns*(?) is a short horizontal line, which is missing only from Albright's drawing. If not a flaw in the stone it could be a sign (for a numeral)? A word divider would be inappropriate at this point.

The first sign in column 4 is a *kap* (palm with four fingers, thus Butin 1932, 190 and Leibovitch 1934, pl. VI, sign XX, as against Grimme 1939, 59 and Albright 1966). It seems that when the third finger from the left was being inscribed, the engraving tool slipped and entered the already existing mark made for the second finger $1\lfloor 2\lfloor 3\lfloor 4$. Though the original could not unfortunately be examined, the sign is very clear in the photograph. Albright's reconstruction – as a *he* – is incompatible with the shape of the letter. The "hovering" *he* was one of Grimme's favourites but does not actually exist; nor is it appropriate since it is completely different from the standing man it is meant to depict. (A single *he*, which is slightly bent, occurs in inscription 365a.) The incision under the *kap* looks like a "slip of the pen". The letter at the bottom of the column is unusual, and Grimme (1939) suggested that it may be a fish. Even so, in the absence of any better suggestion (see above), I would agree with Butin (1932) and Leibovitch (1934), who identify it as an *alep*. The "extra" lines look like inadvertent continuations of the strokes. Albright does not accept the *alep*, and contents himself with a question mark. The two upper *aleps* are very linear, and are reminiscent of the Raddana handle *alep* (see section 4.2.1).

Albright reads the columns from left to right. He reconstructs a missing letter at the top of column 1, although there are two or three missing letters there. This is also the case in column 2. In column 4, Albright has in my opinion mis-identified the upper letter while ignoring the lower one. Thus, of his reading, only $'ht'$ in column 3, perhaps a personal name, is left.

Sinai 364 (figures 75, 76)

Stone plaque (fragment?), 14 x 12 cm

Discovered in the dumps in front of Mine M

Cairo Museum, JE 53821; basement (not located)

Source for collation: Butin 1932, pl. XXI

Bibliography: see section 3.1.7

The stone is well smoothed, and the photograph is good enough for examination of the text. It is composed of a single column, containing four letters. The base is intact, but the top is broken. The inscription is interesting,

as it is more linear than usual. In spite of the unusual form of the letters, they clearly read $?|bn\dot{s}r$, as in inscription 352, perhaps *bnzr*, a personal name.

Sinai 365 (figures 77–80)

Fragment of a stone plaque, inscribed on both sides, 15 x 12 cm

Discovered in the tumuli field known as the "Camp of the Egyptians", on the ground and not in a tumulus

Cairo Museum, JE 53822; exhibited in the same place as Sinai 346

Source for collation: the original

Bibliography: see section 3.1.7

The stone is roughly rectangular, and it is thus possible that the inscription is almost complete, and certainly so on the right and left side.

Face A. Column 1:	$? t\dot{t}b\dot{n}m ?$
Between cols. 1 and 2:	$h ?$
Column 2:	$x\dot{n}\dot{d} ?$
Column 3:	$? tb^c t ?$

Five of the signs are "full" (*alep*, the two *bets*, *cayin* and the uppermost sign in column 2), see also chapter 5. The *nun* is very similar to the *nun* in column 4 of inscription 363. The *cayin* resembles the last letter in inscription 357. The *lamed* is different from most other Proto-Sinaitic *lameds*, and coincidentally is similar to the *lameds* of the Fekheriye statue.

The central column is unclear, both the sign at its top (which Leibovitch, 1934, 91–92, tried to split up into three signs) and those which follow it. If the uppermost sign is a "full" *kap* (as suggested to me by Baruch Brandl), there is a string of letters here similar to that in inscription 363, column 4. If the text is complete, the signs are interposed, as in inscription 361 and others. Albright (1966, 26) considers that it is incomplete, and reconstructs $b^c|t$ at the bottom of column 1.

Face B. The text here is composed of a vertical column and a short horizontal line at the bottom: $?|d\dot{t}x'rh|t\dot{x}|$.

Even though very faintly incised, the letters $\dot{d}\dot{t}$ must have been written when the stone was already damaged, since otherwise they would not have survived at all. After them, there is room for a single letter (or two?), but it is unclear whether this was filled in. The reading of this inscription is uncertain, because of the scrambling of the letters. If $'rh|t$ is read, one must ignore the letter between \dot{h} and $\dot{t}aw$ which looks like a *lamed*. The proposed *kap* at the bottom of the text (Albright 1966, 27) is very doubtful, since the right-hand "finger" is simply the tail of the *lamed*(?) above it. Albright reconstructed $\dot{d}\dot{t}|^c$ at the top of the column, but $\dot{d}\dot{t}|b$ as in inscription 360 would be equally possible.

Albright observed that face B is more cursive in style than face A, and was perhaps written by a different hand. If we compare inscription 365 to

inscription 363 with its four kinds of *alep* and two types of *nun*, we can see that this is not necessarily so.

Sinai 367 (figures 81, 82)

Stone block with an inscription in a steliform panel; dimensions of the panel 26 x 14 cm

Discovered in a tumulus, 150 m south of Mine L, not far(?) from Sinai 370 and 373c

Cairo Museum, JE 53815; basement (not located)

Source for collation: Butin 1932, pl. XVII

Bibliography: see section 3.1.7

The stone was originally larger, but was trimmed at the edges, beyond the frame, by Butin's workmen to facilitate its transportation to Cairo. The text comprises a single column of script, with six signs. Unfortunately, I was not able to examine the original, and the only published photograph is not sufficiently good, due to the bad state of preservation of the inscription. The three scholars who have copied it – Butin, Leibovitch and Albright – agree on the shape of only the first and fifth signs.

The inscription reads: *gh^cri*.

The shape of the first letter is clear, but *gimel* is one of the most problematic of the Proto-Sinaitic letters – see inscription 353 and the discussion of the letter in chapter 5. The lower part of the second letter is not clear from the photograph; *het* would be possible. The *^cayin* is according to Butin and Leibovitch. The next sign looks like a human head, viewed frontally. There is no justification for viewing the eyes as a "later addition" (Albright 1966, 27), and it is difficult to see them as flaws in the stone, though there is no other example of an *en face resh* with eyes. It is possible to read the last sign as *lamed*, but *t* is also possible (Butin 1932), as well as a flat *bet* (Leibovitch 1934) or *qop*, since the left-hand side of the letter is broken.

Albright read *yhn^bcl*, a personal name – an attractive suggestion, but in part contradicting the letters visible from the photograph. As observed above, I cannot make any contribution to the reading of this inscription. In figure 81, Butin's drawing has been reproduced unaltered, since from the photograph it seems to be the most reliable.

The next two inscriptions were found in Serabit el-Khadem by the joint expedition in 1935.

Sinai 374 (figures 83–85)

Stone plaque (shaped as a stele?), 19 x 12 cm

Discovered in the excavations of Mine M

Cairo Museum, JE 65466; basement, or in the Cairo Desert Institute (not located)

Sources for collation: Butin 1936, fig. 19; Leibovitch 1940, pl. XIV

Bibliography: see section 3.1.7

Four columns of text cover part of the stone. The inscription is very faint, and it is possible that someone tried to smooth off the stone anew and erase the text. The stone seems to be broken on the right-hand side (Starr 1936, 23).

Column 1: ?'n

Column 2: *ttnd*?

Column 3: [*m'*]*hbb^cit*

Column 4: *xt* (perhaps *tt*)

Notice the two definite *bets* in *m'hbb^cit*. The position of the two signs in column 4 suggests that they are additions to column 3. The traces of the first would fit an upright *t*, and if so, would provide the only example of this stance in a Proto-Sinaitic inscription. Butin (1936, 40) hesitantly identified this mark as *mem*, while Leibovitch (1940, 104) thought it was a *lamed*. Albright thought that only part of columns 1 and 2 had been preserved. According to his usual method, he interpreted the extra *bet* in column 3 as a preposition, in spite of the fact that it would be redundant here. He read the upper letter in column 4 as *t*(?).

Sinai 375 (figures 86–88)

Fragments of a stone plaque, some of which are missing; present dimensions 25 x 25 cm

Discovered in the excavations of Mine M

Cairo Museum, JE 65467; basement, or else in the Cairo Desert Institute (not located)

Sources for collation: Butin 1936, fig. 21; Leibovitch 1940, pl. XIV

Bibliography: see section 3.1.7

The text is composed of four columns of strongly engraved letters, and while the script is not particularly neat, all the signs are clear except two which neither Butin's nor Leibovitch's photographs elucidate.

Despite the fact that the uppermost letter of every column is inscribed at a different height, they are all at an equal distance from the stone's edges. If this is not a coincidence, then the upper part of the inscription must be complete. It is without doubt complete on all other sides, as can be seen from the wide margins, except perhaps for the second column from the right which is missing a sign or two from the bottom. Albright (1966, 28) thought that the inscription itself was intact, but that the text had not been finished, since his decipherment did not produce a meaningful text.

Column 1: 'rht
 Column 2: mp'dt[?
 Column 3: *llt*βtm
 Column 4: md^ctpn

If column 2 was originally the same length as the other columns, it must be missing one or two letters. Albright's reading assumes that the column is complete as it is. For the identification of the *pe*, see the discussion of this letter in chapter 5. The first and third letters in column 3 have been identified as *ts* (Butin 1936, 36–37 etc.), even though they are inverted. The extra vertical line of the second of these letters (thus Leibovitch 1940) seemed to Butin (1936, 37) to be a flaw in the stone. The next two signs are particularly problematic. Butin (1936, 41) suggests *lamed bet*, and Leibovitch (1940, 106) copied them as our *resh het*; Albright (1966) sees them as *g bet* (the identification of *g* is pure speculation; see the discussion in chapter 5). My suggestion – *resh(?) bet(?)* – is perhaps not much better than the others since it is based solely on the photograph,³⁰ and in the case of the *bet*, involves ignoring the line(s) to the right.

The next five inscriptions have hitherto been named after their discoverers. They are numbered in accordance with the existing system (see Sass 1982, 360). For the location of inscriptions 376 and 377 see figures 89, 90; for inscriptions 379 and 380 see figures 99, 100).

Sinai 376 (figures 91–93)

Rock inscription; maximum dimensions of the actual text, 18 cm high and 20 cm wide

Discovered at the end of the 1950s (1959?) by Gerster, on a saddle about 800 m north-east of Bir en-Naṣb on the ancient path to Serabit el-Khadem; inscription 377 was inscribed next to it

In situ

Source for collation: the original

Bibliography: Gerster 1961, 61; Leibovitch 1961; *Gardiner 1962; Leibovitch 1963; Albright 1963; Cross 1967, 16–17; Rainey 1975, 106–111; Sass 1982, *passim*

The inscription consists of four columnss of text, with that on the right particularly badly damaged. The text seems to be complete at the top, but is broken off below. It reads (from right to left, and from top to bottom):

Column 1: ?]t^xrx[?

30. Butin based his work on photographs of the 1935 expedition and the Cairo Museum, as well as on Starr's copy, which was made from the originals, and corresponded with Leibovitch, who had the original stones (374 and 375, see Leibovitch 1940, 102–107). Albright made a copy from the expedition's photographs, and my copies were made from the photographs of the expedition and the Cairo Museum (= Leibovitch), each of which was taken under different lighting conditions.

Column 2: 'd[?]

Column 3: *twḥbr*[?]

Column 4: *wl^ch*[?]

Albright thought that the first column is actually a 13th Dynasty Egyptian cartouche (see figure 92 and Sass 1982, 363–364). Cross (1967, note 56) was doubtful whether this column really belonged to the text, but if so, he would read the uppermost letter as *d*. Rainey (1975) correctly identified it as *taw*, as Gardiner had earlier. The next letter has been identified as *kap* by both Cross and Rainey. This seems to be possible from the photograph, but examination of the original casts considerable doubt on this. Cross takes no notice of the horizontal stroke below the *resh*. Rainey reconstructs it as *bet*, which is possible, though *d*, *het* and other letters are equally likely. The form of the *taw* in column 3 is unusual (as in column 1). The *waw* here is not as clear as the other example, in column 4, but its identification is almost certain. The lowest letter is problematical. It does not resemble the *resh* in column 1, but I have no better suggestion than this to offer. Rainey (1975) correctly agreed with the identification of the letters in column 4 given by Albright (and followed here), after Cross (1967, 16–17*) suggested reading the second letter as *yod* and splitting up the last letter into *qop* and *bet*.

Of the three suggested readings (all from right to left), that of Rainey agrees with the identification of the signs offered here. Rainey was also the only one of the three scholars to examine the original inscription. As mentioned above, Albright (1966) abandoned the first column, and read the remaining signs in boustrophedon fashion: 'd [l] *tw ḥbr* [n]ḥ *clw*. This interpretation means that the first column must be read from bottom to top; it also assumes that all the columns were the same length; and it forces more letters than possible into column 3. It is also not particularly satisfactory from a linguistic viewpoint. In addition, not a single word from Albright's reading corresponds with one from those of Rainey and Cross. Cross also reads the text boustrophedon fashion: [*d*]kr 'd' rb *ḥwt wy^cqb*. Rainey (1975) corrects this to [*b*]rkt 'd' rb *ḥwt wl^ch*. See above for reservations about Cross' reading of the first and last words.³¹ Reading the text from right to left while the letters face right contradicts Cross' assertion in the same article (1967, 14*) that the direction of reading the Proto-Sinaitic inscriptions should be opposite to that of Egyptian (*ibid.*, note 38). It seems to me that inscriptions 358, 362, 375 and 380 demonstrate that the direction of the signs has no significance (cf. section 5.1), see, however, the discussion of Sinai 380 below. Another serious limitation of the attempts at interpretation is the assumption that this text is complete, especially at the bottom.

Albright (1966, note 22 and pp. 12, 28–29) considered this text to be the earliest Proto-Sinaitic inscription because of the detailed shapes of the pictographs, and Rainey agrees with him (1975, 107). I cannot share this opinion – see chapter 5 (especially the discussion of *alep*, *dalet* and *het*) and section 6.1.5.

31. If the reading *y^cqb* were correct, this would have made the identification of *qop* certain (see the discussion of this letter in chapter 5).

Sinai 377 (figures 94–96)

Fragments of a rock inscription in a steliform panel; panel width 27 cm, estimated panel height 40–45 cm (now 37 cm)

Discovered in 1905 by Petrie; rediscovered and correctly identified at the end of the 1950s (1959?) by Gerster (see inscription **376**)

In situ

Source for collation: the original

Bibliography: *Sinai* I, 1917, pl. XIV:46; Leibovitch 1934a, 182–183; *Sinai* II, 202; for the rest of the bibliography, see **Sinai 376**, except for Cross and Rainey, who do not discuss inscription 377

Three letters survive here which may have been part of a larger text; if so, they would perhaps represent the remains of two columns. Conversely, if they are the only letters, it would seem that the person who inscribed them made use of an existing panel, see Sass 1982, 366–367.

The letters are *mem*, *alep* and *lamed*. The last one is definitely not *ʿayin*; Gardiner's drawing of it (1962, fig. 1) is the most accurate. 'l has been identified as the name of the god El in inscriptions **350**, **363** and **378**.

Sinai 378 (figures 97, 98)

Fragment of a stone plaque with the remains of a panel frame; dimensions of the fragment, 19 x 15 cm

Discovered by I. Beit-Arieh in 1977 in the excavation of Mine L

IDAM S/79.3

Source for collation: the original

Bibliography: Beit-Arieh 1978, 178; Sass 1982, 360

Alep and *lamed* are inscribed on the fragment, which, judging by the empty margins, form a complete word, and may constitute the entire text. For 'l, see inscription **377**.

The next two inscriptions were found at Serabit el-Khadem in 1977 by Judith Dekel and myself, and provided the first impetus towards the writing of this book. They are inscribed about three metres apart.

Sinai 379 (figures 101, 102)

Rock inscription, dimensions of the text 18 x 11 cm

Discovered at the opening of a mine on the south-east of the Serabit el-Khadem plateau (figures 99, 100)

In situ

Source for collation: the original

Bibliography: Sass 1978, 183–185; 1982, 360

The inscription consists of a single column: ?|*mymh*. Some letters may be missing at the top, but it definitely ends with *he*, as was determined from painstaking examination both in daylight and at night with the aid of a torch. At first glance the scratches beneath the *he* would seem to allow the reconstruction *mhb^clt*, an excellent possibility but for the fact that the supposed *bet* seems to me to be a combination of natural marks which continue both to the right and left. We have an almost complete *yod* here for the first time in a Proto-Sinaitic text (see chapter 5), as well as a *he* which definitely ends a word. For the identification of the *he* as an adverbial suffix (*he locale*), see Rainey's suggestion in Sass 1978, 185, and for the possibility of a diphthong *ay* see *ibid.* and section 3.3.2.

Sinai 380 (figures 103–105)

Rock inscription; dimensions of the text 22 x 11 cm

Discovered near Sinai 379

In situ

Source for collation: the original

Bibliography: Sass 1978, 185–187; 1982, 360

The inscription includes a vertical column and a horizontal line split into two parts. From the top left, the letters run: *qnmnmtlxrx(x?)*.

For the direction of reading the inscription, like that of Sinai 357, see Sass 1978, 185–186. It is worth noting that, as in inscription 357, the letters in the vertical column face left, while those in the horizontal line face right. For the identification of problematic letters see *loc. cit.* The only change I would now make would be to drop the incorrect comparisons intended to reinforce the reading of sign 12 (see figure 103) as *tet*. I have no alternative reading.

The main reinforcement in reading this inscription as a single text comes from inscription 357. However, it is not certain that it should not be read as two, or even three, separate texts.

3.2.2 Miscellaneous

This section includes 17 stones which may possibly bear Proto-Sinaitic inscriptions but which are too damaged to be legible, or which were formerly thought to bear Proto-Sinaitic inscriptions.

Sinai 46a (figure 94)

Rock inscription in a steliform panel, reconstructed dimensions c. 30 x 40 cm

Discovered in 1905 by Petrie together with inscription 377 and the Egyptian inscription 46

In situ

Source for collation: the original

Bibliography: in Sass 1982, *passim*

This rock inscription has been almost completely erased. It is not clear whether it was Egyptian or Proto-Sinaitic.

Sinai 366–375c were discovered by the joint expedition, **366–373c** in 1930 and the rest in 1935.

Sinai 366 (figures 106–108)

Trapezoidal stone plaque (complete?), 13 x 9 cm

Discovered in Mine L, near the entrance

Cairo Museum, JE 53823; basement (not located)

Source for collation: Butin 1932, pl. XXIII

Bibliography: see section 3.1.7

Perhaps traces of a short vertical inscription, possibly Proto-Sinaitic.

Sinai 368 (figures 109–111)

Stele, 31 x 19 cm

Discovered in a tumulus, about 75 m south of Mine L

Cairo Museum, JE 53818; basement (not located)

Source for collation: Butin 1932, pl. XXIV

Bibliography: see section 3.1.7

The polished surface of the stele has flaked off together with the inscription, except for traces of four(?) letters, almost certainly Proto-Sinaitic, on the upper left. The right-hand letter looks like an *alep*, and the one on the left like an *ayin*. The direction of the writing is not clear.

Sinai 369

Egyptian inscription; see *Sinai* II, 202.

Sinai 370 (figures 112–114)

Stone plaque (stele?), 21 x 14 cm

Discovered not far from Mine L, to the south, a few paces away from inscription **367** (Butin 1932, 197) or in a tumulus about 100 m south of Mine L (thus the JE); perhaps both descriptions refer to the same spot

Cairo Museum, JE 53825; basement, or else in the Cairo Desert Institute (not located)

Source for collation: Butin 1932, pl. XXIII

Bibliography: see section 3.1.7

Unidentified scratches.

Sinai 371 (figures 115–117)

Stone plaque, 27 x 18 cm

Discovered near a tumulus, not far from inscription **360** (it is not clear whether this means in the same tumulus in which inscription **360** was found)

Cairo Museum, JE 53824; basement, or else in the Cairo Desert Institute (not located)

Source for collation: Butin 1932, pl. XXI

Bibliography: Martin 1961, 61, note 1; see also section 3.1.7

A bird and two unidentified signs are engraved on the stone.

Sinai 372a (figures 118–120)

Stone plaque, 18 x 14 cm

Discovered "in a tumulus immediately to the south of Mine L, together with inscription **372b**" (Butin 1932, 198), or "together with inscription **362**" (JE)

Cairo Museum, JE 53826; basement, or else in the Cairo Desert Institute (not located)

Source for collation: Butin 1932, pl. XXVI

Bibliography: see section 3.1.7

Unidentified sign.

Sinai 372b (figures 121, 122)

Stone plaque, 11 x 8 cm

Discovered in a tumulus, 50 m south of Mine L (see inscription **372a**)

Cairo Museum, JE 53828; basement, or in the Cairo Desert Institute (not located)

Source for collation: Butin 1932, pl. XXVI

Bibliography: see section 3.1.7

Unidentified sign.

Sinai 373 (figures 123, 124)

Scratches on the rock; the incised area was cut out of the rock by its discoverers and its dimensions are 52 x 30 cm

Discovered at the entrance to a mine, on the north of Mine L

Cairo Museum, JE 53830; basement (not located)

Source for collation: Butin 1932, pl. XVI

Bibliography: Butin 1932, note 14 and pp. 198–199; Leibovitch 1934, 97–98; Grimme 1937, 62–63

Unidentified scratches, not Proto-Sinaitic.

The next three inscriptions were not given numbers by their discoverers. I have numbered them in continuation from **373**.

Sinai 373a (figures 125–127)

Stone plaque, 31 x 18 cm

Discovered on the ground, east of Mine A (II according to Butin)

Cairo Museum, JE 53832; basement (not located)

Source for collation: Butin 1932, pl. XXIV

Bibliography: Butin 1932, 199; Leibovitch 1934, 98 (his No. 32 or **374**); Grimme 1937, 45–51 (his No. **373**)

Unclear grooves, probably natural.

Sinai 373b (figure 128)

Rock inscription(?), 20 x 7 cm

Three letters which Butin claimed to have seen at the entrance to Mine L

In situ(?)

Source for collation: none

Bibliography: Lake 1932, 99; Barrois 1932, 113; Butin 1932, 132–133, 200; Leibovitch 1934, 98–99 (his No. 33 or **375**); Grimme 1937, 61–62 (his No. **375**)

On the last day of the joint expedition's stay at Serabiṭ el-Khadem, Butin was the last person left at the site; it was then that he discovered, copied and photographed this inscription. The photograph did not come out well. In 1931, during a short stay at Serabiṭ el-Khadem, the expedition members (this time without Butin) searched unsuccessfully for the inscription, and it has never since been located. If indeed the letters do resemble Butin's copy, then we have from right to left *he*, *lamed* and *alep*. This is one of the few horizontal texts known – if it is not actually composed of adjoining letters from three columns of text.

Sinai 373c (figures 129–131)

Stone plaque, 22 x 16 cm

Discovered next to inscription **367** (JE)

Cairo Museum, JE 53829; basement, or in the Cairo Desert Institute (not located)

Source for collation: Grimme 1937, pl. VIII (face A), photograph in JE (face B)

Bibliography: not in Butin 1932; Leibovitch 1934, 100 (his No. 36 or **376**); Grimme 1937, 40–42, 61; 1939, 61 (his Nos. **372C** and **374**)

It is clear from Leibovitch and from what was entered in the JE that this stone was brought from Serabit el-Khadem in 1930 by the joint expedition. The (natural?) marks on both its sides definitely do not belong to any writing system. Grimme, who was sent photographs of both sides of the stone from the Cairo Museum (though he only published one side), also obtained a plaster cast of face A. He mistakenly published it as a completely separate inscription (1937, 61 and pl. XII – only a drawing; his No. **374**).

The next three stones were discovered at Serabit el-Khadem in 1935 by the joint expedition, and I have assigned them numbers which continue in sequence from the last number (**375**) used by the expedition. Butin (1936, 42) hints that they disappeared in the Cairo Museum. Leibovitch (1940, 101) wrote that they were taken to the United States by the expedition.

Sinai 375a (figures 132, 133)

Stone plaque (stele?), 17 x 13 cm

Discovered in the excavation of Mine M

Source for collation: Butin 1936, fig. 18

Bibliography: Starr and Butin 1936, 22, 42; Grimme 1937, 156–163; Leibovitch 1940, 101–102, 107–108 (his No. 40)

This may be an erased Proto-Sinaitic inscription. The text is inscribed around the edges of the stone(?), and it is perhaps possible to make out an *alep, kap* and *ayin* with a pupil. There are some drawings(?) in the centre. The direction of the writing is not clear, and the positioning of the drawing and photograph (figs. 132, 133), with the curved side up, may be right if the person who prepared the stone had a steliform shape in mind. Writing around the edges of the stone is not known from other Proto-Sinaitic inscriptions, but is a feature of North Arabian texts.

Sinai 375b (figures 134, 135)

Stele(?) fragment; dimensions unknown

Discovered in the excavation of Mine M

Source for collation: Butin 1936, figure 20

Bibliography: Starr and Butin 1936, 23, 42; Leibovitch 1940, 108 (his No. 41); not in Grimme

Unidentified sign, perhaps similar to that in inscription 358 which is reminiscent of *sade*.

Sinai 375c (figures 136, 137)

Stone slab (stele?), 22 x 16 cm

Discovered in a tumulus above Mine M

Source for collation: Butin 1936, figure 22

Bibliography: Starr and Butin 1936, 23, 42; Grimme 1937, 163–164 (no number); Leibovitch 1940, 110–111 (his No. 48)

Unidentified signs. One looks like a later *alep*, and Cross (1962a, 14) compares it to the *alep* on the Revadim seal, even though it is not at all clear whether the signs on Sinai 375c are actually letters.

Sinai 375d (figures 137, 138)

Leibovitch (1940, 111) wrote: "...a fragment exists somewhere(?), of which only a photo is available... but I shall not deal with [it] until it is found..." Nothing else is known about this stone. If the text is indeed Proto-Sinaitic, then only two *bets* can be identified, like those on Sinai 357, 375 and perhaps 351.

Sinai 380a

Kovalski announced the discovery of a new Proto-Sinaitic inscription at Rod el-^cAir, on the west of the Serabit el-Khadem plateau (letter from R. Giveon, 4 December 1978; Cazelles 1979). In 1979 I examined the supposed site of the inscription, as described to Giveon by Kovalski; it is clear (if it is the same spot) that the "inscription" consists of very shallow and seemingly fresh scratches, of an X and one or two other signs, probably made recently by tourists or Bedouin.

For Sinai 527, see the end of section 4.2.3.

3.3 Decipherment of the Proto-Sinaitic inscriptions – a review**3.3.1 Introduction**

In 1966, Albright offered a decipherment of all the Proto-Sinaitic inscriptions, based mainly on his 1948 study. He took care that his readings should agree with – or at least not contradict – mid-second-millennium-BC West Semitic languages, especially Ugaritic. Earlier elements, such as mimation (Albright

1966, 6), which could have undermined this dating, were not identified. Nevertheless, this does not mean that the Proto-Sinaitic inscriptions have been finally deciphered. There are not enough of them, and they are mostly in a bad state of preservation. Some of the letters are still unidentified, and word division is mostly uncertain. A good example is inscription 376, which was read quite differently by Albright, Cross (1967, 16-17) and Rainey (1975, 108-111). Collation of the texts (see section 3.2.1) allows us to review Albright's linguistic treatment of them (1966, chapters IV and V). In the following pages, Albright's grammar and glossary are discussed, in the order in which they appear in his 1966 study.

3.3.2 Phonology

Not securely identified letter - *gimel*.

Incorrectly identified letter - *ḡ* (and *ś*?).

Shifts

The shifts *z* > *s* and *ś* > *t* are unproven.

Assimilation

- Preformative *š* of the Shaphel to initial *t* of the verbal root:

ttbn (365a) - the letters exist, but word division and translation are doubtful.

mtt^c (352) - incorrect reading.

- *nun* to the following consonant:

tt (352) - the letters exist, but word division and translation are doubtful.

mtn (346, 363), *gt* (Lachish prism) - incorrect reading.

- Non-assimilation of *nun*:

'nt (*passim*), *tnl* (347) - probably correct (see also note 16).

gnt (353), *šnšln* (356), *hnd* (363) - incorrect reading.

Diphthongs

- Contraction

ldy (346), *tb* (*passim*) - possible.

^clm (358) - the reading is correct, but the presumed original diphthong poses difficulties (Donner 1967, 279; Rainey 1975, note 42).

ḡbt (375), *tk* (350) - incorrect reading.

- Retention

?*mymh* (379) - reasonable (Rainey).

3.3.3 Morphology

Pronouns

- Personal

--- Indep. 2nd masc. sing.:

'nt (*passim*) - probably correct.

--- Dep. 1st sing.:

-*m* - see 3rd masc. sing.

-*n* (*passim*) - none of the readings is certain.

--- Dep. 3rd masc. sing.:

-*y* (*ldy*, 346) - possible.

-*w* (*^clw*, 376) - the letters exist, but word division and translation are doubtful.

– *m* (*passim*) – following Donner's criticism (1967, 278) Albright at least partially changed the pronoun to the first person (1969, 46). Other interpretations are possible in most cases (but see Rainey 1972, 396).

– Demonstrative and relative

d, *dt* (*passim*) – probably correct.

hnd (363) – incorrect reading.

Nouns

– Masc. sing.:

bn (352, 364), *btñ* (*passim*), *mr'* (357), *mt* (*passim*), *nqb/nqbn* (*passim*), *clm* (358), *rb* (*passim*) – certain or at least possible.

mn (357), *mtñ* (346, 363), *t^c* (*passim*), *tn* (353) – uncertain or incorrect reading.

– Masc. dual:

mtm (361) – from the context this seems possible, but if the translation were correct, then *mt* in inscriptions 351 and 360 will have to be understood as dual too, though they lack *mem* and Albright translated them as plurals. An even greater difficulty is that in both cases which do have *mem* (353 and 361), *hb^clt* follows. In 353, where only *dt btñ* is mentioned, Albright assumed that *taw* had been forgotten, and reconstructed *mt<t>m* ("my lady"; 1969, 46 erroneously "my lord"), and the *mem* is somehow interpreted as a personal pronoun. In 361, however, both *d tb* and *dt btñ* are mentioned, but the muddled writing of columns 1 and 2 probably indicates that the *mem* is joined not to the preceding word (*mt*–) but rather to the next one (*–hb[^clt]*). This provides further evidence of *mhb^clt* being a variant spelling of *m'hb^clt* and *m'hbb^clt* (see the discussion of inscription 345 in chapter 3).

– Masc. plur.:

nqbnm (349) – not entirely impossible, but the *mem* could be interpreted differently.

– Fem. sing.:

'rht (*passim*), *mr^ct* (346), *tnt* (347) – reasonable.

md^ct, *p'dt* (375) – possible.

clt (*passim*), *t't* (353; not 349) – the letters exist, but word division and translation are doubtful (for *clt* see chapter 3, inscription 345).

gnt (353), *mttm* (348, 353), *gbt* (375) – incorrect reading.

– Fem. dual:

'rhtm (375) – the attribution of the *mem* to this word and its identification as the dual suffix are doubtful.

lb'tm (352) – incorrect reading.

– Fem. plur.:

gbt – see Fem. sing.

– *Maqtal*:

mr^ct (346), *md^ct* (375) – possible.

mtñ (346, 363), *mnht* (352) – incorrect reading.

– *Qatlan*:

nqbn (346, 349) – possible.

Verbs

– *Qal*

-- Imperative:

dk (357), *rk* (349), *tn* (374; not 349 and 376) – possible.

m', *hb* (*passim*) – doubtful, see section 3.2.1, inscription 345.

sm/tm (353, col. 3; not col. 2) – *tm* may perhaps exist, but word division, identification of *s* and translation are doubtful.

c_zn (352), *t^c* (*passim*), *tnn* (352) – incorrect reading except for one *t^c* in inscription 349; there, however, Albright reconstructs [*'ly*]*t^c*.

-- Perfect:

ntn (363) – the letters probably exist.

-- Imperfect:

ndbh (345) – reconstructed, but possible.

ttn (374) – the letters exist, but in his discussion of the inscription (p. 28) Albright assigns the first *taw* to the preceding word (*'nt tn*, and thus also *'nt* in the glossary).

yhn (367) – probably an incorrect reading.

yt^c (349) – incorrect reading.

– *Pi^cel*

-- Imperative:

hl^sn (350) – incorrect reading.

– Shaphel

-- Imperative:

ttbn (365a) – the letters exist, but word division and the shift *š>t* are highly doubtful.

šn^sln (356) – incorrect reading.

-- Participle:

mtt^c (352) – incorrect reading.

Particles

– Enclitic *mem*

c_rkm (349), *d_km* (357) – possible.

– Prepositions

-- *'t*:

360; reconstructed in 351 and 361 – reasonable.

-- *b*:

btk (350) – incorrect reading.

b^clt (374) – the word division is unlikely, see section 3.2.1, inscription 345.

-- *k*:

lb^clt (*passim*) – reasonable.

ldy (346, with the meaning "in") – probable.

ltt (352, with the meaning "from") – the letters exist, but word division and translation are doubtful.

lpn (353, twice) – incorrect reading.

-- *c_l*:

346, twice – reasonable.

c_lw (376) – the letters exist, but word division and translation are doubtful.

Numerals

tt (352) – the letters exist, but word division and translation are doubtful.

ltt (375) – the reading is problematic, but possible.

3.3.4 Glossary

Certain or probable readings (most of them documented more than once):

'd (358, Rainey; not 376), *'l* (*passim*), *'nt* (*passim*), *'rht* (*passim*), *'t* (360, reconstructed in 351 and 361), *b^clt* (*passim*), *bn^sr* (352, 364), *b_tn* (*passim*), *d* (*passim*), *d_t* (*passim*), *l* (*passim*), *mr^ct* (346), *m_t* (*passim*, though the gender and

number reconstructions are doubtful), *n^cm* (346, twice), *nqb/nqbn* (*passim*), *^cl* (346, twice), *^clm* (358), *rb* (*passim*), *tb* (*passim*), *tnt* (347).

Problematic but possible:

'bb (357, see *mlk*), *'bm* (362), *'h* (362), *'hn* (349), *'ht'* (363), *dkm* (357), *ldy* (346), *md^ct* (375), *mlk* (357, Beit-Arieh, Rainey), *mr'* (357), *ndbh* (345), *ntn* (363), *^crkm* (349), *p'dt* (375), *pnm* (375), *šm^c* (357), *tl^c* (375), *tpn* (357), *tn* (verb) (374, not in 349).

Letters exist, but word division and translation are problematic:

hbr (376), *m' hb ^clt* (*passim*, see section 3.2.1, inscription 345), *^clw* (376), *šm/tm* (353, col. 3, not col. 2), *t't* (353, not in the other examples), *ttbn* (365a), *tt* (352).

Word division seems likely, but identification of the letters is problematic:

wwt (351).

Incorrect reading:

'lyt^c (349), *'t^c* (352), *b* (350, 374), *bnh* (349), *btk* (350), *gnt* (353), *hnd* (363), *hlšn* (350), *yhnbc^cl* (367), *k* (365b), *lb'tm* (352), *lpn* (353, twice), *mn* 8 (357, emend to *mlk*), *mnht* (352), *mtt^c* (352), *mtn* (346, 363), *nh* (376), *^czn* (352), *^cprm* (357), *gbt* (375), *glyn* (353), *šnšln* (356), *t^c* (*passim*), *tn* (noun, 353), *tnn* (352).

3.3.5 Balance

Those of Albright's interpretations which remain include most of the letters, possibly the evidence for the non-assimilation of *nun*, some of the contracted diphthongs, two of the five personal pronouns, two relative pronouns, thirteen, at most, of the 28 nouns, and about half of the prepositions. As far as verbs are concerned, about half the examples of the *qal* are acceptable. About half the words in his glossary are correct or at least possible. In inscription 379, discovered after Albright's death, there is a possibility that a diphthong is preserved, which may have some bearing on a higher date for the texts.

Those of Albright's conclusions which cannot be upheld include the identification of one to three letters, the shifts, the assimilations, some of the contracted diphthongs, most of the personal pronouns, a demonstrative pronoun, most of the nouns and about half the prepositions. In the verbs, about half the examples of *qal* are doubtful or wrong, the single example of *pi^cel* is incorrect, and the proof of the existence of the Shaphel is based on hypothetical word division of a single example (the other two examples are incorrect readings). About half of the words in the glossary cannot be retained.

Any attempt to deal with the Proto-Sinaitic inscriptions necessitates some degree of reconstruction, but one must ask where the border between reconstruction and imagination really lies. A case in point is inscription 349: Albright's reading includes 58 letters, but only 27 – less than half – actually exist. In inscription 352 too Albright saw 40 letters, while only 26 are preserved. It would not be far off the mark to say of these two damaged inscriptions that they were rewritten by Albright.

3.3.6 The place of the Proto-Sinaitic inscriptions in Northwest Semitic

The phonetic structure of the inscriptions is not clear enough to justify Albright's contention that it definitely demonstrates a Late Bronze date (see section 6.1.4). The theory's reliance on the Shaphel as a parallel to Ugaritic rests on extremely infirm foundations: two of Albright's three examples of it have fallen by the wayside – the identification of the letters was simply not correct. Since the third example is unique and uncertain, it would be unwise to exaggerate its significance. The assumption that *ś* and *t* were represented by a single grapheme as in the Egyptian transcriptions of Semitic words, is also based on two examples; in one of these the letters were incorrectly identified, and in the other, although the letters do exist, the word division and the interpretation of the composite bow shape as *ś* (rather than *t*) are guesses.

The definition of the language of the Proto-Sinaitic inscriptions as a Canaanite *koinē* or *lingua vulgaris*, which may have developed into a separate dialect (Albright's way of accounting for phenomena he could not explain otherwise), does not seem justified by the contents of the inscriptions, since the majority of Albright's linguistic conclusions cannot be substantiated. Nevertheless, it is possible at least to define the language of the texts as Northwest Semitic on the basis of their closeness in date and form of the letters to the Proto-Canaanite inscriptions.

3.3.7 Conclusions

Albright's 1966 study cannot be regarded as a decipherment of the Proto-Sinaitic inscriptions (see Cross 1967, 9, 11), and in many cases not even as a correct record of the forms of the letters, as suggested in section 3.2.1. This does not mean that decipherment is completely impossible (some of Albright's readings are probably correct, and see also Cross' and Rainey's amendments to inscriptions 357, 358 and 376), but that in the absence of many new discoveries – which are unlikely – attempts at elucidating the linguistic structure and content of the texts should be realistic (cf. Millard 1986, 393).

CHAPTER 4: THE PROTO-CANAAHITE AND EARLY PHOENICIAN INSCRIPTIONS (see table 2)

4.1 General notes

4.1.1 Introduction

THE twenty-two inscriptions³² that predate the stabilization of letter- and script-direction in the eleventh century B.C. are listed in section 4.2.1, in the chronological order summarized in sections 6.2 and 6.3. The discussion of each inscription starts with a catalogue description, followed by the archaeological context of each item and its typology, the transcription and its accuracy, and the inscription's date. Detailed discussions of the letters and of the dating appear in chapter 5 and sections 6.2 and 6.3. Of the twenty-two inscriptions, four probably date from either the Middle Bronze II period or the beginning of the Late Bronze Age, and their Proto-Canaanite attribution is not beyond doubt. The rest of the inscriptions date from the end of the Late Bronze Age or from the Iron I period, with the exception of three which may be earlier (see below). The lower limit is somewhat arbitrary, since it is possible that some of the short texts defined as early Phoenician, whose script is close to that on **Aḥiram's** sarcophagus, are actually earlier, and it may be quite by chance that their letters all run from right to left. These texts are discussed in section 4.2.2 in the same detail as the Proto-Canaanite texts in section 4.2.1.³³ The next section, 4.2.3, contains inscriptions which have not been fully published, doubtful inscriptions and those which, though not Proto-Canaanite, were defined as such in the past.

4.1.2 Distribution

The four earliest inscriptions (if correctly dated, see below) were discovered in the south and in the hill country: **Lachish**, **Tel Nagila**, **Gezer** and **Shechem**. If the problematic **Shechem** text is deleted from this list, only southern inscriptions remain. The next eleven inscriptions, from the end of the Late Bronze Age and Iron Age I (before the **el-Khaḍr arrowheads**), were discovered at sites ranging from **Zarephath** in the north to **Qubur el-Walaida** in the south (three of them – the **Lachish 7**, **Rehov** and **Hazor** texts – could be earlier). In fact, only three inscriptions are really from the north – those from **Zarephath**, **Rehov** and **Hazor**. The situation is reversed in the case of the next seven texts, as well as for those from the end of the Iron I and the beginning of the Iron II periods. Of the former, only the **el-Khaḍr arrowheads** are from the south (arrowheads I–IV are counted here as a single text), while the rest are from Byblos and unknown sites in Lebanon. The wide distribution of thirteenth–twelfth century inscriptions is evidence of the widespread use of the alphabet, at least as of this period.

32. The inscriptions on **el-Khaḍr arrowheads I–IV** are reckoned here as a single text.

33. In table 5, the letters of **Aḥiram's** sarcophagus are included for purposes of comparison.

4.1.3 Museums and collections (See also table 2 and index)

Nineteen of the 25 objects with Proto-Canaanite inscriptions (including four arrowheads from el-Khadr with similar inscriptions) were discovered in Palestine, and twelve of them are exhibited in the Pavilion of Hebrew Script and Inscriptions at the Israel Museum. Of the other seven, six are in the following places: the A. Spaer collection in Jerusalem, Tel Aviv University, a private collection abroad, Amman, London and Harvard. The seventh is lost. Of the other six inscriptions, all from Phoenicia, four are in Beirut, one is in a private collection in Lebanon, and one in a private collection in Paris.

4.1.4 The objects and the nature of their inscriptions

Fourteen of the 25 inscribed objects are made of clay. The latest one is a votive cone, linked to a slightly later group of cones, and all the rest are pottery vessels or sherds. Eleven of these were inscribed while the vessel was intact, two are sherds which were used as ostraca, and the nature of one (Lachish sherd 7) is not clear. Seven of the fourteen pottery inscriptions are incised (three before and four after firing) and the others were painted on (three before and three after firing, and one unclear example). Three texts are inscribed on bowls, one on a storage jar, two on stands, one on a cone, two on ostraca, three on jugs and two on vessels of unknown shape.

Ten inscriptions were engraved or punched in on weapons – in one case on a dagger, and in all the others on arrowheads (for additional unpublished arrowheads see section 4.2.3). The only text on stone other than the Proto-Sinaitic inscriptions is the Shechem plaque. It is of course possible that, as in the succeeding periods, most documents were written on papyrus which did not survive (see section 7.2.3).

4.1.5 Collation

I have personally examined fourteen of the twenty-five inscribed objects. The inscription on one (the Beth Shemesh ostrakon) is clearer in the photographs taken at the time of its discovery. In ten additional cases, I had only photographs at my disposal, and these were sufficient for all but one of the objects, the Rapa arrowhead, whose verso could not be read clearly. Lachish sherd No. 7 is discussed on the basis of a drawing alone, and its interpretation is tentative.

I examined only two of the early Phoenician texts – the Revadim seal and the Manahat sherd. The others were collated from photographs, two of which – those of the Nora and Tekke texts – do not allow a definite interpretation.

4.1.6 Bibliography

A selected bibliography has been listed for each inscription, usually including the *editio princeps*, its principal publication(s), and works not cited in the latter.

4.1.7 Palaeography and content of texts

The scarcity of the texts and the brevity of their contents render their contribution mainly palaeographic. At the same time, the reader is referred to the reservation expressed at the end of section 6.2 concerning dates based

solely on palaeography. The palaeographic terms "early" and "late" used here are intended to indicate whether a text is more or less advanced, but this does not necessarily possess chronological significance. Most of the palaeographic discussion is presented in chapter 5, whereas the reading (or, sometimes, the various readings) of each inscription, and several attempts of mine to contribute to the decipherment, are recorded below.

4.2 Catalogue and discussion

4.2.1 Proto-Canaanite inscriptions

Lachish dagger (figures 140, 141)

Bronze dagger, 21 x 4 cm, with incised inscription

Discovered in 1934 in Starkey's excavations, in Tomb 1502, of the Middle Bronze II period; the inscription was revealed in 1936 when the dagger was cleaned

IDAM 34.2791; exhibited in the Pavilion of Hebrew Script and Inscriptions at the Israel Museum

Source for collation: the original

Bibliography: Starkey 1937, 228; *Lachish* IV, 128; Albright 1966, 3, 10; Cross 1967, 10* and notes 11 and 12; Coote 1974, 448; *EAEHL*, 741; Sass 1978, 185

Tomb 1502 is a small, single-period tomb. Apart from this dagger, of Maxwell-Hyslop's Type 27A (1946, 28), the tomb contained another, uninscribed, dagger of the same type, a toggle pin of Henschel-Simon's Type IIB8C \emptyset (1938, 198–201), three "Hyksos" scarabs, a tripod basalt mortar, ostrich eggshell fragments and eleven pottery vessels (figure 142).

The daggers are typologically later than the multiple-ribbed and central-rib types (Maxwell-Hyslop 25 and 26 respectively). Tufnell (*Lachish* IV, 77) dates this type to around 1750–1650 B.C. The toggle pin generally appears in the Middle Bronze Age II, and the scarabs date from phase B of this period. The mortar is of less chronological importance. The pottery is indicative of a relatively late stage of the Middle Bronze Age, especially in its lack of piriform juglets, although the storage jar without handles is typologically earlier.

In figure 6 of *Lachish* IV (figure 142 here) this tomb is the last of the MB sequence. In the discussion (*Lachish* IV, p. 254), Tufnell says that the pottery is characteristic of the Middle Bronze IIB period, and that the absence of piriform juglets indicates a date later than 1700 B.C. She eventually changed her opinion (*EAEHL*, 741) and dated the entire Cemetery 1500 to the eighteenth century BC.³⁴ As far as Tomb 1502 is concerned, despite temptation to raise the date of the inscription, the lower date seems preferable.

34. In a letter of August 25, 1981 Miss Tufnell gave a rather vague answer to a question on this subject.

The text of the dagger consists of four signs incised in a vertical column. If it is indeed Proto-Canaanite, they can be read *xrnz*. Cross (1967, note 12) doubts that it is Proto-Canaanite, with some justification. The first and fourth signs cannot be identified, the second (if Proto-Canaanite) is a *resh*, and the third resembles *nun* more than any other Proto-Sinaitic letter. The letter is problematic due to the clumsy incising of curving lines on the metal blade. The fourth sign has been alternatively identified as *zayin* or *samek* for obvious reasons.

Albright (1966, 10) suggested reading the inscription *trnz*, "Turranza" – a Hurrian personal name known from the Alalakh Stratum IV texts, from the fifteenth century B.C. If this reading were certain, then the problem of *tet* and *zayin*, which have not so far been identified in the Proto-Sinaitic inscriptions, would be solved. On *tet*, see also Coote (1974, note 4); he suggested reading the sign as *cayin*, a proposal not preferable to the last. My note on the subject (1978, note 2) should be disregarded.

The date of the inscription is determined by the date of the tomb and the dagger, and not vice versa. We possess no evidence as to when *resh* (and *nun*?) ceased to be pictographic. A human head in profile appears on the Shechem plaque, which is of uncertain character and date, while the first linear *resh* known may appear on the Beth Shemesh ostrakon from the end of the Bronze Age or the beginning of the Iron Age.

This is the only inscription definitely from the Middle Bronze II period (the Gezer and Nagila texts are probably from the Late Bronze Age), but unfortunately its identification as Proto-Canaanite is not certain.

Nagila sherd (figures 143, 144)

Body sherd, 5 x 6 cm, of a jug with an inscription incised before firing

Discovered in 1963 in the excavations of Amiran and Eitan at Tel Nagila, in a residential quarter (Area A), which probably dates from the end of the Middle Bronze or the beginning of the Late Bronze Age

IDAM 66-1698; exhibited in the Pavilion of Hebrew Script and Inscriptions at the Israel Museum

Source for collation: the original

Bibliography: Amiran and Eitan 1964; 1965; Leibovitch 1965; Mazar 1968, note 92; Röllig 1969, 292, note 11; Naveh 1973a, 206; Sass 1978, 184; *EAEHL*, s.v. Tel Nagila; Cross 1984, esp. 74

The sherd was not found in a clear stratigraphic context, but the most reasonable date for it would seem to be the end of the Middle Bronze or the beginning of the Late Bronze Age, about the sixteenth century B.C. The sherd itself is too small for typological dating.

Traces of two lines of writing are preserved:]*n*[

] $\overset{n}{h}wy.y$]

The **nun** in the first line is broken, but is quite certain; the first sign in the second line is **nun** (Leibovitch 1965) or **mem** (thus also Naveh, personal communication 1983; see table 5). It is not **lamed**, so Cross' translation cannot be upheld. The **he** is definite, but the reconstruction of the legs is not certain. The **word divider** is the earliest example known (Naveh 1973a). The reconstruction of the last letter is uncertain. The letters are almost identical to the **Proto-Sinaitic** shapes.³⁵ The inscription runs horizontally, both because of the stance of **he**, which at this period still supposedly depicts a human figure raising its arms, and because of the wheelmarks which run parallel to the text. The direction of reading, from right to left, is also suggested by the stance of the (reconstructed) **he**. The sherd clearly belongs to the jug's shoulder, and, judging from the stratigraphy as described above, dates probably to the seventeenth-fifteenth centuries. The letters themselves do not give us any means of reducing this range, but tend rather to expand it towards the end of the Late Bronze Age (see the discussion of the **Lachish bowl fragment**).

Gezer sherd (figures 144-147)

Body sherd, 7 x 5 cm, of a closed vessel, probably a stand, with an inscription incised before firing

Discovered in 1929 on the surface of Tel Gezer during a field trip of the American Schools of Oriental Research

IDAM 54.3 (its former number, later cancelled, was 51.23); exhibited in the Pavilion of Hebrew Script and Inscriptions at the Israel Museum

Source for collation: the original

Bibliography: Taylor 1930a; 1930b; 1931; Albright 1966, 11; Mazar 1968, 95-96; Cross 1967, 10* and note 13

The sherd was discovered in the dumps of Macalister's excavations. It was dated to the Middle Bronze II period by archaeologists who examined it in Jerusalem in the 1930s, and this is still the most commonly held opinion. In fact, the chronological range of this tiny sherd should be expanded to cover the entire second millennium – the period of the Middle and Late Bronze and Iron I Ages (thus also Professor Ruth Amiran, personal communication, 1981). The sherd's archaeological dating is thus of no significance, since the shape of the letters allows this wide time range to be reduced by a few centuries.

35. Amiran and Eitan (1964) read **qop waw** instead of **waw yod**, as though the script were similar to the early Phoenician letters, citing Cross (personal communication). They repeated this in *EAEHL* (Hebrew edition). Cross first discussed the Nagila sherd in 1984. He dates it to "ca. 1500", and reads these letters as **waw yod**. The **yod** is certain, but if the sherd should ultimately be dated to the late LB, **qop**, instead of **waw**, would become possible.

Three letters are preserved on the sherd - *kxb*,³⁶ there is no way of knowing whether there were originally more, or whether this is a complete word, part of a word or parts of two words (cf. Albright 1936, 9). The reading *klb*, "Caleb" (e.g. Cross 1967, note 13) is no more than wishful thinking.

The inscription is incised at right angles to the wheel marks, perhaps indicating that it should be read vertically. If this is so, then this would be the only example known of a *kap* on its side.³⁷ On the other hand, it is also possible that the inscription was meant to be read when the object was lying on its side, as with the Shechem plaque.

The middle letter has been alternately identified as *nun* (Albright 1948, 12 and note 34) and *lamed* (Cross 1967, note 13), or has not been identified at all (Albright 1966, 10). The last-mentioned possibility seems to be the best, since this letter resembles - even if it is not identical to - *waw* and *lamed* (and *nun*?) of the Proto-Sinaitic inscriptions. Of the three, the resemblance to *waw* seems strongest. Taylor read it as *waw* (1930a), but for the wrong reasons. The two other letters resemble their Proto-Sinaitic counterparts, and see also chapter 5 and section 6.1.3. As mentioned above, the direction of the text is not known.

The upper chronological boundary for this inscription is about 1800 B.C., if it is accepted that this is the period of the Proto-Sinaitic texts. Those who support a lower date (1500) for the Proto-Sinaitic inscriptions can, according to the associated archaeological evidence, raise the date of the Gezer sherd to the twentieth century, if they think that its letters are earlier than the Proto-Sinaitic ones, or can lower it to the 15th-14th centuries if they think the opposite; our knowledge of the absolute dates for the types of letters before the thirteenth century B.C. is so limited that both hypotheses seem equally possible (see sections 6.2 and 6.3).

Shechem plaque (figures 148, 149, 153)

Fragment of a limestone relief,³⁸ 8 x 5 cm, with an incised inscription and incisions on the reverse

Discovered in Sellin and Steckeweh's excavations in 1934, stratigraphic context unclear

IDAM 38.1201; about to be exhibited in the Pavilion of Hebrew Script and Inscriptions at the Israel Museum

Source for collation: the original

Bibliography: Alt 1935, 6; Böhl 1938; 1939; Kahane 1946, with previous literature; Albright 1964, note 3; 1966, 10-11; Cross 1967,

36. Or *bzk*.

37. Cross (1967, 15*) probably means this letter, and perhaps the *reshs*(?) on the Shechem plaque.

38. The stone was identified by Shmuel Meiri.

notes 12 and 16; 1979, note 12; 1980, note 5; Collon 1975, 108, note 1; Merhav 1985, esp. 36–37

The objects found with the plaque, which included sherds of Tell el-Yahudiyeh juglets, cannot be used for dating because of the excavation methods of the German archaeologists.

The fragment comes from the lower right-hand corner of a relief. The lower part of a human figure, facing left, has been preserved (a wrapped garment with thick coil and fringed edge, and one of the feet). It can be reconstructed as a male figure on the basis of Syrian examples, some of which are presented below. On a cylinder seal now in the Ashmolean Museum, Oxford (figure 150 = Buchanan 1966, No. 868) appears a figure dressed in a wrapped garment. The fringes are not visible, perhaps because of the small size of the seal, but the coil and in particular the upper winding fold which descends in an oblique curve from the figure's back closely resemble the dress of the Shechem figure. The garment is wrapped one and a half times below the hips. Somewhat similar to this is the garment with thick coil, wrapped three and a half times below the hips, which can be seen on cylinder seal impressions from Alalakh (figures 151, 152). See also Buchanan 1981, No. 1203. In the Shechem example, the upper coil is broken off before the fringed edge, but judging by these parallels it should be reconstructed as covering this edge and continuing on to the front (left) of the body. It is hard to decide in which of the two variants the Shechem figure was dressed. The almost vertical top of the upper coil is more like the Oxford example, but its continuation becomes more horizontal, like the Alalakh examples. It is possible that the original scene on the Shechem plaque was made up of a worshipper (preserved on the plaque) or two in front of a deity, although on the "Snake Goddess" relief from Tell Beit Mirsim, which is stylistically close to this plaque, only one figure is shown.

Alalakh impression No. 14, from Stratum VII (figure 150), bears the name of ^cAmmitaquma, the ruler of Alalakh appointed by Yamkhad. Impression No. 60 also belongs to this stratum, of the eighteenth–seventeenth centuries B.C. There are other examples from Alalakh, but the section comparable to the Shechem fragment is not so clear on them. The Oxford seal dates from the same period, judging by its style (Buchanan 1966, 167).³⁹

A partial survey of the "Hyksos" scarabs revealed a large number of examples of wrapped garments, but none is identical to that worn by the Shechem figure.

The inscription seems to be a later addition to the relief. It was carelessly incised from top to bottom in the right-hand border, occasionally even crossing over the line of the frame. Seven complete letters and part of another, which run from left to right when the plaque is laid on its side have

39. The wrapped garment is also known from the Late Bronze Age, but the coil is usually not so thick (Ugarit: Schaeffer 1936, pl. XIV; a Syrian from the tomb of Ramesses III: *ANEP* 53; a Syrian from the mortuary temple of Ramesses III: *ANEP* 54). The coil also appears on the statue of Idrimi, king of Alalakh.

been preserved. Kahane (1946, 128–133) discussed in detail the technical aspects of the signs' engraving. I will summarize the main points:

Sign 1. A right angle is preserved. The "stain" was actually caused by the stone flaking off.

Sign 2. It is possible that the right-hand leg is not part of the sign but was made by a slip of the engraving tool. If this is so, then this sign is different from Sign 7.

Sign 7. A strongly incised mark intended to cross out a sign, probably a rectangle (its base is formed by the frame line).

Corrections added as the inscription was written are visible on other signs. The two lowest signs are squeezed in and descend below the frame line. From this it is obvious that these signs were the last to be incised, and that the corner of the plaque was already broken at that time. These are the main points Kahane makes.

If indeed Proto-Canaanite, the inscription reads *ḥbrxttṣr*. The first sign can be reconstructed as a square *bet*, although *gimel*, *het* and *pe* are some of the alternatives. The second and seventh signs may represent the same letter, in spite of Kahane's views; *alep* or *dalet* are both possible (see chapter 5). If the inscription is Proto-Canaanite, the third and eighth signs are *reshs*. The fourth sign may represent a palm with only the thumb shown separately (like Gardiner's sign D46), in contrast to the Proto-Canaanite *kap* which depicts an open palm. In any case, if it is accepted that the script was still pictographic (at least for some of the letters) at the time the inscription was written, it would be preferable to read the sign as *kap*. Baruch Brandl has pointed out to me a certain similarity between this letter and the Proto-Sinaitic *pe*. Obviously, neither of these suggestions can be definitely proved. On Albright's proposal to read it as *ḡ*, see chapter 5. The fifth and sixth letters are not *mems*, assuming that the person who inscribed the text was familiar with the *mem* form with its more than two zigzags (thus also Cross 1979, note 12). The most probable letter would be *shin/t*. Thus a possible reconstruction of the text's letters would be *ḥdrkttṣr* although this is only one of several alternatives.

Not surprisingly, the inscription's date (let alone decipherment) is problematic; see sections 6.2 and 6.3.

Raddana handle (figures 154, 155)

Handle fragment, 11 cm long, of a storage jar, with an inscription incised after firing

Discovered in the Callaway and Cooley excavation in 1969

Judea and Samaria Archaeological Staff Officer, Inv. No. 5736; exhibited in the Pavilion of Hebrew Script and Inscriptions at the Israel Museum

Source for collation: the original

Bibliography: Cross and Freedman 1971; Aharoni 1971; Cross 1979, 97 and note 5; Callaway 1983, esp. 43–44; Mazar 1986, 37

The lack of any absolute chronological "anchors" for the Israelite Settlement period affects the dating of the Raddana handle. The dates assigned it by various scholars depend on their historical approach, which can give rise to variations of a hundred years or more. The stratigraphic context was described as unreliable by the excavators themselves: Callaway and Cooley (1971, 15) and Cooley (1975, 11) record that the handle was found in debris inside a room, not on a floor, and that no other fragments of the storage jar were found. The debris comes from the later of two Iron Age I strata at the site. Cooley (1975, 7) dates this stratum, in which buildings from the preceding period continued to be used with slight changes and rises in floor level, to about 1125–1050 BC. In the two articles mentioned above, it is stated that the handle may have originally belonged to the earlier Iron I stratum, since it was an isolated find and did not form part of a complete vessel broken *in situ*. In this, the excavators have undoubtedly been influenced by the date Cross assigned to the inscription – about 1200 B.C., and indeed a late twelfth or eleventh century date is unlikely from the palaeographic point of view (see especially chapter 6). Later (1983, 43–44), Callaway dated the inscription to the eleventh century, probably to its second quarter (the time of Samuel, before 1050) – a date which is even more difficult to reconcile with our knowledge of the palaeography of this period.

Two complete letters and part of a third have been preserved: 𐤀^{h} .

Logically, the inscription on a vertical handle should be read vertically, starting at the letter nearest its top – in this case, at the *alep*.⁴⁰

Cross and Freedman (1971, 22) have dated this text to 1200 B.C., because of the traditional dating of the Israelite Settlement to the twelfth century; they too thought that the letters were earlier in type: "on epigraphic evidence... 1200 B.C. is a minimal date". Later, Cross assigned the handle a date at the end of the thirteenth century (first, with McCarter, 1973, note 15).

Aharoni (1971) raised the minimum date to 1300 B.C., in accordance with his historical views. The archaeological evidence he presented (pp. 132–133) was refuted by Yadin (1979, 63–65), and now even most of Aharoni's pupils would not support such a high date for the Israelite Settlement. His discussion of the *alep* and *het* is convincing. In his treatment of the third letter (which he read as *resh*), Aharoni had to fall back on citing the direction of the *lamed* on the Hazor sherd, even though the direction of letters – in particular that of *lamed* – is of no significance at this period. He also contradicts himself by comparing the letter to the *resh* on the Beth Shemesh ostrakon, after reversing it from right to left. His comparisons with the St. Louis seal, which has a forged inscription, are obviously useless. For "Ruweise arrowhead" (Aharoni 1971, note 6), one should read "Rapa arrowhead". In any event, the letter is not a *resh* (see chapter 5).

40. In fact, this is not obvious. See the Gibeon handles.

The reservations concerning Aharoni's arguments notwithstanding, there is no obstacle to dating the inscription to 1300 B.C. on purely palaeographic considerations (see the discussion of *alep*, *waw*, *het* and *lamed* in chapter 5): the *alep* is of a form intermediate between the Proto-Sinaitic and thirteenth century forms; similar forms are even known from Sinai 363. The *het* is very close to the Proto-Sinaitic shape. If the next letter is *lamed*, it is the coiled form found as early as the thirteenth century, although it is unknown when it first appeared. This would also be true if the letter should be identified as *waw*. On purely palaeographic grounds, the inscription could not only be from about 1300 B.C. but even close to the time of the Proto-Sinaitic texts. In any case, the upper limit for this inscription is historical – the upper limit of the Israelite Settlement period, which even most maximalists would not now raise beyond the thirteenth century – most would not place it beyond the middle of the century. Judging from palaeographic evidence, the lower limit would be some time earlier than the Lachish ewer and bowl, although these considerations probably would not stand the test of a close examination of the archaeological context which looks later (see section 6.3). If indeed the palaeographic and archaeological data contradict each other, then we must assume that letter typology (the width and stance of the *alep* and the extremely archaic *het*) is not too significant chronologically. This view has important implications for the dating of inscriptions, especially short texts, where palaeographic criteria are the principal means of judging their date.

Lachish ewer (figures 156–160)

Pottery jug, 45 cm high, with a reddish-brown inscription painted before firing

Discovered in Starkey's excavations of 1933 in the Fosse Temple, Phase III

IDAM 34.7738;⁴¹ exhibited in the Pavilion of Hebrew Script and Inscriptions at the Israel Museum

Source for collation: the original

Bibliography: Starkey 1934, 173; *Lachish* II, 47–54; IV, 36, 127, 130, 138; Leibovitch 1940, 106, 115–117; Cross 1954, esp. 19–22; Albright 1966, 11

Most of the ewer fragments were discovered in Locus 172, which is described alternately as a rubbish dump or as a pit outside the eastern wall of the temple; one sherd was found inside the temple, on the Phase III floor. It is usually assumed that the ewer was made at some time during Phase III, which has been dated to the thirteenth century (see section 6.3). Exact parallels for the ewer were not found; its shape and decoration could be from the Late Bronze III, though a somewhat earlier date is also possible.

41. In 1938 Miss Tufnell produced some more sherds which may perhaps belong to the ewer (they are now in the Israel Museum). /1 was then added to the inventory number of the ewer, while the extra sherds received the number 34.7738/2. No traces of letters appear on these sherds.

The text was written from left to right, *mtn.šy [xxx]ty 'lt*. The surviving letters are all quite clear, and Cross (1954) reconstructed *mtn. šy [lrb]ty 'lt*, "Mattan (PN), a tribute for my lady Elat". The shape of the word divider (three dots) is unique in this period. The other words are separated by the details of the ewer's decoration. Cross prefers to translate *mtn* as a personal name, though "giving (of)/gift" are likewise possible. The text identifies the goddess worshipped in the temple, or at least one of the two or three deities revered there (see also *Lachish* II, 24–25).

The archaeological date for the ewer is the thirteenth century, as mentioned above. The inscription is typologically later than the Raddana text, and earlier than the Beth Shemesh inscription. The Lachish bowl text is slightly later than or contemporary with the ewer inscription (see section 6.2).

Lachish sherd No. 7 (figures 161, 162)

Pottery sherd (of a jug?), 4 x 3 cm, with a fragmentary inscription painted on in black (after firing?)

Discovered in Starkey's excavation in 1935 in the fill of the Israelite palace-fort

Probably in the British Museum⁴²

Source for collation: none

Bibliography: *Lachish* III, 116; IV, 131; Yadin 1959; Ussishkin 1978, 21–22

The fill of the palace-fort contained sherds mainly from the Late Bronze Age, but also from earlier and later periods. I was unable to examine the sherd itself, and even if it is found in the future it is doubtful whether such a small sherd could provide any dating evidence. I have relied on the unpublished one of the two drawings of the sherd, since it was drawn from the original at the time of its discovery. The identification of the letters must remain provisional until the sherd itself can be examined.

The inscription consists of three letters and the traces of a fourth: *?[xby]t[?]*. The direction of the text and its correct positioning are unknown. (If the original sherd were available, the orientation of the inscription could perhaps be deduced from its relation to the wheel marks.)

Diringer, who published the text (*Lachish* IV, 131), read *[l]^cwt*, and dated it to the eleventh century, without giving any justification for this. Yadin (1959) read *[b]^clt* and dated the sherd to the thirteenth century, the time of the Lachish ewer and bowl. Cross has not discussed this inscription.

42. On February 8, 1984, Jonathan Tubb of the British Museum wrote to me that the sherd was not among the material from Lachish transferred from the Institute of Archaeology to the Museum, but that the sorting and registration of the material had not yet been completed.

Of the two outermost letters, one is definite and the other has been reconstructed. The letter identified as *ayin* by Diring and Yadin is rectangular, and if drawn correctly, must be *bet*. The dating of this *bet* depends on the missing fourth stroke (see chapter 5). The remaining letter, which could be *waw*, *yod* or *lamed* to judge from the published sketch, is definitely *yod* if the excavators' drawing deposited at the Israel Department of Antiquities (here figure 161) is correct. Unfortunately, the *yod* of the end of the Late Bronze Age (Lachish ewer) is not very different from the Proto-Sinaitic letter. The date of this text is thus closer to that of the Proto-Sinaitic inscriptions and the Gezer sherd if the *bet* is square, or closer to the Lachish bowl, if it has a *bet* similar to the one in that inscription.

Lachish bowl fragment (figures 163–165)

Bowl fragment, 9 x 6 cm, with part of an inscription in black ink painted after firing on the exterior

Discovered in Ussishkin's excavations in 1983, in pit 3867 from Stratum VI in Area S

Lachish Expedition, field number 44048/1

Source for collation: the original⁴³

Bibliography: Ussishkin 1983, 115, 155–157; Cross 1984

The association of pit 3867 with Stratum VI is certain, and the bowl type is characteristic of this stratum. Additional sherds may well be found in the as yet unexcavated part of the pit, which is outside the boundaries of the excavation area. Traces of two lines have been preserved, running parallel to the rim of the bowl and thus showing that the text ran horizontally: *hlhbx*?

?]xb^{xu}h^{gs}q^{pr}b[?

The drawing of the text presented here (figure 163) differs in a few details from that of Ussishkin. Nothing was written above the upper line. It is impossible to determine whether anything more was written below the lower line. The space to the right of the upper line is blank. The dot visible there seems to be a stain, as is the mark between the first and second letters from the right. Several letters have faded or have been damaged by the flaking off of the sherd. On the identification of the *bet* and *het*, see chapter 5.

Ussishkin is of the opinion that the text runs from left to right, because of the empty space to the right of the upper line. The stance of the *gimel/pe* and of the *resh*(?), and perhaps also the "knees" of the *he* would indicate this. The identical stance of the *bets* in both lines proves that the text does not run boustrophedon fashion (as against Cross, 1984, 71). The only problematic sign in the upper line is that at the extreme right, a line which Ussishkin and Cross see as a divider. In the lower line, there is a small vertical line on the left which could be interpreted in the same way, though it might be preferable

43. Thanks are due to Professor Ussishkin who showed me the sherd and the manuscript of his paper before it was published.

to regard it as a trace of a letter (Cross, 1984, note 7, suggests that it is either a **divider** or the surviving trace of a **he**). It should be remembered that so far, **dividers** have been found in Proto-Canaanite texts only between words, not at the ends of lines as here. Furthermore, if the identification of a **word divider** in the upper line is accepted, then the lower line will be seen to possess a word 8-9 letters long, an impossible length for a word in a Semitic language. The only plausible alternatives are thus either that **word dividers** were used inconsistently here, or that the signs are actually the traces of letters. If the second of these possibilities is accepted, as I would suggest, it could be supposed that the blank space to the right of the upper row was originally inscribed.

The sixth letter in the lower line is not clear. On Ussishkin's suggestion to read it as **qop**, see chapter 5. Cross has suggested **ayin**. The reading of the eighth letter depends on the shape of its upper stroke. Ussishkin is sure that this touches the right-hand stroke, and if so, this would probably be a **resh** (see also chapter 5); I think that there is a small space here, however, as does Cross (1984, 74) (see figures 164, 165). At first I was inclined to read the letter as **yod**, but the right-hand line seems too long. **šade** is a possibility.

It is very tempting to suggest a reading for this inscription, but neither the letters nor the word division is as clear as on the Lachish ewer, for example. Cross' interpretation is difficult to accept both since it is almost certain that the text is not written boustrophedon fashion, and because of the incorrect identification of several letters, especially his **šade**.

The form of some letters, such as **he**, is very archaic, and were it not for the secure stratigraphic association of the sherd, the thirteenth century would be considered a minimum date. It seems to me that the inscription should be dated as close by as possible to the beginning of Stratum VI, which according to Ussishkin dates from the first half of the twelfth century (Cross suggests the first half of the thirteenth century). This is the longest Proto-Canaanite text known from before the Beth Shemesh and 'Izbet Šarṭah ostraca.

Lachish bowl (figures 166, 167)

Pottery bowl, diameter 16 cm and 6 cm high, with an inscription painted in white after firing

Discovered in Starkey's excavations in 1935, in Tomb 527 in the saddle area (square A24)

IDAM 38.126; exhibited in the Pavilion of Hebrew Script and Inscriptions at the Israel Museum

Source for collation: the original

Bibliography: Starkey* 1935, 202; *Lachish* IV, 129, 239; Albright 1966, 11; Cross 1967, 10

The finds from the tomb (figure 168) include seven bowls (two of them decorated with palm tree motifs), a biconical vase, a dipper juglet, a Base Ring II Cypriot juglet, a locally made imitation of this, and a local imitation of a Mycenaean pyxis (*Lachish* IV, 239). Tufnell regards this tomb as parallel to

Stage II or III of the Fosse Temple, but prefers the second possibility. This is actually preferable, since such a small tomb was probably only used for a single burial, and should be dated on the basis of the latest objects it contains. Some of the objects may well be earlier. The Lachish bowl itself is of a type dozens of which were found in Structure II of the Fosse Temple, but which continued to be used later too (see also section 6.3).

There are at least two words in the inscription: *bšlšt.y* . After the *yod* appear traces of 4–5 more letters, now quite illegible (but see the excavators' drawing, figure 166). The last one could be a *het* with two horizontal bars. Attempts to read the second word can only be speculative because of the bad state of preservation. All agree that the *bet* is the first letter, but the positioning of the text, whether the opening of the *bet* faces up or down, is not clear. (For this, see also the discussion of the Qubur el-Walaida bowl.)

The script is slightly more advanced than on the Lachish ewer and bowl fragment; its relationship to the Beth Shemesh ostrakon is not clear, but it is probably earlier than the ʿIzbet Šarṭah ostrakon and definitely earlier than the Qubur el-Walaida bowl (see section 6.2).

Beth Shemesh ostrakon (figures 169–174)

Fragment of a storage jar, 8 x 6.5 cm, with black ink inscriptions on both sides

Discovered in Grant's excavation in 1930 in a residential area, between Strata V and IV, but the stratigraphy is not reliable

IDAM I.8664; exhibited in the Pavilion of Hebrew Script and Inscriptions at the Israel Museum

Sources for collation: the original, which has faded, *Ain Shems I*, pl. X and IDAM photographs

Bibliography: *Ain Shems II*, 30; Grimme 1935/6, 270–276; Albright 1936, 9; 1966, 11; 1969, 45; Cross 1967, *passim*

The archaeological context of the ostrakon is unclear, and the sherd itself cannot be dated typologically. We have to fall back on palaeographic criteria.

Even when the ostrakon was discovered, the long inscription (the verso) was difficult to read. By now the letters have faded so much that they are almost invisible, and the excavators' photograph is the most accurate source. All agree on the identification of the letters and the reading of the shorter text (the recto). As to the reading of the text on the verso, in contrast, the number of different readings approximates the number of readers.

On the recto are two columns of script, *hnn/gm^cn*, probably two personal names (*hnn* was first discussed by Dussaud 1930, 393; *gm^cn* by Albright 1936, 9), and traces of other signs, mostly dots. The inscription may be complete. The order of the columns is not clear.

The verso displays two columns: *lʿz'h/ʿbxxr* and there was probably a third and perhaps some other signs, all illegible, and some dots. In 1954 Cross claimed that the text ran horizontally and that the *lamed* was the last letter

(with Milik, notes 24, 26; alone, p. 16). In 1967 (p. 17) he turned both sides 90° and began the reading with the *lamed*. In 1981 (note 13) he again raised the possibility that the back of the ostrakon was written horizontally. However, the wide form of the *hets* with "legs" seems more appropriate to a vertical text. If the *resh* has been identified correctly, this would also indicate a vertical direction. It is possible that the verso is complete at the top (above the *lamed*), but it is almost certainly broken below (as against Cross 1967, note 58) and perhaps on the right side as well. Under the lower *het* and *resh* traces of more letters can be seen (Albright too, 1948, note 62, noted that the *het* was not the last letter). Cross reads two personal names here, the first, with *lamed*, *l'z'h*, *'b'skr*; upon examination this reading can be seen to be incorrect (see also below).

The letters of the first column are quite clear in the photographs, except for the right-hand side of the *zayin* (for this letter in particular, see chapter 5). In the second column, there seem to be two horizontal strokes and the left-hand vertical stroke of a *bet*. There is no way of knowing whether the remaining line descended obliquely to the left as in Cross' reconstruction (1967, fig. 3). Every reconstruction entails ignoring some of the traces of ink and constructing strokes from other traces, according to one's imagination. In other words, the letter is best ignored, and it should certainly not be used for purposes of comparison (Cross 1967, 21). The next two letters were reconstructed by Cross in 1967 as *shin* and *kap*, based on even less visible traces. (These letters were removed from the palaeographic chart in Cross' 1980 article, p. 16, where the clearer *gimel* and *zayin* were also omitted.)

The script of the ostrakon stands midway between that of the Lachish ewer and the ^cIzbet Sartah ostrakon. Its relationship to the Lachish bowl is uncertain (see section 6.2). Cross dates the ostrakon either to the thirteenth century or to 1200 B.C. (e.g. 1967, note 37, vs. p. 19); Mazar (1964, 7 and note 15) dates it to the beginning of the eleventh century.

The possibility of reading the columns from left to right or boustrophedon should not be ignored. The dots are reminiscent of the recording of workdays beside the names and signs of labourers on Egyptian ostraca from western Thebes at roughly the same period (so also Yeivin, e.g. 1939, 111).

^cIzbet Sartah ostrakon (table 6, figures 175, 177)

Fragment of a storage jar, 16 x 9 cm, with letters incised after the jar was broken

Discovered in the excavations of Kochavi and Finkelstein in 1976, in silo 605, whose stratigraphical attribution is unclear; the site dates from Iron Age I

IDAM 80-1; exhibited in the Pavilion of Hebrew Script and Inscriptions at the Israel Museum

Source for collation: the original

Bibliography: Kochavi 1977; Demsky 1977; Naveh 1978; Garbini 1978; 1979; Lemaire 1978; Cross 1980, 8-15; Demsky 1986

The stratigraphic context of the ostrakon is unclear, and the sherd itself cannot be dated typologically.

It is generally agreed that the ostrakon is a writing exercise of a rather unskilled student, who missed out several letters and made mistakes in the forms of others. There are five lines of script (about 80 letters), the lowest of which contains the 22 letters of the alphabet, with *pe* and *ayin* transposed and several errors. Cross (1980, 13) has argued at considerable length with Kochavi (1977) and Demsky (1977) over the script's Israelite nature. However, the two scholars have not claimed that the script is Hebrew, but merely that, judging by the provenance and archaeological finds, the site and the writer of the inscription were probably Israelite; thus also Lemaire 1978, 224. (Kochavi has put forward an alternative suggestion, that the first four lines are a Philistine text.)⁴⁴

It seems best to adopt a midway position between Naveh (1978) and Cross (1980) when judging the value of the ostrakon for palaeographic comparisons. As Naveh has observed, the scribe was undoubtedly careless and made several errors, but this need not cancel the value of all the letters. On the other hand, I cannot go along with Cross, who regards each letter on the ostrakon as palaeographically significant. One should deal mainly with those letters known previously as well as with those appearing for the first time on this ostrakon, as long as they are clear. This would include *dalet*, *he*, *tet*, *sade*, and *qop*, and to a lesser extent, *gimel/pe* and *kap*. The first three are of the expected forms judging from earlier and later examples. The two other letters are also not unusual. *Gimel* and *pe* are problematic because of their resemblance to each other, but this is a difficulty encountered later as well. On the *kap* (and on the other letters) see chapter 5. At the very least we have to use these letters until some future discovery throws light on whether their forms are correct.

From the spacing of the letters and the inclination of the lines, the order in which they were written can be reconstructed – 5, 4, 1, 2, 3 (Kochavi 1977, 4–5). Kochavi (*loc. cit.*) and Demsky (1977, 19) assumed that the abecedary and the other lines were inscribed by two different people, but Naveh (1978, 32) and Cross (1980, 9) seem to be more correct in supposing that there was only one hand here, since the mistakes are similar (see note 44 on *mem*).

The quality of the engraving and the preservation of the letters, the texture of the pottery (which was wet-smoothed before firing) and its wavy surface mean that, as with some Proto-Sinaitic inscriptions, even

44. It is almost certain that this is simply an exercise in writing the letters, since *mem* is missing from the ostrakon and it is hard to imagine a text containing dozens of letters (whether in a West Semitic language or not) in which *mem* would not appear several times. Dothan's suggestion (1981) for identifying the *shin* as *mem* is hardly convincing. The identity of the shapes of *bet* and *lamed*, and of *qop* and *resh*, is proven by the abecedary line. *Mem* is missing from this line, and there is no alternative but to accept Kochavi's suggestion that the scribe simply left a space there for a letter whose form he had forgotten (see Dothan 1981, note 4). Examination of the sherd confirms that this space on the ostrakon is not the result of an erasure.

examination of the original does not solve all the difficulties – all the more when only photographs can be examined.

Kochavi's table (1977, 7) will serve as a starting point for the discussion in this chapter; some slight changes have been made to it, and for the sake of convenience serial numbers have been added to the letters (here table 6). Kochavi's *editio princeps*, a model of balanced blend between objectivity and interpretation, remains the principal publication of the text; I venture to disagree with him only over a few minor points. The identifications of the letters are based on a painstaking examination of the original under different lighting conditions. Particularly difficult letters were studied under a microscope, and I was thus able to distinguish between incisions belonging to letters and various other types of marks.

Line 1. ' b/l 𐤁 d h? ' t? x x ' 𐤀
1 2 3 4 5 6 7 8 9 10 11

Line 2. k t n 𐤀 q? h ' t b/l ' 𐤁? x t 𐤀 b/l t t
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

Line 3. y/𐤁 x q x q q
1 2 3 4 5 6

Line 4. 𐤀 q? g/p b/l n h g/p ' t b/l h d z/𐤁 q b/l
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

𐤀 t 𐤀 ' 𐤀 b/l ' h b/l r? 𐤀 b/l 𐤁?
16 17 18 19 20 21 22 23 24 25 26 27 28

Line 5. ' b g d h (w) h (z) t y k l (m) n (s) p 𐤀 q q 𐤁 t

The discussion of the letters has been divided into two parts. The identification of the disputed forms of the letters is presented here, and the palaeographic aspects are discussed in chapter 5 (Kochavi = 1977, Demsky = 1977, Cross = 1980).

Alep: At 4.22 there does not seem to be a crossbar (with Cross).

Bet/lamed: Cannot be used for comparison. Cross draws 1.2 differently from Kochavi, but does not mention this in the text, except in the transliteration. Kochavi's is the correct drawing; the closing on the left side drawn by Cross is actually an impression of a piece of straw. The "closure" of 4.27 is formed by a small stone pulled out by the engraving tool. The *lamed* in the abecedarly is as Kochavi shows it. The photograph, which is the source of Cross' alteration, is misleading.

Gimel/pe: These too cannot be used for purposes of comparison. Cross does not mention 4.7 (it appears in his transliteration as a question mark). The *pe* in the alphabet line is as Kochavi shows it, and as Cross drew it in his table, p. 16.

Dalet: At 1.4, Cross hesitates between *dalet* and *resh*. Kochavi's drawing (*dalet*) is correct. The angle at the bottom on the right (Cross) is formed by a small lump which has blocked up the incision. For 2.11, see *shin*.

Waw: The sixth sign (unidentified) in the abecedary, which is definitely not *waw*, has been identified by Cross as *mem*. For 2.5 and 4.2, see *qop/resh*; for the thirteenth sign in the alphabet line, see *mem*.

Het: Letter 4.23 does indeed have four horizontal bars (Kochavi), but the left-hand vertical stroke also continues upwards (Cross). Demsky (1977, note 2) has suggested, rather unconvincingly, this is a *samek*.

Zayin(?): In the alphabet line it appears as Kochavi shows it; the horizontal strokes definitely do not exist. Letter 4.13 is as Cross shows it when the light comes from the upper left side; in different lighting the letter looks like *shin*.

Tet: Letter 2.17 is a cross on its own, and may thus be *taw*. While this is the way Cross drew it, he identified it as *tet*, perhaps because of its x-stance rather than +-stance. In his transliteration only a question mark appears.

Yod: In the abecedary this is as shown by Kochavi. In sign 3.2, however, I have noted the addition which led Cross to his identification of the letter as *yod* (Kochavi read it as *sade*), but this is perhaps merely a difference in colour because of the material used to consolidate the surface of the sherd.

Kap: In the alphabet line, this is similar to Kochavi's version, as against those of Demsky and Cross.

Lamed: See *bet*.

Mem: In the abecedary, only a tiny scratch appears (Kochavi), not a v-shaped remnant of a sign (i.e. the head of a *waw* – thus Cross, misled by the photograph) or a zigzag and a half (Demsky). Sign 3.4, identified by Kochavi as *shin*, was hesitantly identified by Cross as *mem*; it is so faint that it might be best ignored.

Nun: Cross does not mention letter 4.5, except in the trans-literation.

Samek: In the alphabet line as shown by Kochavi. The supposed closure on the left of the letter (Cross, and already Demsky, note 2) and the *ayin* suspended from it (Cross) are actually the line formed by the glue used to stick the two fragments of the ostrakon back together. This line continues upwards and downwards. See also *het*. For sign 2.5, see *qop*.

ayin: No comments, but see *samek*.

Pe: See *gimel*.

Sade: Letter 3.2 – *sade* or *yod*. See *yod*.

Qop/resh: For sign 1.4, see *dalet*. Cross does not mention 2.5 except in the transliteration, where he gives it as *waw*(?). It is definitely not the remains of a *samek*. The closure of the circle on the right is almost certain under side lighting, and the closure on the left is also probable. Sign 4.2 is as shown by Kochavi. The line curving round on the right, which led Cross to read it as *waw*, is part of the sherd's texture; the photograph here is misleading.

Shin: At letter 2.11, I see Σ , a combination of the drawings of Kochavi (*dalet?*) and Cross (who does not identify the sign, but gives *zayin*(?) in the transliteration). Perhaps this is a dextro-sinistral *shin*, in spite of the other *shins*. For sign 3.4, see *mem* and Unclear letters. Letter 4.13 is a *shin*, or the shape the writer of the ostrakon thought was *zayin*.

Taw: Cross identified and completed as *taus* signs 1.7 and 4.17, left unidentified by Kochavi. For the latter sign, Cross' is the correct drawing. For 2.17, see *tet*.

Unclear letters: 1.8, 1.9, 2.12, 3.2 (Kochavi, Cross disregards them). Sign 3.4 (Cross reads it as *mem*?).

Kochavi (1977, 12) dates the ostrakon to about 1200 B.C. Cross (1980, 12) dates it to the twelfth century, perhaps to its first half. Its archaeological context is not clear, see also section 6.3. The ^cIzbet Šarṭah inscription is palaeographically later than the Beth Shemesh ostrakon and perhaps also than the Lachish bowl. It may perhaps be earlier than the Qubur el-Walaida bowl, but the script of all these examples is similar (see section 6.2).

Tel Rehov sherd (figures 178, 179)

Sherd, 6 x 5 cm, from a fenestrated stand, with an inscription incised before firing

Discovered on the surface of the tell in 1939 by Ruth Kallner (Amiran) and Avraham Bergman (Biran)

Institute of Archaeology, Hebrew University of Jerusalem, No. 3432; exhibited in the Pavilion of Hebrew Script and Inscriptions at the Israel Museum

Source for collation: the original

Bibliography: Kallner 1945; Sukenik 1945; Cross 1967, 10* and note 10

The sherd comes from the foot of the vessel, and its modelled rim belongs to a window. Judging from the wheel marks, the sherd has to be positioned so that the window rim is either on its right or left side. In that case, the *shin* would be horizontal, and since it is more likely that the letter is open above, this would indicate that the window must have been on the right side.

Milik and Cross (1954, 11) and Cross (1954, 17) date the sherd "by archaeological means" to the end of the Late Bronze Age, 1200 B.C. or slightly later. In 1967, 10* Cross gives a date "probably from the early twelfth century" and in note 37 - "the twelfth century". The sherd belongs to a vessel type common in the Middle Bronze, Late Bronze and Iron I periods, and is in fact too small to be dated more exactly.

Traces of three or four columns are preserved, copied here from right to left: $[mx]$ / $[š^c]$ / $[^cm]$ / $[x]$. The order of the columns and the direction of reading (vertical or boustrophedon) are unknown. It is possible that the two unidentified signs are merely traces of lines running alongside the inscription. The dating of the inscription is problematic. It is definitely

palaeographically earlier than the el-Khadr arrowheads and perhaps also earlier than the Qubur el-Walaida bowl. The twelfth century is a minimum date at best, but the text is probably earlier by some centuries (see chapter 5 and section 6.2).

Qubur el-Walaida bowl (figures 180–182)

Fragments of a pottery bowl, about 13 x 6 cm, with an inscription incised on the exterior after firing

Discovered in R. Cohen's excavations in 1979 at Qubur el-Walaida (map ref. 1011–0827) in a pit with early Philistine pottery; intrusive sherds from the end of the Late Bronze Age may also be present

IDAM 79–567; exhibited in the Pavilion of Hebrew Script and Inscriptions at the Israel Museum

Source for collation: the original

Bibliography: Cohen 1979, 35; Cross 1980, 1–4

The pit in which the bowl was found has been dated, as mentioned above, to roughly the twelfth century, but according to Rudolph Cohen (personal communication) earlier material may have penetrated it. The bowl itself could be either from the thirteenth or the twelfth century, and assigning it to the original phase of the pit in the twelfth century would fit in with the types of the letters on it.

The inscription is horizontal and the tops of the letters face the rim of the bowl. The direction of the letters is from left to right, as is the probable direction of the entire inscription. It seems likely that the first letter preserved on the left side is the start of the text. The text is broken on its right side. The uniformity of direction of the letters is interesting when compared with that on the Lachish ewer, for instance. Eleven letters have been preserved (two of these are fragmentary), as well as two word dividers in the form of a long vertical line.

The inscription reads $\text{šmp}^{\text{cl}}.\text{y}^{\text{l}}.\text{šx}$. This is Cross' version (1980) except for the last letter and my doubts about the *pe* and *ayin*. The *mem* has four complete zigzags (as in Cohen's drawing, figures 180 and 181, as opposed to Cross). The third letter could be *gimel*,⁴⁵ the fourth – *lamed*, and the last – *bet*, *gimel*, *dalet*, *pe* or *resh*. The last letter is as shown in Cohen's drawing, from which it is clear that this is a single letter and not a word divider and another sign.

Cross reads $\text{šmp}^{\text{cl}}.\text{y}^{\text{l}}.\text{š.10}(?)$ and identifies the first two words as personal names; this is likely for the first word, in spite of the two doubtful letters, as *p^{cl}* makes sense. The vertical line which Cross draws after the *shin* is too long and too far from the horizontal line; thus his reconstruction "10 sh[ekels]" is incorrect, for all its attractiveness and similarity to the "Beth Horon" sherd

45. This letter looks as though it has another horizontal stroke, but this is actually a wheel mark (see Cross 1980, 3).

from Tell Qasile. As in the case of most of the Proto-Canaanite inscriptions, its reading is not certain, and alternative interpretations are possible.

Palaeographically speaking, the bowl is later than the **Beth Shemesh ostrakon**. Its relationship to the **Lachish bowl** is undeterminable, but if the archaeological context of the Qubur el-Walaida bowl is accepted at face value, the **Lachish bowl** would be earlier. Its relationship to the **ʿIzbet Sartah ostrakon** is also unclear (see section 6.2).

Zarephath sherd (figure 183)

Jug fragment, 8 x 7 cm, with an inscription painted in red or black before firing

Discovered in Pritchard's excavations in 1971 in Area II, square A-6, local stratum 2, in an industrial area, principally of potters' workshops; nothing is published of its context

Probably in the Beirut Museum or the American University of Beirut; excavator's no. 2460

Source for collation: Teixidor 1975a, figure 55:1

Bibliography: Teixidor 1975a, 101; Cross 1979, 97-98

The archaeological context and typological date of this sherd are unknown, but judging from the photograph, it probably belonged to an LB vessel. Teixidor dated the inscription to the ninth century in spite of quoting Cross' observation on the similarity of its letters to those on the **Beth Shemesh ostrakon**. Cross dates the text to about 1200 B.C. for this reason, and also because of the stance of the *alep*.⁴⁶ The text reads]d'hx[? and Cross reconstructs the last letter as *kap* with a question mark, but in fact it is unidentifiable. The wheelmarks indicate that the inscription is horizontal; Cross reads it from right to left, probably because the tip of the *dalet* points left, but letters facing in different directions are known, such as on the **Lachish ewer**.

Dating the inscription is not easy. All that can be said, judging from the *alep*, is that it stands midway between the **Raddana handle** and the **el-Khadr arrowheads**. Publication of the type of the sherd and its stratigraphic context may alter this.

Hazor sherd (figure 184)

Sherd, 2.5 x 2.5 cm, with two letters painted before firing in dark brown

Discovered in Yadin's excavations in 1955 on the surface in Area D2

46. When Cross wrote this, the **ʿIzbet Sartah ostrakon** had not yet been published, even though Cross knew of it, and the **Qubur el-Walaida bowl** had not yet been discovered. In his article of 1980, Cross did not mention the Zarephath sherd, but see Cross 1984, 72 etc.

Lost⁴⁷

Source for collation: *Hazor* I, pl. CLX:2

Bibliography: Yadin 1956; *Hazor* I, 107; Cross 1967, 10^{*}

Two letters, *[lt]*, have been preserved. The *lamed* is of the type known from the end of the Bronze Age and the beginning of Iron Age I, though an earlier date is not impossible. Cross' suggested date (with Freedman, 1971, note 7) of 1225 B.C. is too precise, and his claim that the text runs vertically (*loc. cit.*) is not verifiable. In the absence of any archaeological context or typological data, the sherd's importance consists primarily in adding a northern site to the distribution of Proto-Canaanite inscriptions (see also section 7.1.6). The date of the sherd, which was found on the surface, is at the latest that of Stratum 1A in the lower city – the thirteenth, probably early thirteenth, century (Beck and Kochavi 1985, 38, and see the bibliography there).

Inscribed arrowheads

Nineteen arrowheads with Proto-Canaanite/Phoenician inscriptions are known from the eleventh (end of the twelfth?) and tenth centuries, and their time range can probably be narrowed down to the mid-eleventh – early tenth centuries (see below and section 6.3). Most of the arrowheads probably come from Lebanon. Only the five *el-Khadr* arrowheads are not from this region; it is not known whether this is significant or whether the scarcity of these arrowheads in the south is coincidental (see also below). Only one example, the *Ruweise* arrowhead, was found in an excavation, but in a mixed context. The arrowheads' typological features permit only a very general dating at roughly the end of the second millennium, as demonstrated by the broad typological range of the uninscribed *el-Khadr* arrowheads (figure 196). Serious attempts to determine the typology and chronology of the arrowheads have been made by, among others, Cross and Milik (1956), Rothenberg (1975), Tubb (1980), Mitchell (1985, 141–142), see also Miller, McEwan and Bergman (1986), but none of them has managed to reduce the chronological range of the inscribed arrowheads. For the distinction in weight between arrow- and javelin heads, see Mitchell, *loc. cit.*, who demonstrates convincingly that all our inscribed objects, labelled "arrowheads", were indeed used as such.

There follows a list of the arrowheads and their inscriptions in the order in which they are discussed in the next few pages.

1–4 El-Khadr arrowheads I–IV	<i>ḥṣ c bdlb't</i>
5 El-Khadr arrowhead V	<i>c bdlb't / bn c nt</i> (or <i><bn> bn c nt</i>)
6 Rapa arrowhead	<i>ḥṣ rp'</i> (or <i>r c'</i>) / <i>bn yḥš</i>
7 Gerba ^c al arrowhead	<i>ḥṣ grb c l / <bn>? ṣ dny</i>
8 Yato arrowhead	<i>ḥṣ yt' / bn zm'</i>
9 ^c Abodniya arrowhead	<i>ḥṣ c b dny / 'š c zb c l</i>
10 Ruweise arrowhead	<i>ḥṣ 'd' / bn c ky</i>

47. Professor Trude Dothan (personal communication). Several objects from Hazor were removed for photographing in the 1950s and were not returned to their original boxes. Some of them were later rediscovered in other boxes.

11 Beqa ^c arrowhead	<i>hš zkrb^{cl} / bn bn^{cn}[t]</i>
12 King of Amurru arrowhead	<i>hš zkrb^{cl} / mlk 'mr</i>
13 ^c Azarba ^{cal} arrowhead	<i>hš ^czrb^{cl} / bn 'dnb^{cl}</i>
14 'd ^c arrowhead	<i>hš 'd^c / bn b^{cl}'</i>
15 <i>ymn</i> arrowhead	<i>hš ymn / 'š^y cbdy</i>

The other four arrowheads have not yet been published; see section 4.2.3.

The inscriptions always run from the tang towards the point. Those on el-Khadr arrowheads I–IV are written vertically, while the rest run horizontally, from right to left. The el-Khadr arrowheads are considered to be the earliest because of the direction of writing on arrowheads I–IV. Of the rest, those with some letters facing right are perhaps earlier, but this is not absolutely certain. It is not easy to inscribe a text on metal, and the forms of the letters are often clumsy, especially when rather than incised they were punched in with a small chisel (for instance, el-Khadr arrowheads I–IV). This method of writing was bound to give the letters a seemingly archaic appearance (cf. Millard 1976a, 135–136). Every palaeographic analysis should take this factor into account, and should rely principally on those elements of the script which are not affected by the writing technique. Most of the letters of the alphabet are represented on the arrowheads; *he*, *waw*, *tet*, *samek* and *qop* are missing. The only known example of *pe*, on the Rapa arrowhead, is not entirely certain.

The inscriptions on the arrowheads usually follow the formula of *hš* ("arrow") (omitted only on el-Khadr arrowhead V) and a personal name on one side. Except in the cases of el-Khadr arrowheads I–IV, which are inscribed on only one side, the patronymic, origin or title appear on the other side. The three place names – Sidon, Abdon and possibly Acre – found as components of a personal name or as the place of origin, are all in the north and appropriate to the area of distribution of these arrowheads (Mitchell 1985, 145).

Are there common features shared by the people whose names are inscribed on the arrowheads? *lb't* and *^cnt* on six specimens seem to indicate that these individuals belonged to warrior families (Cross 1967, note 33 and relevant bibliography). Two of the arrowheads may have belonged to warriors who inscribed them with the names of their commanding officers – (*'š*) *^czb^{cl}*, (*'š*) *^cbdy* (Bordreuil 1982), and see below on Hellenistic arrowheads inscribed with the name of the unit. For an excellent summary of the military context of the arrowheads' owners and the problems inherent in this presumed context, see Mitchell 1985, 143–145. The most interesting of the arrowheads is that of the "King of Amurru". On the possibility of identifying this king, see the discussion of this arrowhead in section 4.2.2.

It seems to be generally agreed that the inscriptions are mainly ownership texts (see below for alternative possibilities), and the most important question is without doubt that of the use of the arrowheads which necessitated their being inscribed with names. In spite of numerous suggestions, the problem has not been satisfactorily settled. A knowledge of their archaeological context would probably be helpful, but, as mentioned above, even the single example discovered in an excavation was found in a disturbed tomb. The five inscribed el-Khadr arrowheads were found

together with dozens of uninscribed ones, seemingly demonstrating that both types were used together.

Tubb (1977; 1980) discusses arrowheads marked with a single sign each, probably as an identifying mark. Their area of distribution stretches from Boğazköy to Tell el-Ajjul, and most of them date from the Middle-Late Bronze Ages. Tubb (e.g. 1980, 4) rightly warns against trying to read these signs as some sort of script. Although it is not entirely impossible, in most cases there is no reason to decipher an "inscription" consisting of a single sign (see also the Gezer Jars, section 4.2.3), all the more when it is not even certain to which script it belongs.⁴⁸

Contemporary arrowheads with cuneiform inscriptions are known from western Iran (Sass forthcoming 2). Their chronological proximity becomes even more pronounced if my suggestion to extend the maximum time range assigned to the el-Khaḍr arrowheads and consequently to lower their date to about the middle of the eleventh century is accepted (see below). Other points of similarity include the direction of writing, from the tang to the point, and the fact that most of the arrowheads are inscribed on both sides. The arrowheads from western Iran, like the only alphabetic arrowhead found in an excavation (the Ruweise example), were found in tombs. There is no documentation for contacts between Phoenicia and Babylonia or western Iran at this period, but it is very likely that the numerous points of similarity between the arrowheads from these two areas, and especially their contemporaneity, are more than a mere coincidence.

There are also some differences: *hš* (arrow) is inscribed on all the alphabetic arrowheads except one, but does not appear on the Akkadian examples. Most of the cuneiform arrowheads bear the names of Babylonian kings, while there is only one royal example among the alphabetic ones – that of the "King of Amurru". The texts on the royal Babylonian arrowheads are definitely not ownership inscriptions. The arrows may have served as offerings or awards. Inscriptions of the formula "A son of B", the usual type in our area, are very rare in western Iran. Tools and weapons bearing inscriptions are less common in the eastern Mediterranean than in western Iran (the Lachish dagger, section 4.2.1; the Byblos spatula, section 4.2.2, which Iwri, 1961, 32–34, see below, has attempted to link with the arrowheads, although the contents of its inscription – still controversial – are undoubtedly different; the Naḥal Tavor knife, sections 7.2.2, 7.2.3; the Ugarit axes).

Two specialists, Calmeyer (1969, 75) and Moorey (1971, 38), mention the arrowheads from our area, but barely touch upon the subject of a possible link between them and the "Luristan" arrowheads. Moorey considers that, like the latter, the Phoenician arrowheads are also votive in character. Neither he nor Calmeyer discuss Iwri's suggestion (1961, see below) that the arrows were used in belomancy.

48. Nevertheless, I would like to point out that the sign on a Byblos arrowhead (Tubb 1980, fig. 3) is identical to the Byblian pseudo-hieroglyphic sign G13 (Dunand 1945, 112 and fig. 36). Tubb dates the arrowhead to the mid-second millennium, and this may have some bearing on the problematic question of the date of the pseudo-hieroglyphic inscriptions (see note 58).

Iwri, using abundant evidence from the Near East of the third to first millennium B.C., demonstrates that arrows were used in divining the future and for casting lots. This fact, however, as convincingly and eruditely as it is presented, does not help to solve the problem of why the *inscribed* arrowheads should have appeared just at the end of the second and beginning of the first millennia. Surely, as shown by Iwri's own evidence, arrows had already been used for divining for more than a thousand years; why should inscribed arrowheads be so popular for a mere century or less? (See also below, and Sass, forthcoming 2.) It is quite impossible to accept Iwri's assertion (1961, 28) that it is illogical that the word "arrow", in the sense of the object's name, should appear on the artefact itself. Writing the name of an article on the object itself was a common practice, for instance *ks* on the Tekke bowl (see section 4.2.2 and also Millard 1976a, note 12).

Later arrowheads are also known: a votive arrowhead was found in Memphis in 1910, made of faience and bearing a sixth century B.C. inscription: *bnrsp*, "son of Reshep" (Michailidis 1947, and see also references there to other weapons with inscriptions or signs). Arrowheads with the Greek inscription "Philippos" were used by the bodyguard of Alexander the Great's father (*Olynthus* X, 382-383).⁴⁹ In this case, it was not the names of their owners but the name of their unit, called after the king, which was inscribed on the arrowheads.

To summarize – even if the use of arrows for divination is certain, it does not follow that this was the sole purpose of the arrowheads with alphabetic inscriptions. It was definitely not the purpose of the cuneiform arrowheads, since texts identical or similar to their inscriptions have been found on a wide range of bronze objects. If Cross and Bordreuil (see above) are correct in associating the inscribed arrowheads with warriors, Iwri's suggestion does not hold water. The fact that arrowheads were marked is not surprising in itself, since it would help to identify them when necessary, whatever they were used for. It is actually more surprising that so few arrowheads were marked in this way – supposing that it was not usually the shaft, which would have been easier to inscribe or incise, which was marked. As mentioned above, dozens of uninscribed arrowheads were found together with the inscribed examples from el-Khadr (cf. Cross 1967, note 33).

Of course, identification of the owner of an arrow by an inscription would have been important not only for divinatory purposes, but also in archery contests, in hunting and even in battle. All these activities, however, existed prior to the eleventh century and after the tenth. The significance of the appearance of arrowheads bearing cuneiform and alphabetic inscriptions just at this period, and the possible link between the two groups, are still open to speculation (cf. Mitchell, 1985, 147-148).

49. I would like to thank Rachel Bar-Natan for drawing my attention to the arrowheads from Olynthus.

El-Khadr arrowheads I-IV (figures 185-188, 190-194, 197)

Four bronze arrowheads with incised or hammered inscriptions on one side; dimensions of arrowhead I – 10.5 x 1.5 cm, arrowheads II-IV – 9.5 x 1.5 cm; weight of arrowhead I – 13.05 g

Arrowheads I-III were discovered in 1953, reportedly by a peasant in his field, near the village of el-Khadr, together with about 25 uninscribed arrowheads (figure 196). Eight of these are now in the Israel Department of Antiquities and Museums, No. 54.2. The exact findspot and its nature are unknown. During the 1968 Judea survey Professor M. Kochavi was introduced by the Mukhtar of el-Khadr to a man said to be the discoverer of the arrowheads. The man led Kochavi to a place (el-Başa, map ref. 1653-1199) where he said the arrowheads were found near a skeleton. There is no way of verifying this statement (Kochavi 1972, 44, site 47 and personal communication, May 1987). At the end of the 1970s, a similar inscribed arrowhead was found, probably at the same place (arrowhead IV; for arrowhead V see below).

Arrowhead I was purchased in Jerusalem by Father Milik and was given to the Rockefeller Museum, IDAM 54.1. Arrowhead II was purchased in Jerusalem by F.M. Cross, and was given to the Harvard Semitic Museum, No. 982.1.1.⁵⁰ Arrowhead III was purchased in Amman by G.L. Harding and given to the Amman Museum, No. 5137. Arrowhead IV was purchased in Jerusalem by a private collector, and is in his collection abroad.

Sources for collation: Arrowhead I – the original. Arrowheads II and III – photographs of the Israel Department of Antiquities (figures 191, 192). Arrowhead IV – photographs taken by Z. Radovan (figures 193, 194).

Bibliography: Milik and Cross 1954; Cross and Milik 1956; Cross 1967, *passim*; 1979, *passim*; 1980, 4-7; Iwri 1961; *KAI* 21; Mazar 1964, 7 and note 15; 1963, 312; 1986, 44

In the absence of any knowledge of their archaeological context, only typological criteria can be used to date the arrowheads. Cross and Milik have shown (1956, 22) that typology can only give the el-Khadr arrowheads a very general date of the fourteenth-tenth centuries B.C. Mitchell (1985, 142) is of the same opinion. (Cf. also the wide range of types of the uninscribed el-Khadr arrowheads, figure 196.) As with most Proto-Canaanite inscriptions, we have no archaeological confirmation of the date suggested by palaeographic comparisons.

The inscriptions run vertically.

Arrowheads I, III: $h\dot{s}^c bdlb't$, "arrow of $^c bdlb't$ "

Arrowhead II: $h\dot{s}^c bdlbt$

Arrowhead IV: $h\dot{s}^c bdl't$

50. The inventory number is taken from a letter from the Museum, of June 5, 1982. The arrowhead was formerly in the possession of Professor Cross.

The omission of letters on arrowheads II and IV is accidental (so also Cross 1980, 5) and not the result of assimilation to the preceding vowel, as Cross thought earlier (1967, note 32); likewise one should not attach too much importance to slight differences in "handwriting" (see chapter 5). The pupil Cross drew in the ^c*ayin* of arrowhead IV cannot exist because the arrowhead is broken in the middle of the letter. If Cross saw something there, it must have been on the material used to stick the two pieces of the arrowhead back together (see figures 193, 194). I have no comments on the transcription of the other letters.

On ^c*bdlb't* and on *hš/hz*, see Cross 1967, 13^{*}–14^{*} and especially notes 32–33 and the bibliography given there, as well as 1980, 7.

Cross' estimates of the date of the el-Khadr arrowheads have changed as follows: "ca. 1100 B.C." (1954, 18), "late twelfth century" (1967, 14), "beginning of the eleventh century" (1979, 103), "ca. 1100 B.C." (1986, 117). Mazar suggests that the arrowheads were associated with mercenaries in the king's service, as in the time of David, and therefore lowers their date to the second half of the eleventh century (1963, 312) or to some time in the eleventh century (most recently 1986, 44). For Cross' reaction, see 1967, note 33.

Unfortunately, I cannot accept Cross' contention (1980, note 19) that the inscriptions from the end of the second millennium B.C. are securely dated. The texts from ^c*Izbet Sartah*, *Qubur el Walaida* and elsewhere have only been dated in a general way to the twelfth century, and even this is not absolutely certain. Of the inscriptions which are palaeographically later than these, the earliest whose date, about 1000 B.C., has been established by additional (though indirect) criteria is the *Aḥiram* text, and even this is not unequivocal. The el-Khadr texts, then, can be dated to the twelfth–eleventh centuries, although it seems quite reasonable to suppose that they were not written during the first half of the twelfth century nor at the very end of the eleventh. See the end of the discussion of el-Khadr arrowhead V, and the discussion of the arrowheads in sections 6.2 and 6.3.

El-Khadr arrowhead V (figures 189, 195)

Bronze arrowhead, 9.5 x 1.5 cm, with an inscription incised on both sides

Said to have been discovered at the end of the 1970s near el-Khadr, together with arrowhead IV, at the same spot as arrowheads I–III

Arnold Spaer collection, Jerusalem

Source for collation: the original

Bibliography: Cross 1980, 6–7

Regardless of unexpected features, I rely on the expert opinion of Rafi Braun of Jerusalem that the inscription is genuine. Nothing is known of the arrowhead's archaeological context. For the typology, see the discussion of el-Khadr arrowheads I–IV.

The inscription is horizontal, and reads ^c*bdlb't/bn^cnt* from right to left.

Were it not for the fact that **arrowheads IV and V** were brought to a Jerusalem antiquities dealer by the same man, it is unlikely that this arrowhead would have been associated with the others, in spite of the name ^c*bdlb't*. The text is horizontal, running from right to left unlike the vertical inscriptions on the other el-Khaḍr arrowheads (but like all other inscribed arrowheads), and the word "arrow" is missing – the only known case among inscribed arrowheads. Furthermore, the patronymic or family name is given, the letters are not punched in with a small chisel as in the other el-Khaḍr arrowheads but are incised, and several of their forms seem more developed. Such features might have thrown doubt on the authenticity of the inscription (not on that of the arrowhead itself), but Braun's opinion outweighs this.

Neither of the two ^c*ayins* have visible pupils (as against Cross 1980, 7). The scratches in the first ^c*ayin* are the result of mechanical cleaning and resemble those found at other places on the arrowhead. The second ^c*ayin* is completely covered by green patina that was not removed during cleaning, which extends only as far as the incision forming the letter. The *dalet* is not closed at the bottom and has a very short leg, perhaps by accident. The second *nun* is very faintly incised and has also been slightly damaged by the mechanical cleaning (see chapter 5). On *bn^cnt* see Cross 1980, 7.

Cross dates this arrowhead together with all the el-Khaḍr inscriptions to about 1100 B.C., in spite of its more advanced letter forms, and Bordreuil (1982, *passim*) accepts this opinion. If all the arrowheads do indeed belong to the same assemblage, the differences between the first four arrowheads and the fifth one would have to be attributed to the method used to inscribe them. As with many arrowheads, most of the letters on **arrowheads I–IV** were made up of straight lines, and at least on **arrowheads I and IV** the letters were made mainly by hammering with a chisel whose cutting edge was about two millimetres wide. The use of straight lines is particularly noticeable on the el-Khaḍr arrowheads, and sometimes even *lamed* and ^c*ayin* are made up in this way (cf. the rhomboid ^c*ayin* on the ^c*Azarba^cal* arrowhead, section 4.2.2). Most of the letters are thus angular, and are probably slightly different from contemporary letters written in ink (of which as yet none have been discovered)—the rigid forms of the letters on **arrowheads I–IV** create a false archaic impression. The inscription on arrowhead V was incised with a sharp point, giving it a more "correct", or cursive, form. The date of an assemblage must be determined on the basis of the latest elements it contains. So if we accept that it belongs to the group, the other arrowheads must be dated according to Arrowhead V and not vice versa. The lowest possible date would be the middle of the eleventh century or slightly later, not far from the time of the *Rapa* and *Gerba^cal* arrowheads, which can hardly be dated any later. The only palaeographic justification which remains for dating the el-Khaḍr arrowheads earlier than these other two specimens is the vertical direction of the inscriptions on **arrowheads I–IV**. But this feature could be later than commonly thought, and in any case, as long as the el-Khaḍr arrowheads are the only example of this after the *Beth Shemesh ostrakon*, the end of the period of vertical writing has to be dated according to them, and not vice versa.

It is particularly unfortunate that the word *ḥs* is missing on arrowhead V, since the form of the *ṣade* could have either reinforced or refuted my dating. The *bet*, which looks even later than the mid-eleventh century, is also problematic, but see chapter 5.

Rapa arrowhead⁵¹ (figures 198, 199)

Bronze arrowhead, 11 x 1.7 cm,⁵² 12.89 g, with an inscription incised on both sides

Provenance unknown, probably Phoenicia

Beirut Museum, number unknown

Source for collation: Martin 1962, pl. I

Bibliography: Martin 1962; Cross 1967, note 72 and pp.20*–23*

For the typology of arrowheads see the discussion of the **el-Khadr arrowheads I–IV**. The arrowhead's point was resharpened in antiquity; it is not certain whether an earlier inscription can be seen below the present text (Cross 1967, especially note 84).

The inscription reads *ḥsrp'/bnyḥš*, "arrow of Rapa son of Yahoš".

The horizontal stroke in the middle of the *het* of *ḥs* is faint, but it seems quite certain. Martin read *kl'* instead of *rp'*. Although he examined the original artefact, *rp'* (Cross) seems preferable, since Martin's *kap* is not appropriate to the period of the arrowhead. The *pe* suggested by Cross is possible (see chapter 5) but alternatively this could be an *ḥayin*, partially obliterated, rendering the name *rḥ'*, a hypocoristic of *rḥ'l*, *rḥbḥ'l* etc. Only a re-examination of the original arrowhead can determine this is so, and until this is possible I would prefer not to change the accepted name of the artefact – the "Rapa arrowhead". The form of the letter in question suggests that *lamed* is another alternative (Martin's reading), but the name that this produces, *rl'*, seems unlikely. The *bet* is blurred in the photograph, but is certain from its context. On the names Rapa and Yahoš, see Cross 1967, 20*. The traces of the supposed, earlier, erased inscription cannot be identified, certainly not from the photograph, so it seems best to ignore Martin's reading.

Cross dates the inscription to the middle of the eleventh century. If my suggestion of lowering the date of the **el-Khadr arrowheads** on the basis of **arrowhead V** is correct, this would be very close to the dates of the **Rapa** and **Gerba^cal arrowheads** and **Byblos cone A**. As to the **Rapa arrowhead** and **Byblos cone A** it is hard to decide which is earlier. The script of the **Gerba^cal arrowhead** is slightly more developed than that of the **Rapa arrowhead** (see section 6.2).

Byblos cone A (figures 200, 201)

Fragment of a pottery cone, 9 cm long, with an inscription incised after(?) firing

51. Dunand (1942–3) mentions buying an inscribed arrowhead for the Beirut Museum. Milik and Cross (1954, 6) are of the (erroneous?) opinion that two arrowheads were involved. This arrowhead cannot be definitely identified, but it was probably the **Rapa'**, **Gerba^cal** or **ḥAzarba^cal arrowhead**.

52. According to a note found among Roger Saidah's papers (Starcky 1982, 184).

Discovered in the French excavations of 1933–1938, probably in the area of the Obelisks Temple; archaeological context unclear

Beirut Museum, No. 1473

Source for collation: *Byblos* II, pl. CXLIV:7765

Bibliography: *Byblos* II, 144 (No. 7765); Cross and McCarter 1973; Teixidor 1975b, 279 (Nos. 108, 109); Cross 1979, 103, 105

The function and date of the pottery cones from Byblos, most of which have no inscription, have never been clarified. Palaeography supplies the only criterion for dating the cones. Dunand read this one correctly as *l^cbdhmn*['? (belonging) to ^cAbdhamon], and dated the inscription "close to that of **Ahiram**". Cross and McCarter date the text to the beginning of the eleventh century, though Teixidor prefers the tenth century. In 1979 Cross assigned the cone to the eleventh century. The script is certainly more archaic than that in **Ahiram**'s inscription, and should be placed roughly with the **Rapa arrowhead** and before the **Gerba^cal arrowhead** (see section 6.2).

Another cone bears the inscription *th* (*Byblos* II, 466–467, No. 11671 and pl. CXLIX). The *het* leans in the same direction as that on cone A.

Gerba^cal arrowhead⁵³ (figures 202, 203)

Bronze arrowhead, 8 x 1.5 cm, 11.66 g, with an inscription incised on both sides

Provenance unknown, probably Phoenicia

Beirut Museum, No. 5137

Source for collation: Milik 1961, pl. I:3

Bibliography: Milik 1961, especially 106–107; Cross 1967, 21*–23*

On the typological dating of arrowheads, see the discussion of **el-Khaḍr arrowheads I–IV**.

The inscription reads *ḥsgrb^cl/šdny*, "arrow of Gerba^cal, <son of>? the Sidonite". For the names see Milik and Cross. The latter (and following him, Bordreuil, 1982, 189) dates the arrowhead to the eleventh century, together with the **Rapa arrowhead**. The script is indeed very similar, but that of Gerba^cal is slightly more advanced (see section 6.2). The conjectural pupil in the **cayin** (Starcky 1982, 180) is a mere defect on the surface (cf. Milik 1961, 106).

Yt' arrowhead (figures 204, 205)

Bronze arrowhead, 7.4 x 1.8 cm (the tang is broken), with an inscription hammered on on both sides

53. See note 51.

Purchased in Tyre between 1966 and 1968, and probably found in the vicinity⁵⁴

Collection of Jean A. Mariaud de Serres, Paris

Source for collation: colour slides⁵⁵

Bibliography: *Sauvegarde de Tyr*, 16, 31 (No. 14); Bordreuil 1982a, 189 and note 6; 1982c, 29–30

For the typology of the arrowheads, see the discussion of el-Khaḍr arrowheads I–IV.

The inscription reads *ḥṣyt'/bnzm'*, "arrow of Yato son of Zimo". I have no comments on the identification of the letters (though see chapter 5). It is interesting to note that the obverse was carelessly incised, while the reverse was very meticulously engraved. For the names, see Bordreuil 1982c, 30.

In *Sauvegarde de Tyr* (in which both the photographs are reversed right to left) the arrowhead is dated to the eleventh century, and Bordreuil (1982c) dates it to the beginning of that century. The inconsistent direction of the letters does indeed justify a date of approximately the eleventh century, close to the Rapa, Gerba^cal and ^c*bdny* arrowheads and Byblos cone A (see section 6.2).

^c*bdny* arrowhead (figures 206, 207)

Bronze arrowhead, 6.5 x 1.5 cm, 6 g, with an inscription incised on both sides

Provenance unknown, probably Lebanon

Private collection in Lebanon

Source for collation: Bordreuil 1982a, 188

Bibliography: Bordreuil 1982a, 187–190

For the typology of arrowheads, see the discussion of el-Khaḍr arrowheads I–IV. Apart from the Beqa^c arrowhead whose point has been filed down, this is the smallest known inscribed arrowhead; it is possible that it, too, was filed down.

The inscription reads *ḥṣ^cbdny/ṣ^czb^cl*, "arrow of ^cAbdoniya, the man of Uzziba^cal". All the letters are clear (but see chapter 5). Bordreuil interprets ^c*bdny* as a gentilic ("the Abdonite"), like ^c*ky* on the Ruweise and *ṣdny* on the Gerba^cal arrowheads. On the identification of Abdon/Ebron with Khirbet ^cAbda near Nahariya, see Aharoni 1979, 96–97. "Man of ^c*zb^cl*" (see also "man of ^c*bdy*" on the *ymn* arrowhead, section 4.2.3) means, according to Bordreuil, one of Uzziba^cal's soldiers, as in "men of David" (1 Sam. 23:3).

54. The owner of the arrowhead notes (in a letter of October 20, 1983) that unlike other antiquities markets in Lebanon, the sources of the Tyre dealers were usually in the vicinity of the town.

55. I would like to thank the owner of the arrowhead for the slides.

4.2.2. Early Phoenician inscriptions

In this section are included inscriptions all of whose letters face left, and which have been dated, mainly by Cross, earlier than **Aḥiram's** sarcophagus. It is my opinion that most of these texts should be dated to approximately the same time as **Aḥiram's** sarcophagus — the palaeographical data is not precise enough to determine their exact chronological sequence (see the discussion of each inscription). Two texts, those on the **Nora fragment** and the **Revadim seal**, might be brought down to the ninth century, and as for the **Tekke bowl**, the most likely date at the moment seems to be at the end of the tenth century. The script of the **ʿAzarbaʿal arrowhead** is generally accepted to be more advanced than that of **Aḥiram's** sarcophagus. It is discussed in this section in order to present the entire group of inscribed arrowheads together. The order in which the inscriptions are discussed here does not necessarily conform to their relative sequence, unlike the pattern followed in section 4.2.1.

Ruweise arrowhead (figures 208, 209)

Bronze arrowhead, 8.5 x 1.5 cm, with an inscription incised on both sides

Discovered in Guigues's excavations in 1925 in a rock-hewn shaft grave with a rounded chamber; the tomb was reused in Roman times and most of the finds were of this period

Musée du Louvre, AO 18849⁵⁶

Source for collation: the original

Bibliography: Guigues 1926; Ronzevalle 1926; Virolleaud 1928; Dussaud 1927; *KAI* 20; Mazar 1964, 7 and note 15; Cross 1967, 20, 22 and notes 64, 90

For the typology of arrowheads, see the discussion of **el-Khaḍr arrowheads I–IV**. An uninscribed arrowhead was found together with this one (not the second arrowhead which appears in Ronzevalle 1926, pl. III; see *ibid.*, 358). Ronzevalle read the inscription correctly: *ḥṣ'd'/bnʿky*, "arrow of 'Ado son of ʿAkiya (the Accoite?)". The *kap* and *yod* are not completely clear in the photograph, but their identification was confirmed by an examination of the original artefact in September 1982, then exhibited in Nantes. For a discussion of the names see Milik and Cross 1954, 6, 7.

The dates assigned to this inscription by early scholars were influenced by the then accepted date of **Aḥiram's** sarcophagus – the thirteenth century; Ronzevalle thus attributed this arrowhead to the beginning of the twelfth century, i.e. slightly later than **Aḥiram's** sarcophagus, while Virolleaud and Dussaud dated it to the tenth century, close to the **Abibaʿal** and **Elibaʿal** inscriptions. Milik (1956, 4) also dated the arrowhead to the first half of the

56. See for instance Amiet 1971, 114. In *KAI* 20, it is incorrectly stated that the arrowhead is in the Beirut Museum. In 1929 Virolleaud resorted to this arrowhead, which was then the only example known, while deciphering the Ugaritic alphabet, although it later became clear that *ḥrṣn* on the Ugarit axes is a personal name rather than "axe".

tenth century while Cross preferred the eleventh: Cross & Freedman 1952, 19 – end of the eleventh century; Milik & Cross 1954, 6 – eleventh–tenth centuries (compromise with Milik); *ibid.*, 11 – eleventh century; Cross 1967, 22 – end of the eleventh century; 1979, 103 – second half of the eleventh century. Bordreuil (1982a, *passim*) dates the Ruweise arrowhead to the eleventh century or (with Abou Assaf and Millard 1982, 89) around 1100 B.C. Millard (1976a, 143) dates it to the end of the eleventh century.

The differences between the script of this arrowhead and that of **Ahīram's** sarcophagus are minute and probably insignificant. It seems best to date the arrowhead close to the **Ahīram** inscription.

Beqa^c arrowhead (figures 210, 211)

Bronze arrowhead with refiled point, presently 6.5 x 1.5 cm, 9.03 g, with an inscription incised on both sides

Said to come from the Lebanese Beqa^c

Beirut Museum, number unknown (gift of H. Seyrig)

Sources for collation: Milik 1956, 3 (Starcky's photographs, see Milik 1958); photographs in the Israel Department of Antiquities and Museums

Bibliography: Milik 1956; Grelot 1957; Yeivin 1958; Milik 1958; 1961, 105–106; Cross 1967, *passim*; 1979, 103; *KAI* 22

For the typology of arrowheads, see the discussion on **el-Khadr arrowheads I–IV**. The arrowhead was in Jerusalem for some time; Milik saw it there and took it to the Rockefeller Museum to be photographed. The tip of the arrowhead has been filed down, turning it into a kind of spatula.

Milik read the inscription: *ḥṣzkrb/bnbn^cn*, and Yeivin produced a reasonable reconstruction: *ḥṣzkrb[^cl]/bnbn^cn[t]*,⁵⁷ "arrow of Zakarba^cal, son of Ben^canat", attributing the disappearance of the letters to the filing down of the arrowhead. For further details, see Cross 1967, 19 and notes 33 and 72.

The name *bn^cnt* appears on **el-Khadr arrowhead V**; see the discussion there.

Cross dates the arrowhead to the late eleventh century, with the **Ruweise arrowhead** and the **Byblos spatula** (1967, 23) or to the second half of the eleventh century (1979, 103). Bordreuil dates it once to the first half of the tenth century (1982a, 189) and once to the eleventh century (*ibid.*, 190). As in the case of the **Ruweise arrowhead**, and in spite of Cross (1967, note 90, which probably refers to *KAI*), the differences between the scripts of the **Beqa^c** arrowhead and **Ahīram's** sarcophagus are very small and may be due to the incision of the text on the arrowhead using straight lines (on this, see also **el-Khadr arrowhead V**).

57. Milik too thought that *zkr* was a hypocoristicon of *zkrb^cl*.

"King of Amurru" arrowhead (figures 212, 213)

Bronze arrowhead, 11.3 x 1.7 cm, with an inscription hammered on on both sides

Provenance unknown, probably Lebanon

Beirut Museum, number unknown; purchased about 1970

Source for collation: Starcky 1982, fig. 1

Bibliography: Starcky 1982; Bordreuil 1982a, 189

For the typology of arrowheads, see the discussion of el-Khaḍr arrowheads I–IV.

The inscription reads *ḥṣzkrb^cl/mlk.'mr*, "arrow of Zakarba^cal, king of Amurru". The photograph (figure 213) suggests there is a dot in the *^cayin*. Starcky (1982, note 8), who examined the original artefact, declares that the dot does not exist and that the photograph is misleading. All the other letters are perfectly clear in the photograph. The extra line in the *kap* is doubtless a "slip of the pen". Word dividers do not appear on other arrowheads except for the later *^cAzarba^cal arrowhead*, and the occurrence of one here makes the reading "king of Amurru" certain; if it did not exist, the letters could be interpreted as a personal name, *mlk.'mr* (Starcky 1982, 180).

On the name *zkrb^cl*, see Starcky 1982, especially p. 182, and the bibliography given there. On "king of Amurru", see *ibid.*, 182–184, 186. Starcky concludes that a local ruler, in the Phoenician *hinterland* or in one of the coastal cities, presumptuously assumed the title of "king of Amurru". Of course he cannot be identified with the *zkrb^cl* of Wen-amon's report, who bore the title of "king of Byblos". According to Rainey (1982a, 133–134) that name could be expected to have been written *skrb^cl* even at this early period. However, even if the shift *zkr > skr* took place as early as this in Phoenician (in partial assimilation to the mute *kap*) on the basis of the spelling of this name in the Wen-amon report, it is likely that the written language still preserved the original consonant, while Wen-amon wrote down what he heard (see also the discussion of *zayin* in Sass in press). Another possibility is that a spelling with *zayin* represents an inland dialect as against *samek* of the coast (Professor Rainey, pers. comm. 1984).

Starcky (1982, 182, 184) dates the inscription to the eleventh century, before Aḥiram's sarcophagus. In fact, all letters closely resemble their Aḥiram counterparts, save *lamed* which is slightly less advanced (see chapter 5 and section 6.2); whether this really has chronological significance, only the Phoenician scribes could tell.

'd^c arrowhead (figures 214, 215)

Bronze arrowhead, 9.1 x 1.5 cm, 13.6 g, with an inscription hammered and incised on both sides

Provenance unknown, probably Lebanon

British Museum, WAA 136753

Sources for collation: obverse, the original; reverse, black and white photograph and colour slide from the British Museum

Bibliography: Mitchell 1985

For the typology of arrowheads, see the discussion of el-Khadr arrowheads I-IV.

The inscription reads *ḥṣ'd^c/bnb^cl'*, "arrow of 'd^c son of b^cl'". The rhomboid, open form of the *ḥayin* in *b^cl'* is almost certainly the result of the way in which the text was inscribed, in contrast to the better execution of the *ḥayin* on the obverse. The small, angular *lamed* leans over far to the left. This is the only appearance of a *lamed* of this type on an arrowhead, but a very similar form can be seen on the Byblos clay cones and spatula and in later inscriptions. I cannot offer any explanation of the additional incisions on the obverse. For a discussion of the names, see Mitchell 1985.

Mitchell (1985, 147) dates the text to the late eleventh century, between the Ruweise and "king of Amurru" arrowheads on one hand and Aḥiram's sarcophagus on the other, mainly because of the *lamed* and *nun*. This is possible, but it seems preferable simply to date all those inscriptions just close together, as most of the letters on our arrowhead and others were punched in in straight lines, preventing further palaeographic refinement.

Manahat sherd (figures 216, 217)

Fragment, 8 x 4.5 cm, of a storage jar with letters incised after(?) the jar was broken

Discovered by Stager and Landgraf in a rock-hewn burial cave on the southern slope of the Holyland Hotel hill, Jerusalem, Israel grid point 29738/168327; most of the sherds in the cave were of the Roman period

IDAM 65-1249; in storage

Source for collation: the original

Bibliography: Stager 1969; Teixidor 1970, No. 2; Landgraf 1971; Cross 1979, 103

The context and the sherd itself are of no help in dating the inscription. Had it not been found by an archaeologist, one would suspect it was a forgery or a practical joke. It reads *lṣdh*, and may be complete – perhaps a hitherto unknown personal name, *ṣdh*, preceded by *lamed*. Stager, Landgraf and Cross date the sherd to the eleventh century. Its letters have parallels in eleventh-century inscriptions.

Byblos cone B (figures 218, 219)

Fragment of a pottery cone, 19.5 cm long and largest diameter 7 cm, with an inscription incised after(?) firing

Discovered in the French excavations of 1933-1938, probably in the area of the Obelisks Temple; archaeological context unknown

Beirut Museum, No. 1462

Source for collation: *Byblos* II, pl. CXLIX:11687; Teixidor 1977

Bibliography: *Byblos* II, 468 (No. 11687); Cross and McCarter 1973; Teixidor 1975b, 261, 279–280 (Nos. 108, 110); 1977; Cross 1979, 103, 105; 1980, 7 and note 11

On pottery cones, see the remarks on Byblos cone A above. Dunand correctly read the inscription *l'h'mbbd*, "belonging to 'Aḥi'am s<on of> Bodi", and dated it together with cone A and others to close to the time of Aḥiram's sarcophagus.

Cross and McCarter (1973) identified the fifth letter as *shin*, and cited its vertical stance to date the text "probably ... to the eleventh century B.C., probably to the mid-eleventh century" (*ibid.*, 8).

Teixidor (1975b, 280), who examined the cone in Beirut, confirmed that the letter is *mem*, as in Dunand's reading, and published a new photograph of the object (1977). In his opinion the inscription dates from the second half of the eleventh century, probably very near its end. In 1979, Cross was still adhering to *h's*, but by 1980 (note 11), he had accepted Teixidor's correction and dating. The inscription is close in date to Aḥiram's sarcophagus.

Byblos spatula (figures 220–223)

Bronze spatula, 9.5 x 5.5 cm, with a Phoenician inscription incised on one side and incisions (remnants of a Byblian pseudo-hieroglyphic inscription?) on the other

Discovered in the French excavations between 1926 and 1932 near the surface in the area of the temples, which was disturbed by building activity in the Crusader period

Beirut Museum, number unknown

Sources for collation: *Byblos* I, pl. XXXII; Martin 1961, pls. VI–XI

Bibliography: Dunand* 1938; *Byblos* I, 28; Iwri 1961, 32–34; Cross 1967, note 9 and p. 11; KAI 3; McCarter and Coote 1973; Ranck 1973; Teixidor 1975b, 280 (No. 111); Shea 1977

Four other spatulae were discovered in the Byblos excavations, all of them with pseudo-hieroglyphic inscriptions; the example discussed here also bears on its reverse incised marks which have been interpreted by some as pseudo-hieroglyphic. The function of these inscribed spatulae is unclear, and any connection between the Phoenician text and text on the reverse is also obscure. The person who wrote the Phoenician inscription was perhaps making use of an older object discovered by chance. On the other hand, it is quite possible that the appearance of pseudo-hieroglyphic and Phoenician texts on the same type of object indicates some chronological overlap in the use of the two scripts.⁵⁸ In any case, in the absence of typological or stratigraphical data,

58. In note 48 to this chapter I pointed out a possible indication that the pseudo-hieroglyphic inscriptions existed around the middle of the second

the only available criterion for dating the object is the Phoenician text itself. The content of the inscription is still a matter of controversy, and from time to time fresh attempts are made to interpret it (see the bibliography). All agree on the identification of the letters, apart from the *gimel* which has been read as *pe* by some, and the *ayin* added by McCarter and Coote to line 3. Teixidor examined the original spatula in Beirut, and was convinced that this *ayin* does not exist. Thus, those who would read *nšb^ct* are forced to assume that the writer left this letter out (Teixidor). Concerning *gimel/pe*, I would favour the former. It is true that these two letters are not well documented from this period, but comparison with the text on Aḥiram's sarcophagus can resolve the problem.

Cross dates the spatula inscription slightly earlier than Aḥiram's sarcophagus (first with Milik in 1954, 11) but his arguments for this are not easy to find in his publications. In *KAI* (No. 3) a tenth-century date is preferred and Wallenfels (1983, 111) is for the ninth century (but see the end of section 6.3). The script on the spatula is almost identical to that on Aḥiram's sarcophagus, making it impossible to decide which is the earlier.

millennium B.C. Does it seem likely that, at a time when the first examples of alphabetic writing were appearing in Sinai and southern Canaan and other scripts were being tried out throughout the Near East, Byblos also developed a script of her own? (Up until the end of the eighteenth century, Egyptian script was used there.) With Byblos' strong ties to Egypt, most of the pseudo-hieroglyphic and other documents were no doubt written on papyrus, as illustrated by the 500 papyrus rolls brought from Egypt by Wenamon to Zakarba^cal, king of Byblos, as late as the eleventh century. Comparison with Ugarit is instructive: had the scribes of Ugarit also written on papyrus, nothing would have been left of their numerous texts but a handful of inscriptions on axes, seals and stone (see Millard 1979, 616 and section 7.2.3), even fewer in number than the surviving pseudo-hieroglyphic inscriptions. Unlike Ugarit, Byblos existed into the twelfth-eleventh centuries, and later. The extensive excavations undertaken there have not yielded any Proto-Canaanite or Phoenician inscriptions dated earlier than the late eleventh century, nor have any inscriptions in the cuneiform alphabet been found there. Even though the pseudo-hieroglyphic script does not seem to have taken root outside Byblos, it is possible that it held sway for a considerable time within the city itself, perhaps almost until 1000 B.C., as seems to be shown by the inscribed spatulae, when it was superseded by the alphabet; only the Phoenician Byblos spatula has been dated with some certainty, and its pseudo-hieroglyphic counterparts should perhaps also be dated to the eleventh century on this basis. If this is so, the latter represent the swan song of the pseudo-hieroglyphic script, which continued in use a little longer alongside the alphabet until ousted by it in the course of the eleventh century. For a completely different opinion, see for instance Cross 1967, note 30. Millard (1976a, 134) thought that the pseudo-hieroglyphic script carried on to the end of the Late Bronze Age, and even suggests (*ibid.*, 139), in spite of the evidence for a Sinaitic or south Canaanite origin, that Byblos was the site of the invention of the alphabet; see also Millard 1986, 394.

^cAzarba^cal arrowhead⁵⁹ (figures 224–225)

Yellowish bronze arrowhead, with broken point, now measuring 10.4 x 2 cm,⁶⁰ 16.79 g, with an inscription incised on both sides

Provenance unknown, though this was probably in Lebanon; bought from a collector in Damascus

Beirut Museum, No. 677

Source for collation: Milik 1961, pl. I:4 (except for three signs on the reverse)

Bibliography: Milik 1961, esp. 107; Cross 1967, esp. 21*–23*

For a discussion of the typology of arrowheads, see the entry for el-Khadr arrowheads I–IV. The arrowhead is similar in shape to the "king of Amurru" example and to uninscribed arrowheads in the el-Khadr find (figure 196).

The inscription reads *ḥs.^czrb^cl/bn.^cdnb^cl*, "arrow of ^cAzarba^cal son of Adoniba^cal", and includes word dividers. (A single, longer word divider can be seen on the "king of Amurru" arrowhead.) In the photograph of the reverse, the first *bet*, the *alep* and the word divider are not clear. In my fig. 224 they were drawn after Milik 1961, fig. 2:4.

On the names see Milik 1961.

Milik dates the arrowhead to the tenth century, as does Cross (1967, note 89 – "early tenth century"; p. 23* – "ca. 1000–950"). Starcky (1982, 180) wishes to raise the date to the eleventh century on the basis of the shape of the *bet*, but it seems that this letter has little chronological significance in the period under discussion (see chapter 5); other letters, chiefly *zayin* and *nun*, are of greater importance for dating and suggest that our arrowhead should be assigned a later date than that of Ahiram's sarcophagus. This is the only inscribed arrowhead dated as late as the tenth century, and would thus be outside the scope of this book. It is nevertheless described here so that the entire group of inscribed arrowheads might be presented together.

Tekke bowl (figures 226–229)

Bronze hemispherical bowl, 15 x 8.5 cm, with an inscription incised on the exterior below the rim

Discovered in Tomb J at Tekke (Ambelokipi) near Knossos in excavations carried out by the British School of Archaeology in Athens in 1975–1976, directed by R. Howel. The tomb has been dated to the Early Proto-Geometric period of Crete, contemporary with the Late Proto-Geometric period in Attica

59. See note 51.

60. This is probably the correct size (Starcky 1982, 184). According to Milik it is 11.4 cm.

Iraklion Museum, No. Br. 4346⁶¹

Source for collation: Sznycer 1979, pls. I, II

Bibliography: Catling 1977, 11–14; Sznycer 1979; Cross 1980, 15, 17; 1986, 118 with previous bibliography; Coldstream 1982, 271–272; Puech 1983, 374–393

Tomb J belongs to the Proto-Geometric and Geometric cemetery (figures 230–233) first excavated by Platon in 1943. Besides an urn (figures 232, 233), about 50 painted pots (figure 234:1–2) were found in the tomb, most of them imports from Attica. Other finds included two gold pins (figure 234:3), a silver plated bronze pin, a pendant and beads of rock crystal, amethyst and carnelian, a lentoid seal of the Middle Minoan III period (figure 234:4) and the inscribed bronze bowl.

The dating of the tomb is based on the Late Proto-Geometric vessels imported from Attica, but in terms of absolute dates data from this period does not reach the desired degree of precision. The accepted date (Desborough 1952, 101; see also Cross 1980, note 19; 1986, note 12) is 950–900, but even Desborough notes (*loc. cit.*) that these dates could be raised by about 50 years, i.e. to 1000–950. Cross (*loc. cit.*) quotes Saltz (1978, 288) who raises the transition from Early Geometric II to Middle Geometric I to about 926, some 75 years earlier than the accepted date. In a conversation with Dr. Saltz in February 1982, the following points emerged:⁶³ 1. The raising of MGI by about 75 years does not necessarily imply that dates of earlier periods should be shifted accordingly. 2. On the basis of a Palestinian dipper juglet from a tomb at Lefkandi Saltz (1978, 280) dates the transition from the Sub-Mycenean to the Early Proto-Geometric period in Attica to the second half of the eleventh century, with no possibility of giving a more precise date (the juglet is of a Megiddo VI type). 3. This does not solve the problem of the absolute date of the Late Proto-Geometric period and its end in Attica, which is of relevance to our problem, and there is no way of knowing whether the period came to an end before or after 1000 B.C. Once again we are confronted with a situation in which palaeography turns to archaeology for assistance, and vice versa, but to no avail.

The tomb's assemblage has still not appeared in a final publication, but Coldstream (1982, 271) has added some important details relating to its context: the two burials are about a generation apart in date. Most of the vessels imported from Attica are of a tenth century date according to the traditional chronology, and are associated with the earlier burial, while the locally made vessels are from the beginning of the ninth century and come from the later burial. The bronze bowl was found with the latter group. In such a situation, the context can supply only the latest possible date for the bowl; even though the ninth century seems the most likely date, we shall never be able to prove (or disprove) that the person buried in the tomb owned the bowl or was its contemporary, and the inscription can thus be interpreted in different ways.

61. Letter from the museum, dated 13 April 1984.

62. I would like to thank Dr. Saltz for her instructive explanation.

Szzymer, who published the bowl, read from photographs *ksššx(x?)xbnl'xn*. He stressed the fact that this was a preliminary version, and that changes might be necessary after examining the original. He suggested three alternative interpretations:

1. *ks šš... bn l'...*, "cup of šš... (PN) son of l'... (PN)"
2. *ks š<l> š... bn l'...*, "cup o(f) š... son of l'..."
3. *ks šš...* (verb, *qal* or *pi^cel*, perfect, 3rd masc. sing. beginning with *šade*)
x... l'..., "cup that (made?) x... (PN) for '... (PN)"

Names beginning with "šš..." and "l'..." are probably not Semitic. On *ks* see Szzymer 1979, *passim*.

Puech (1983, 374–393) accepts Cross' dating (see below) and his 1980 reading, and even reconstructs the rest of the text from the photographs: *ksšm^c.bnl'mn*, "cup of šm^c son of l'mn. He has an unprovable, if original, explanation of the patronymic. Although one can understand from the photograph why Puech drew the problematic signs – the fourth, fifth, sixth and eleventh – in this way, I would prefer to wait until the original is properly examined; the photograph may be misleading.⁶³ the fourth (and perhaps also the eleventh) sign is an indistinct zigzag, *mem* or *šade* if the photograph can be trusted. The identification of the fifth letter as *ca^yin* with pupil is uncertain. Only the lower part of the sixth letter is left, perhaps the end of a vertical line, and this could be interpreted in other ways than an *alep* or a word divider.

Cross (1986, 118) reads: *ks.šm^c.bnlbn*, "cup of šm^c son of lbn". See the remarks on Puech's reading.

I would read the photographed text *ksšš^m_šxbnl'xn*.

No reading can be seen as final because of the poor state of preservation of the inscription, and only careful examination of the original can throw new light on the problematic details. The Iraklion Museum drawing (fig. 227), done from the original, is of unknown value. *Ks* and *bn*, at least, are clear and guarantee the interpretation of the text as "cup of A son of B".

The dates for this text given by Szzymer are as follows: "début du IX^e siècle" (p. 90), "vers 900/environs de 900" (pp. 90, 91, 93), "sans exclure la ... X^e siècle" (p. 91), "IX^e–X^e siècles" (p. 93). Cross (1980) bases his date at the end of the eleventh century mainly on the dot he sees in the *ca^yin* (see chapter 5). As to relevant Greek chronology he suggested two alternatives, boldly in 1980, note 19 and rather cautiously in 1986, note 12: either to raise the date of the Cretan Early Proto-Geometric period (parallel to the Late Proto-Geometric period in Attica) to the end of the eleventh century, or to assume the bowl was at least 50 years old when deposited in the tomb. On the first of these, see below and Saltz's observations above; the second alternative is as good as any

63. Not only does the corrosion of the metal make it hard to identify the inscription from the photograph, but the fact that the surface of the bowl is spherical prevents even lighting over the entire inscription. A photograph of a straightened-out squeeze of the inscription may yield satisfactory results.

other. Naveh (1982, 41, 59) and Puech (above) accept Cross' dating. If Cross proves right about the dot in the *^cayin*, the early date will gain support, but before the original has been examined one cannot even be certain that the letter is actually an *^cayin*. Furthermore, in the light of Coldstream's remarks, Cross would have to assume that the bowl was 150, rather than 50, years old when placed in the tomb; this cannot be proved either way, and in any case cannot be used as evidence for a Phoenician settlement in Crete in the eleventh century.

Parallels for the relatively clear letters in the inscription – *alep*, *bet*, *kap*, *lamed*, *nun*, *samek* and *shin* – can be found in texts from the eleventh–tenth centuries (see chapter 5). The K-shaped *alep* and legless *kap* do not seem to have survived into the ninth century. Only authentication of the *^cayin* with pupil could lend support, but not proof, for dating the bowl earlier than Aḥiram's sarcophagus. In the meantime, the combination of archaeological and palaeographical data indicate a date at the end of the tenth century, towards 900 B.C., for the bowl (thus Sznycer 1979, esp. p. 90). Proof for a late second millennium date for the Phoenician expansion westwards will have to be sought elsewhere.

Nora fragment (figures 235, 236)

Fragment of a sandstone inscription, 62 x 46 x (now) 4 cm, with traces of carved letters

Discovered in 1838 by Count Albert de la Marmora in a wall of the monastery at Cape Pula, the ancient site of Nora in Sardinia

National Museum, Cagliari, No. 6989(?); exhibited

Source for collation: a colour slide

Bibliography: *CIS* I, No. 145; Amadasi 1967; Cross 1974 (with earlier bibliography); Cross 1979, 103–104, 107 and note 46; 1986, 120–123; Röhlig 1982

This inscription was generally considered to be contemporary with the famous Nora stone until, in 1974, Cross suggested turning it upside down and reading the text in boustrophedon fashion, and dated it to the eleventh century. Unfortunately the inscription has been very badly preserved, and as in the case of several Proto-Sinaitic texts, only a careful examination of the original could allow the correct identification of certain letters. Cross had a colour photograph at his disposal, which, while more reliable than a black and white one, cannot compare with a direct examination of the original.

Cross' reading, after "straightening out" the boustrophedon, runs]*n.p^cl*] /]*lt.ḥt*]. Naveh (1982, 40–41, 59) and others accept Cross' version.

If the inscription were indeed written boustrophedon fashion and if the *^cayin* did have a pupil as Cross suggests, this would give some backing to an early date. My doubts concerning Cross' reading were reinforced after looking at a colour slide of the fragment (photographed by Zvi Lederman, to whom I owe grateful thanks). The letter on which the boustrophedon reading depends is the conjectural *lamed* in Cross' second line, but its identification as *lamed* is by no means certain. In my 1983 paper (note 13) I assumed it was a letter

facing left, perhaps *sade*, and doubted the existence of a dot in the *^cayin*. In the meantime, I obtained Röllig's 1982 article,⁶⁴ in which he disagrees with Cross' reading and, following an examination of the original (p. 125), suggests returning to a ninth-century date for the fragment (p. 127). Röllig's examination of the original has borne out my doubts, and even added to them. I will summarize his principal observations here:

1. The inscription should be read as it was originally, and not upside down.

2. The letter identified by Cross as a *lamed* facing right (his proof for boustrophedon), was drawn by him as if it were complete (Röllig terms this "Verfälschung"), while in reality it is only part of a letter, the other part of which has been chipped off. When the inscription is viewed from the other way up, it can be reconstructed as a *bet* (or *dalet*).

3. The letter Cross identified as *tet* is actually an *^cayin*. The conjectural cross within the circle does not exist.

4. The supposed dot in the *^cayin* is a natural hollow.

5. Cross' *alep* – the key letter for his positioning and dating of the inscription – is nowhere shown as having such an oblique crossbar. Turning the inscription back to its original position restores the well-known *kap* whose oblique foot is a continuation of the right-hand finger.

6. The "box-shaped" *het* has no parallel in ninth-century inscriptions (but see below), so it may be possible that the Nora fragment is slightly earlier than the Nora stone. Even so, Röllig would date the fragment to the beginning of the ninth century (p. 127).

Röllig reads [*bth^c* /] *p^clnk*], very close to the original reading. The *het* seems to stand at the end of a word because of the following *^cayin*, even though there is no word divider visible. (I was unable to see another word divider suggested by Cross between *bet* and *taw*.) Röllig's examination of the original has quite definitely refuted Cross' reading. The two lines of text run from right to left, and the inscription's date is close to that of the famous Nora stone (on the latter, see Cross 1972). It will be noted that the letters common to the fragment and the stone from Nora – *bet*(?), *kap*, *lamed*, *nun*, *pe* and *taw* – are similar, if not identical, in the two inscriptions. Cross (1986, 120–123) still clings firmly to his own interpretation.

The only obstacle to dating the Nora fragment to the same time as the Nora stone is the box-shaped *het*, although this may prove less of a problem than it seems. It is true that one of the latest known appearances of this type of *het* is on the Gezer calendar, thought to date (on palaeographical grounds only...) to the end of the tenth century, but when the calendar is compared to the Nora stone and fragment, it is plain that the letters are very similar. Moreover, isolated occurrences of the box-shaped *het* are known later, as on some *mlk* impressions.

Thus vanishes another piece of evidence for dating the Phoenician expansion westwards as early as the eleventh century. Eventually a late second millennium date for the expansion may be confirmed; but a *tour de*

64. I would like to express my gratitude to Professor M. Dothan, who drew my attention to the article, and to Professor J. Naveh, who placed his copy of it at my disposal.

force such as that of Cross (see also the **Tekke bowl**, above) merely serves to cast doubt on the issue, if only because the simpler interpretation of the Nora fragment was always within reach. One cannot but join Röllig's conclusion (1982, 128) that (for the time being? B.S.) the earliest epigraphic evidence for Phoenician presence, probably also settlement, in Sardinia dates from the beginning of the ninth century.

Revadim seal (figures 237, 238)

Scaraboid seal of hard limestone (*mizi hilu?*),⁶⁵ 16 x 13 x 7.5 mm

Discovered by chance in 1959 by David Yuval, then a member of Kibbutz Revadim, in an apple orchard, Israel grid ref. 13150/13245

IDAM 80-891; about to be exhibited in the Pavilion of Hebrew Script and Inscriptions of the Israel Museum

Source for collation: the original

Bibliography: Giveon 1961, 38-39; 1978, 110-112, 116; Cross 1962a; 1967, 10; Naveh 1966, 74; Albright 1966, 11; Mazar 1964, 7; Sass 1983; Millard 1986, 394

The place where the seal was discovered has no other ancient remains (N. Eidlin, letter of 29.6.1981). Until July 1980 the seal was in the kibbutz museum, and it was then transferred to the Israel Museum. The kibbutz collection received a replica.⁶⁶ The seal's shape itself is too simple to be of much help in dating it.

The seal, with its inscription *'b'* and a scene, was published by Giveon (1961), who assigned it to the class of personal seals, mostly of the eighth-sixth centuries, known from Palestine and neighbouring countries. Cross (1962a) dated the seal to the twelfth century on palaeographic grounds, placing it between the **Rehov sherd** and the **el-Khadr arrowheads** (see also Cross 1967, 10), and this view won wide acceptance (e.g. Naveh and Albright, above).

The four letters of the text run from right to left when the seal impression is turned upside down, perhaps as a result of the seal-cutter's illiteracy. Examination of the letters indicates a date between the eleventh and ninth centuries; the twelfth century is out of the question (see chapter 5 - *alep*, *bet* and *lamed*, and section 6.2). The inscription, which includes only three different letters, cannot be dated more closely without using additional data.

The scene is schematic, and engraved in a linear style. An enthroned figure, facing right (on the impression), occupies the centre. A standing figure

65. The type of stone was identified by geologist Shmuel Meiri and Ella Altmark, chemist in the Israel Department of Antiquities and Museums. Giveon (1961, 38) described the seal as made of steatite, which misled Cross (1962a, 15).

66. Special thanks are due to Nathan Eidlin of Kibbutz Revadim, the curator of the local antiquities collection, for his help and information.

presents it with a Ma^cat statuette (Giveon 1961, 39) held in the right hand while the left points down. To the left stands a third figure, facing right, with the left arm raised and the right arm pointing down. The scene and inscription are framed by a broken line.

Giveon identified the central figure as the sun child or child on the flower, an Egyptianizing motif common in Phoenician art of the early first millennium. But there can be little doubt that the figure is seated on an Egyptian throne (Cross 1962a, 16) of the cuboid type with a low back (see below). All the lines in the lower part of the scene belong either to the throne or to the figure's legs (no lines are left for the offering stands or standards that Cross, *ibid.*, note 19, saw). These details are of significance for the correct interpretation of the seal: representations of an offering-bearer facing an enthroned figure, sometimes with another figure behind the latter, occur frequently and with several variations in Egyptian art from the New Kingdom down to the Ptolemaic period. The Revadim scene corresponds in most details to a relief from the temple of Seti I (1314–1305) at Abydos (figure 239), to give but one example. There, the kneeling king presents a statuette of Ma^cat to Osiris, who is seated on a cuboid throne; behind him stands Isis. The main difference between the two scenes is the attitude of the offering-bearer, but numerous representations at Abydos and elsewhere (Cross 1962a, note 22) show him standing, while other details and the identities of the participants vary. The Egyptian scene thus served as a prototype for the Revadim representation, although the only clearly Egyptian element in our seal is the Ma^cat statuette (and perhaps the throne).

This Egyptian scene is too long-lived to contribute to the dating of the Revadim seal, and there are no exact parallels to the scene on other local seals (but see below). Some scarabs with similar scenes to this are known (Hornung and Staehelin 1976, Nos. 317, 405, 475 and bibliography cited there), but their purely Egyptian style prevents direct comparison. Some of the parallels cited by Cross (1962a, note 16) for the seal's style are beside the point, such as the well-known cylinder seal from Beth Shean showing Ramesses II shooting at a bronze ingot. Others, mainly Rowe (1936) Nos. 632 and 633, are closer, but Rowe's 18th–19th Dynasty date for them must be lowered considerably according to well-dated examples such as that from a small, undisturbed tomb at Matmar, No. 790, in the 22nd–25th Dynasty cemetery (*Matmar*, pl. LXIII:109) or another example from Naukratis (*Naukratis* I, pl. XXXVIII:161, 162).

Nevertheless, the Revadim seal and its style are not unique, and parallels exist, if not for the entire scene; some may be found, for example, in the group of scarabs, probably of local manufacture, discussed by Keel (1982) (figure 240). The scene on this group differs from that on the Revadim seal and its Egyptian, or Egyptianizing, character is self-evident. At the same time several aspects of technique and style link it with the seal: the representation is schematic and linear, and extensive use is made of drilling and incisions (and chip-carving, not present on the Revadim seal because of the hard limestone of which it is made). The head always consists of a single drilling and the neck of a short incision. The arms are more or less horizontal lines with one forearm pointing up and the other down, an attitude extremely rare on true Egyptian scarabs. The bare legs of the seated figure are depicted one over the other. In Egyptian art, such figures sometimes show two calves but always only one thigh, and the legs, or at least the thighs, are always clad.

The provenance of the seals described by Keel, where known, is mainly along the Palestinian coast. He dates them to the tenth–ninth centuries (1982, 445), or more precisely, although this is only hypothetical, to the period of Egyptian domination of the coastal area following Shishak's campaign of 926 B.C.

The palaeographic evidence can supply only a wide chronological range – the eleventh–ninth centuries. The scene, style and technique of the seal may reduce this span to the tenth (perhaps late tenth)–ninth centuries. In any event, the script is not Proto-Canaanite but Early Phoenician (see chapter 5). If a ninth century date is thus possible, the Revadim seal may be placed early in the group of Iron Age II personal seals, mainly of the eighth–sixth centuries. Indeed, very little is known about the beginning of this series,⁶⁷ but still, palaeographic and stylistic features permitting, a ninth-century date would seem preferable to placing the seal in splendid isolation in the tenth or eleventh (let alone the twelfth) century. The material, hard limestone, is by far the most commonly used for Hebrew, and other, seals of the Iron II period.⁶⁸

The provenance of the seal may indicate the origin of its owner. Found in north-eastern Philistia, three km west of Tel Migne (Ekron, see Naveh 1958), could the seal have belonged to a Philistine? (Until 1987, only sherds out of context from the tenth–ninth centuries have been uncovered on the tell.) By the early first millennium, the Philistines were already using Semitic names, as attested by the Bible and Assyrian sources (Tadmor 1966; Ahituv 1971, esp. 495–498, but cf. Kempinski 1986 and references there). It seems that prior to becoming an Assyrian vassal in the late eighth century, Ekron for the most part retained its independence (Tadmor 1966; Ahituv 1971; Naveh 1971).

A small group of alphabetic inscriptions is known from late Iron Age Philistia, including a seal of unknown provenance belonging to an official of Mititti (or Mitinti) son of Šadqa king of Ascalon in the early seventh century B.C. (Bergman 1936, 224–226; Naveh 1982, 111–112; 1985, esp. 9, 18). Other possible Philistine seals, most of them doubtful, are mentioned by Herr (1978, 147–150). Keel (1982, 445) also relates his group of scarabs to the Philistine realm. It is thus not impossible that, as indicated by its provenance, the Revadim seal may have belonged to a Philistine (as already suggested by Mazar 1964, 7, albeit from a different viewpoint).

To summarize: The Revadim seal with its tenth–ninth century Phoenician inscription *l'b'* (from the stage before national characteristics can be distinguished), is one of the earliest in the series of personal seals of Iron Age II. It may have actually belonged to a Philistine and is one of the earliest Semitic documents discovered in Philistia.

67. Cross (1962a, note 12) assigns the *šm^cyhw bn c^cryhw* seal to the ninth century, and regards it as the earliest in the series of the Hebrew seals of the following centuries.

68. For example, of the 116 seals listed by Hestrin and Dayagi (1979) (apart from one cylinder seal and 19 impressions), 33 are made of limestone; carnelian and agate follow with 16 and 15 seals respectively. See also note 65 above.

4.2.3 Miscellaneous

This section deals with unclear or unpublished inscriptions, or texts which although not Proto-Canaanite were classified as such in the past.

Sherds from Lachish (figures 241, 242)

Fragment of a bowl with traces of an inscription painted before firing on the interior, below the rim

Discovered in 1976 in Ussishkin's excavations, in the hall of the temple from the end of the Late Bronze Age, Locus 3164

Lachish Expedition, Institute of Archaeology, Tel Aviv University, field number 9859/1

Source for collation: the original

Bibliography: Ussishkin 1978, 20–21; Ahlström 1983

Three indistinct signs, perhaps remains of a Proto-Canaanite inscription, have been preserved. The text is very fragmentary, and, in spite of attempts to do so, cannot be deciphered.

The present Lachish expedition discovered other sherds with traces of inscriptions, but they are even less clear than this one.

Hesi sherd (figures 243–247)

Fragment of a carinated bowl, about 15 cm long, with an inscription incised before firing

Discovered in Bliss' excavations in 1891, in "City IV" from the end of the Bronze Age⁶⁹

PEF, London, no number

Source for collation: the original

Bibliography: Bliss 1892, 109, 110; 1894, 88–89; Albright 1928/9; 1936, 9 and note 2; not mentioned in Albright 1966; Cross 1967, 10 and note 15; Lemaire 1985, 15–17

The Hesi sherd may belong to the MBIIB–LB type of carinated bowl, but it is also possible that it comes from an Assyrian palace bowl (see note 71).

A single word, *xl^c*, is preserved, running down from the rim on the bowl's interior. If the diagonal stroke of the first letter is incidental, one may read *ll^c*, or, turning the sherd 180°, *c^cpp* (or *c^cgg*). Sayce (in Bliss 1894) read *bl^c*. In 1929, Albright rescued the sherd from oblivion and assigned it to the thirteenth century, since at this time he was dating Aḥiram's sarcophagus to about 1100. In a 1936 paper (p. 9) he lowered the date for the sherd to the

69. Albright (1936, note 3) notes that in the PEF collection there are Philistine sherds from this stratum, which were not published.

twelfth century, relying on the Philistine sherds mentioned in note 69.⁷⁰ Cross and Freedman (1952) date the sherd on p. 8 to the "twelfth century?" and in note 36 on the same page repeat this without the question mark. Cross (1967, 10 and note 15) dates it to "perhaps the thirteenth century", and sees the *bet* as an early type, while the *lamed* and *ayin* are later.

I found it difficult both to read and to date the text. There exist three alternatives:

1. The three signs are either not alphabetic, or are not script signs at all.
2. If the bowl is from the MBII or LB and the inscription is Proto-Canaanite (running vertically or horizontally), the first letter must be one of the letters which have not yet been identified if its diagonal stroke is not to be viewed as accidental. It can hardly be *bet*. The second letter, if an open *lamed*, is earlier in form than the late Proto-Canaanite *lamed* and resembles the Proto-Sinaitic *lamed*. The third letter, a circular *ayin*, is later than the Proto-Sinaitic inscriptions (see the discussion of these letters in chapter 5). In this case, the text's date would be between the eighteenth and the fourteenth-thirteenth centuries; ceramic typology cannot reduce this range by much, except at its end: the bowl type does not appear in the thirteenth century.

3. If the sherd comes from an Assyrian "palace bowl" or a local imitation, and its inscription is alphabetic (and obviously runs from right to left), one of the alternatives (see above) would be *xl^c*, assuming that there was a mistake in incising the first letter (cf. Lemaire 1985, 15-17).⁷¹ Both the *lamed* and *ayin* could be from the period of Assyrian domination around 700 B.C., but they are not distinctive enough to establish which of the national scripts was used here. It is possible that the inscription was not influenced by Aramaic, because of the closed *ayin*, though this form does still appear in seventh-century Aramaic lapidary inscriptions.

I personally incline to the possibility that the text is Proto-Canaanite (see also chapter 5 and sections 6.2 and 6.3), but have included it in this section because of its doubtful status.

Tel Haror sherd

An inscription, probably Proto-Canaanite, on a pottery sherd discovered in the excavations of the Archaeology Division of Ben Gurion University of the Negev in 1983. The sherd was found in Area D on the tell's western slope, in a pit dating from the end of the Late Bronze period, which had been dug into the MB rampart (see Oren 1984, 56).

ymn arrowhead and another arrowhead from the Beirut Museum

70. Albright last mentioned the sherd in *TBM* III, 31.

71. John Matthers told me in March 1979 that in his opinion the sherd belongs to an Assyrian palace bowl, and that he would thus date the inscription to the eighth-seventh centuries. Millard (1976, 144) hints at the same conclusion.

Bordreuil (1982a, 189, 190) mentions two more inscribed arrowheads in the Beirut Museum. One is incised with the names of three owners (one of them being *'ky*, Bordreuil 1983, 13), and the other bears the inscription: *ḥsymn/'š^cbdy*, "arrow of *ymn*, man of *'bdy*". No further details about these arrowheads are currently available, and their relationship to the arrowhead(s) mentioned in the past is not definitely established (see note 51). Starcky (1982, 184) quotes from a list of the late Roger Saida, which among other items mentions details of an unpublished arrowhead from the Beirut Museum (length 93 mm, weight 11.88 g), and this could well be the *ymn* arrowhead or the one with the names of three owners. See also Abou-Assaf, Bordreuil and Millard 1982, 95, for a discussion of the *sade*.

Three arrowheads in private collections

Bordreuil (1982a, 189) writes that he intends to publish three arrowheads, two of which are in an unnamed private collection, and the third in another.

Two arrowheads in the Israel Museum

These arrowheads, inv. No. 86.59.87 and 86.59.88 are to be published by F.M. Cross. See meanwhile *Israel Museum Journal* VI (1987), 103.

Gezer jars (figure 248)

Twenty-three storage jars with signs incised before firing

Discovered in the Hebrew Union College excavations in Field IV (MBII gate), most in Stratum XVIII (early LB) and one in Stratum XIX (late MBII)

Skirball Museum, N. Glueck School of Biblical Archaeology, Jerusalem

Source for collation: the originals

Bibliography: Seger 1983

Marks believed by Seger to be Proto-Canaanite letters.

Kh. el-Hedamus jar

Ibrahim (1978, 122) reports a rim of a collared rim jar with "...incised disarticulated letters of the... Proto-Canaanite type", discovered by Mittmann during a survey at a site to the north of the ^cAjlun in Transjordan. In the survey report (Mittmann 1970, 68, site No. 161, grid ref. 1967/2202) Mittmann mentions Iron I sherds among others, but no inscription. In December 1982, Professor M. Kochavi showed me a photograph of the sherd sent to him by Mittmann. The incised marks do not constitute an inscription, as far as I can judge.

Tell el-Jisr sherd (figures 249, 250)

Rope-decoration on a sherd of an MBII(?) vessel, which Mendenhall (1971) thought was an inscription. See Cross, 1979, 100–101.

St. Louis seal (figure 251)

Cylinder seal with a scene and a pseudo-inscription, probably a late forgery; see Buchanan 1966, No. 1072, p. 213. Goetze (1953) published the inscription as a Proto-Canaanite text. Cross (1979, note 19) accepted Buchanan's opinion, but later (1984) rejected it.

Tel Halif handle (figure 252)

Jar handle with incised signs

Discovered in the American excavations in an LB stratum

IDAM 76-625; in storage

Source for collation: the original

Seger (1977, 45) and Seger and Borovski (1977, 160–161) thought this was a Proto-Canaanite inscription. Shea (1978) correctly established that it is not Proto-Canaanite: of the three signs one is unclear, the second bears no resemblance to any Proto-Canaanite letter (its shape is reminiscent of the later shekel-sign) and the third resembles *taw* – but a cross-shaped sign could have several other meanings.

Kamid el-Loz sherds (figures 253–256)

These are sherds, including one Mycenaean example, which bear various signs incised on them after firing. Röllig and Mansfeld (see Cross, below) saw them as Proto-Canaanite inscriptions of the fifteenth–fourteenth centuries. In 1983 Mansfeld (pp. 43–44) redated them to the thirteenth–twelfth centuries. Cross (1979, 98–100 and bibliography cited there) demonstrated that the forms of the signs do not resemble any known or anticipated letters of this period. No suggestion for their identification is offered by Cross (or myself), though it is worth noting the similarity of some of the signs to North and South Arabian letters. Starcky (1982, note 2) suggests that they are signs of ownership (such as Arab *wasm* signs) or else another of the contemporary attempts at inventing a new script (see also Sass forthcoming 3).

Lachish prism

Egyptian inscription; see Hestrin, Sass and Ophel 1982.

Lachish 'Bowl No. 2' (figures 257, 258)

Jug (*sic*) fragment with black signs painted on the interior

Discovered in the area of the Fosse temple

IDAM 35.2342; stored in the Rockefeller Museum

Source for collation: the original

Bibliography: Starkey 1934, 172–173 (Egyptian inscription); *Lachish* IV, 130 (illegible); Cross 1967, note 12 (not Proto-Canaanite)

Pseudo-inscription?

Lachish sherds No. 6 (figure 259)

Sherds of a bowl with signs painted in dark red

Discovered in Tomb 571 of the end of the Late Bronze Age

British Museum, WAA 160226–7

Sources for collation: *Lachish* IV, pl. 47:5 and photographs from the British Museum

Bibliography: *Lachish* IV, 130, 249–250; Cross 1967, note 12

Unidentified signs. Four sherds, which were not published in *Lachish* IV, bearing more unidentified signs reached the British Museum from the Institute of Archaeology in London, and were given the numbers WAA 160228, 160230–32 (letter from Jonathan Tubb of the British Museum, of 8 February 1984).

Lachish ‘Censer lid’ (figures 260, 261)

Lid of a footed pottery pyxis, on the underside of which are traces of signs drawn in black after firing

Discovered in Starkey’s excavations of 1935–36 in Tomb 216 of the Late Bronze II period

British Museum, WAA 160178

Sources for collation: the original and *Lachish* IV, pl. 45:4

Bibliography: Starkey 1936, 180; *Lachish* IV, 128–129; Cross 1967, 10

The inscription has faded beyond recognition; it may have been Proto-Canaanite.

Khirbet Tannin sherd (figures 262, 263)

Body sherd, probably of jar, 5.5 x 6.5 cm, incised before firing

Found on the surface at the end of 1980 at Kh. Tannin, grid point 1823–2024, c. 7.5 km SE of Jenin. The site is No. 18–20/22/1 of the survey.

Haifa University, Institute of Archaeology and Maritime Studies, Field No. 17

Source for collation: the original

Bibliography: Lemaire 1985, 13–15

The finder, Adam Zertal, was kind enough to show me the sherd in February 1981. It cannot be archaeologically dated. The incision looks like a meandering line, more or less continuous, but is incomplete because of the small portion preserved. Zertal and Lemaire think this is an inscription.

Megiddo ring (figures 264–266)

Gold ring (or electrum with a relatively high proportion of gold), about two cm in diameter, with incised signs

Discovered in the 1931 season in Tomb 912B from the LB

IDAM 34.1888; exhibited in the Rockefeller Museum, north hall, case LL, exh. No. 1228

Source for collation: the original

Bibliography: *Megiddo Tombs*, 173–176; Albright 1966, 11; Cross 1967, note 17; Cross and McCarter 1973, fig. 2 and p. 8 (*shin*)

The form of one of the signs is identical to the Proto-Canaanite vertical *shin* (Cross and McCarter), but since the rest of the signs cannot be identified, there is no way of knowing whether this resemblance is accidental or not. For this reason, I prefer to regard these signs as a pseudo-inscription.

Ajjul cup (figures 268–270)

Cup with handle and (broken) spout, about 11 cm in diameter, with a painted inscription

Discovered in Petrie's excavations of 1931–1932 in Tomb 1109 in the 18th-Dynasty cemetery

Institute of Archaeology, University of London, No. EXIII 115/1⁷²

Source for collation: Photographs from the Institute of Archaeology, University of London

Bibliography: Not discussed in *Ancient Gaza* II (only drawn in pl. XXX:37A5, and erroneously described in the caption as a graffito); Cross 1967, note 12

The tomb assemblage (figure 267) dates from the 18th Dynasty, as noted by Petrie. The inscription is painted on the vessel's shoulder, between the neck and the line drawn at the level of the base of the handle. I was unfortunately unable to examine the cup and its inscription while in London. It is difficult to decide from the photographs whether this is a Proto-Canaanite inscription, but it is quite possible.

72. The cup was rediscovered in 1982 in the Institute of Archaeology (letter from Peter Parr of 19 April 1982). The drawing and photograph (figures 268–270) were made by the Institute's staff.

Ajjul jug⁷³ (figure 271)

MBII jug, 31 cm high, with a seal impression at the base of the handle

Discovered in Petrie's excavations in 1938 in pit GDV, niche 2030, from the MBII period

In England(?)⁷⁴

Source for collation: none

Bibliography: *Ancient Gaza* V, 19

Nothing can be learned from the drawing (fig. 271), which is the only source.

Ajjul handle (figure 272)

Jar handle, 17 cm long, with a sign incised after firing

Discovered in Petrie's excavations in 1932 in Tomb 1503 of the Late Bronze Age

IDAM 32.2052; stored in the Rockefeller building

Source for collation: the original

Bibliography: *Ancient Gaza* II, pl. XL:30 (not mentioned in text); Milik and Cross 1954, 11; Cross 1954, 23, 24; 1967, 10 and note 12

See discussion of the next object.

Akko handle (figure 273)

Jar handle with a sign incised after firing

Discovered in Dothan's excavations at Akko in 1973 in Area B above the rampart, in a LB context

Akko expedition

Source for collation: the original

Bibliography: Dothan 1976, 9

The incised signs on the **Ajjul and Akko handles** belong to a large group of signs incised on jar handles from the Near East, Cyprus and the Aegean region. Some of these signs resemble Proto-Canaanite letters; others are like the pseudo-hieroglyphic script from Byblos, or the Cypro-Minoan and Linear A and B scripts. Cross (1954, 23, 24) and Dothan would like to read this

73. Miss Olga Tufnell drew my attention to the jug in July 1976.

74. According to the publication, the jug is now in England. It is not in the Petrie Museum (letter from Barbara Adams of 29 April 1981), the Institute of Archaeology of the University of London (letter from Peter Parr of 2 June 1981), nor in the British Museum (letter from Jonathan Tubb of 30 March 1982).

example as *kap taw*, but with "inscriptions" of only one or two signs decipherment equals wishful thinking. The similarity of some of the signs to one script or another could be accidental. Cf. for example, *Lachish* III, pl. 52:11 and countless other examples.

Tell Beit Mirsim sherd (figures 274, 275)

Sherd, 4 x 4 cm, with one complete letter and part of another, incised before firing

Discovered in Albright's excavations in 1930; context unknown

Probably in the US (*TBM* III, 30–31)

Source for collation: *TBM* III, pl. 60:1

Bibliography: Albright 1930, 8; *TBM* III, 30–31; Cross 1954, 24; Albright 1966 and 1969, fig. 1 (*kap*, thirteenth century)

In *TBM* III Albright identified the letter as *kap* and dated it to the twelfth century, relying on the rounded base which seemed to him to be earlier than the pointed base. Cross rather hesitantly mentioned this in 1954 (p. 24), but has not repeated it since. The letter appears as *kap* in Albright's alphabetic table (1966 and 1969, fig. 1) and is dated to the thirteenth century there.

Rounded *kaps* are known from the *Yahimilk* and *Šipitba^cal* inscriptions of the tenth century. From the seventh century on, and perhaps even earlier, Phoenician *shin* appears in this form (Cross 1979a).

Tel Bira (Yas^cur) sherds

M. Prausnitz reported the discovery of two sherds with incised marks resembling Proto-Canaanite script (*IEJ* 12, 1962, 143).⁷⁵ An investigation carried out with Dr Prausnitz and Mrs Varda Sussman of the Israel Department of Antiquities and Museums has revealed that these marks were actually made by the excavating implement when the sherds were unearthed. I have not been able to discover the present whereabouts of the sherds.

Stone from the Arava (figures 276, 277)

Stone plaque with an incised inscription

For details of the plaque and its discovery see Tzori 1953

IDAM 52.1348; in storage

Source for collation: the original

Bibliography: Tzori 1953; Birnbaum 1971, 34; Naveh 1975, Text 3

Tzori thought that this was an early Phoenician inscription, but it is in fact Thamudic (Naveh).

⁷⁵ Baruch Brandl gave me this reference, for which I am most grateful.

Milik arrowhead No. 1 (figures 278, 279)

Copper or bronze arrowhead, 11 x 1.5 cm, 12.79 g, with an inscription incised on one side

Provenance unknown

Beirut Museum, No. 2951 (presented by H. Seyrig)

Source for collation: Milik 1961, pl. I:1

Bibliography: Milik 1961, 103, 105; Naveh 1966, 66; Cross 1967, 19*–20; Starcky 1982, 179–180, 184

Milik dated this arrowhead to the fifteenth century and read it as Proto-Canaanite: *hs*. Cross amended the date of the arrowhead to the Middle Bronze period, and demonstrated that it carries a cuneiform text. Starcky (1982, 179–180) nevertheless clings to Milik's theory. See the end of Sass forthcoming 2.

Byblos 'enigmatic' inscription (figures 280, 281)

Fragment of a stone slab, 40 x 35 cm, with an incised inscription. Since its discovery, various scholars have tried to read it as Proto-Canaanite (most recently Albright 1969, 11). Cross has presented convincing reasons for rejecting these attempts (first in 1954, 22–24) and he associates this inscription with the pseudo-hieroglyphic texts from Byblos.

Kahun inscriptions (figures 282–285)

In the excavations of Kahun and Lahun, Petrie discovered a wooden heddle-jack (Manchester Museum 50), a pottery ostrakon (present whereabouts unknown) and a limestone seal (Petrie Museum, UC), all inscribed (Petrie 1921 and bibliography cited there). He dated them to the XII Dynasty, the period of greatest activity in the region, even though substantial remains of the 18th–19th Dynasties exist at Kahun. See also Mazar 1968, note 96.

Whatever their date and character, the signs do not resemble Proto-Canaanite letters of any date, let alone the earliest examples. The second line on the ostrakon is in hieratic script as are the other lines (Professor Sarah Groll, personal communication 1982).

Valley of the Queens ostrakon (figure 286)

This pottery ostrakon was published as Proto-Sinaitic by Leibovitch (1940, 119–120), and Albright (1948, note 33) even deciphered it. However, this is merely a hieratic ostrakon with some non-hieratic signs, which are probably workmen's identification marks.

Steatite vessel from Cyprus (figures 287, 288)

Steatite vessel, 13 cm high, with an inscription incised on the base

Purchased by Cesnola in Nicosia before 1876

Metropolitan Museum, New York, No. 74.51.5057A

Source for collation: Masson and Sznycer 1972, pl. XXII:2

Bibliography: Masson and Sznycer 1972 and bibliography cited there

The vessel type is characteristic of the Late Cypriot III period (the twelfth–eleventh centuries) (cf. Caubet, Karageorghis and Yon 1981, Nos. 102, 103). Masson and Sznycer date the inscription *hḥh(?)* incised on the vessel's base to the eleventh century. If it is genuine and Phoenician, the first *het(?)* would point to a date of about the eighth century, contradicting the *he*, whose form seems at first glance to be earlier. It would not be surprising, though, if the inscription turns out to be a later, even modern, addition.

Sinai 527 (figures 289, 290)

Knauf (1984) suggested that this is a Proto-Canaanite text of the 19th Dynasty or from the first half of the 20th Dynasty. Dijkstra (1984, 37) is of a similar opinion. At one time I too thought that this might be an alphabetic inscription (though **Proto-Sinaitic** rather than Proto-Canaanite), but I finally dropped this idea for palaeographic and other reasons, after repeated examinations of the original between 1972 and 1979 (see Sass 1985). It seems preferable to hold to Gardiner, Peet and Černý's (*Sinai* II, 222) opinion that this is an illegible Egyptian(?) inscription.

Other "inscriptions" are mentioned in the literature, such as Yeivin 1970, 30 and note 54.

CHAPTER 5: PALAEOGRAPHY

(see tables 3–5)

5.1 Introduction

As early as 1916, Gardiner showed that the **Proto-Sinaitic** inscriptions were written in a Semitic language, and that their letters were the prototypes for the **Phoenician** alphabet. The letters are alphabetic, acrophonic in origin, and consonantal, and their forms are derived from Egyptian hieroglyphs.⁷⁶ This conclusion is still valid for almost all the letters that have been identified; if indeed hieratic influence was involved in the selection of the shape of a letter or two this can be best explained as secondary, through the influence of hieratic on hieroglyphic forms (see below and table 3). The original names, derived from the pictographs, remain unchanged in most cases, making possible the identification of many **Proto-Sinaitic** letters. Of the 27–29 **Proto-Sinaitic** letters, the shapes of 23–26 are known and the phonetic value of most of them is certain. Thirteen letters (*alep*, *bet*, *he*, *waw*, *h*, *yod*, *lamed*, *mem*, *nun*, *ayin*, *resh*, *t* and *taw*) present no problems. The remaining letters may be divided into seven groups, according to the type of problem associated with them:

1. The acrophonic logic is certain, but there is no exact equivalent in Egyptian – *kap*.

2. The acrophonic logic and Egyptian origin are clear, but the letter has been identified only in texts from the end of the second millennium – *gimel*.

3. The name of the letter has perhaps changed in the course of time – *dalet* (and *het*?).

4. The acrophonic logic is unknown – *d*, *qop*.

5. The Egyptian prototype is unknown – *qop*.

6. The evolution from the **Proto-Sinaitic** to the **Phoenician** letter is unclear – *dalet*, *qop*.

7. Unidentified or doubtful – *dalet*, *zayin*, *tet*, *samek*, *g*, *pe*, *sade*, (*s*, *d*, *z*), *shin* (and *ś*?).

There is no disagreement concerning the hieroglyphic origin of most of the **Proto-Sinaitic** letters, but it is not beyond the bounds of possibility that a few letters (*kap*, perhaps *qop* and several of the unidentified letters) have a different source (cf. Szymer 1974, 12), though I have no suggestions to offer. Ullmann (1927, 313, note 2) demonstrated that prototypes for most of the **Proto-Sinaitic** letters exist in a single Egyptian inscription from Sinai (Sinai 53, figs. 291, 292 in this book). In any case, the actual selection of signs must have been a simple matter, even if few were not taken from the hieroglyphic script. It is the breaking up of the language into its component consonants which is the main achievement, and which seems to imply previous knowledge of one or more writing systems (see the end of section 6.1 and Sass in press).

76. Three **Proto-Sinaitic** letters, *nun*, *ayin* and *resh*, are written alternately with two hieroglyphs each, depicting a snake, eye and head.

The long and short alphabets

Five of the letters had disappeared by the time of the thirteenth-century Proto-Canaanite inscriptions, as a result of the assimilation of certain consonants to others: they include the pairs *z-d*, *h-h*, *c-g*, *s-d* (*z?*) and *š-t* (*š?*) (first listed by Albright 1926, 82). A similar phenomenon has been recognized in the short cuneiform alphabet (see Cross 1967, 9* and note 7, and also section 7.2.2 below). It was Albright's conclusion (1948, fig. 1) that the later Proto-Canaanite signs for *zayin* and *shin* were originally employed to designate *d* and *t*, while the original signs for *zayin* and *shin* were lost; the original signs for *het*, *cayin* (and *sade?*) survived while their counterparts disappeared. Only the *h-h* pair has been identified; in the other cases, one of the letters is still unknown or doubtful – *zayin*, *g*, *d* (*z?*) and *š* (see the discussion of these letters below). The first 27 letters of the Ugarit abecedaries (see chapter 2 and section 7.2.1) indicate that these letters already existed in the Proto-Canaanite alphabet.

As far as is known, the Proto-Canaanite texts of the thirteenth-twelfth centuries were written in an alphabet of 22 letters, as shown by the *c*Izbet *Šarḥa* ostrakon and perhaps also by *ḥ* (for original *ḥ*) on the Beth Shemesh ostrakon (Cross 1967, note 61).

Direction of writing and stance of the letters

Twenty-three of the Proto-Sinaitic inscriptions are written vertically, and twelve of these possess more than one column. Lines divide the columns in two examples from this latter group (350, 351). Sinai 345 and 349 are horizontal inscriptions, with the lines of the latter text also separated by incised lines. In four inscriptions (346, 357, 365b and 380) vertical and horizontal writing is mixed, and in two others (355 and 358) the direction of writing is not clear. Judging by recognized words, the horizontal lines in inscriptions 345, 346 and 365b should be read from left to right. And, according to the location of its meeting point with the vertical column, the line in inscriptions 357 and 380 probably should be read in this direction too. Inscription 349 reads from right to left.

Cross (first in 1954, 18) proposed that, like the Phoenician ones, the Proto-Sinaitic letters should read in the direction the signs themselves face, and at least in the case of the horizontal texts he seems to be right. However most of the inscriptions with two or more columns have usually been read from right to left too (Albright 1966, 26, reads Sinai 363 from left to right), although only in texts 350 and 351 do all the signs face left. The letters in 361, 365a and 376 face right, in inscriptions 352, 353, 363, 374 and 375 they face in both directions, and in 354 and 356 the direction is not clear. (The columns in 353 must have been written from right to left, judging from the cramped letters at the bottom of the left-hand column.) The obvious conclusion is that even if some of the writers of these texts tried to give them a standardized appearance, there was still no universally observed rule about the stance of the signs. All that was required was that the pictograph be identifiable. This is also true of the Proto-Canaanite texts.

An inscription written boustrophedon fashion is known from the side text of the block statue (Sinai 346, see figure 14). Cross and Rainey have suggested reading inscription 376 in this way too.

Since his article of 1954 (p. 18), Cross has attributed a chronological significance to the stances of the letters. He has constructed a timetable for 90° or 180° rotations, and has occasionally made alterations to this scheme (cf. for instance the **Beth Shemesh** ostrakon, section 4.2.1, whose orientation has been changed three times). The available material seems to indicate that there was no particular principle behind the rotation of the letters before about 1000 B.C., when the right-to-left direction of the script became fixed. (Millard, for example in 1976a, 135, also warns against attributing any significance to the stances of the letters at this period.) The stabilization of the script is linked to the final loss of the pictographic concept of the alphabet, a process whose beginning must be nearly as old as the alphabet itself, though it took many centuries to be completed. Before this occurred, the direction of the written line had no significance (right to left, left to right, top to bottom or boustrophedon), nor did the stance of the individual letters in each line or column. All that was necessary was that the shape of the letter be identifiable. As long as the letters retained their pictographic forms, those whose appearance required a particular stance (such as *alep* and *resh*) did not rotate. Others, for instance *lamed*, occur from the beginning in different stances. In the transitional stage to linear forms, in the thirteenth-twelfth centuries, most of the letters rotate haphazardly, except perhaps *kap* and *resh* (thus first Cross, 1954, 19), but it is quite possible that the unchanged stance of these two rare letters has more to do with the random nature of our knowledge of the inscriptions. Fixed direction of letters and lines is found even before the end of the eleventh century (e.g. on the **Qubur el-Walaida** bowl, all of whose letters face from left to right), but this is rather the exception to the rule.⁷⁷

5.2 The letters (see tables 3-6)

Alep

The letter was first identified by Gardiner (1916) in the **Sinai** inscriptions on the basis of acrophony and its similarity to the **Phoenician** *alep*. It is in the shape of an ox's head, showing also the horns and sometimes an eye or an ear. In some cases, the upper line of the head, between the horns, is missing, as in inscriptions 357(?), 358 and 376. Albright mistakenly reconstructed a similar *alep* in **Sinai** 351. The line marking the muzzle which some scholars have thought they saw in inscriptions 349 and 359 does not exist. The hieroglyphic source is Gardiner's sign F1.

The next *alep* typologically is that from the **Raddana** handle (on the A-shaped letter on the **Shechem** plaque, see below). As in the **Proto-Sinaitic** inscriptions, the horns of the **Raddana** *alep* point upwards and the muzzle is broad and rounded, though the letter is by now symmetrical and linear in form. The muzzle, jowls and horns were incised with a single stroke, while the upper part of the head is formed by a horizontal line. In most of the **Proto-Sinaitic** *aleps*, in contrast, the head and horns were drawn separately. A good example of an exception to this rule is provided by the upper *alep* in inscription 376 (see also above), where the horns were incised as a continuation of the ox's face and the upper part of the head remained open.

77. Cross too has begun to retreat. He has already admitted (for instance 1980, 3) that the rotation of letters in the thirteenth-eleventh centuries is unsystematic; but see Cross 1984, 72 and elsewhere.

In spite of the crude execution of the letters (and of the entire inscription), it is somewhat more advanced from a typological point of view, although this seems not to have any chronological implications. There are other reasons (see the discussion of *h* below) why inscription 376 should not be considered as the earliest Proto-Sinaitic text. The two upper *aleps* of Sinai 363 resemble that of the Raddana handle even more closely. Cross and Freedman (1971, 21) and Aharoni (1971, 132) disagree on the extent to which the horizontal stroke on the Raddana handle crosses the vertical lines. A careful examination of the handle under a magnifying glass and under different angles of lighting (in May 1981 at the Israel Museum) revealed that the horizontal line does not cross the vertical lines at all (figure 154). This is quite clear on the right hand side even in the photograph. On the left, the incised line has split the pottery, causing a break beyond the vertical line. The early features of the Raddana *alep* are its stance, reminiscent of the pictographic letter, and the upper line of the head, which does not cross the horizontal lines. This latter characteristic can also be seen in the abecedary on the ^cIzbet Šarṭah ostrakon, and a fairly similar example occurs on the Lachish ewer. The elements which seem later in relation to the Proto-Sinaitic letter consist of the symmetry and the drawing of the horns together with the face in a single line; the prototypes of these features can already be seen in Sinai 363. It is not certain that the archaic form indicates an early date for the inscription. See the discussion of the Raddana handle in section 6.3.

The next *aleps* come from the Lachish ewer, the Beth Shemesh and ^cIzbet Šarṭah ostraca, the Qubur el-Walaida bowl and the Zarephath sherd. They differ from each other in the finer details: the sides are sometimes equal and sometimes different in length, the muzzle is sometimes rounded and sometimes pointed, in some cases the crossbar crosses the sides while in others it only touches them, and its distance from the muzzle also varies. The letter's stance is either horizontal (facing right or left) or vertical, like the letter A (upside down in relation to the Raddana *alep*). It is difficult to see any chronological significance in these variations, even in the pointed muzzle which is a new feature (with the rounded muzzle continuing to appear beside it). The farness of the crossbar from the muzzle may be an early feature in contrast to the next types of *alep*, especially those from Byblos where crossbar and muzzle often touch, but the crossbar moves further away again in the tenth century. Cross (1980, 3) lumps the Beth Shemesh and Qubur el-Walaida *aleps* together, in spite of the difference in the position of the crossbar. If this is correct, it may be that even the broad muzzle of the Raddana *alep* has no particular significance. Cross (1984) identifies as an *alep* the letter on the Lachish bowl fragment which Ussishkin reads as *het*. Only further discoveries can clarify this matter; in the meantime, I would favour *het*.

An A-shaped letter also appears on the Shechem plaque. It is not known when linear forms began to replace the pictographic ones, and it is possible that a linear *alep* and a pictographic *resh* coexisted for some time, as seen on this plaque. Alternatively, this sign from Shechem could be another letter which at some stage of its development resembled an A. (This would have had to happen before *alep* took on this form. A similar case is the Proto-Sinaitic *waw*, which is identical in shape to the *qop* from the ^cIzbet Šarṭah ostrakon.) *Dalet*, a transitional form between the Proto-Sinaitic fish and the thirteenth-twelfth centuries triangle, could be a candidate. This is

obviously merely a guess, and it is also possible that the Shechem inscription is not Proto-Canaanite at all.

Eight examples of *alep* are known from the end of the second millennium, four from the south (the el-Khadr arrowheads) and four from the north (the Rapa, *yt'* and *^cAbdny* arrowheads). In the el-Khadr III, Rapa and *yt'* examples, the muzzle points to the right, while in the other texts it faces left, as in all the inscriptions listed below. It is possible that the appearance on the el-Khadr I and *yt'* arrowheads of an *alep* resembling the Byblian form (Cross, first with Milik 1954, 12–13, esp. note 27) is merely coincidental, and partly the result of the difficulty of incising letters on metal. This is also reflected in the form of other letters on the arrowheads; see in particular the *lamed* and *^cayin* on el-Khadr arrowhead II. In any case, the next *aleps*, close to those from Ahiram's sarcophagus – the Ruweise and "King of Amurru" arrowheads, the Byblos spatula, and perhaps the Tekke bowl (see below) – are quite different, except for that on Byblos Cone B, which has not been proved to antedate Ahiram's sarcophagus (cf. the advanced forms of the *bet* and the *dalet*).

As mentioned above, all the *aleps* later than the *^cIzbet Sartah* ostrakon, Qubur el-Walaida bowl etc. but earlier than the Gezer calendar are characterized by the closeness of the crossbar to the muzzle. It was chiefly the greater distance between this stroke and the muzzle in the *aleps* on the Revadim seal that led Cross to date the seal to the beginning of the twelfth century. However, even if it is assumed that such *aleps* did not exist between the 12th and the tenth century, the Revadim letter may be compared with such late examples as the ninth-century Cyprus inscription, or even the later *^cAjrud* stone bowl (cf. Cross 1979, 109), the incised signs on the *^cAjrud* pithoi and a sherd from Stratum VIII at Hazor (*Hazor* II, pl. CLXX:2). Moreover, most of the known twelfth–tenth centuries *aleps* are from the north, only the el-Khadr examples being of southern origin (and among the inscribed arrowheads the el-Khadr group is an exception, as it is the only find of this kind from the south).⁷⁸ In the north we can trace the rise, zenith and decline of the Byblian *alep*, which does not form part of the main line of development of this letter. It is generally agreed that the Gezer calendar *alep*, for example, is a descendant not of the Byblian variant but rather of the (southern) Proto-Canaanite form (Milik and Cross 1954, note 27; Cross 1979, 110). The Revadim seal *alep* could thus provide the missing link between the Proto-Canaanite and Gezer forms, but it may actually be later. It is not particularly developed in comparison to the thirteenth–twelfth centuries *alep*, just as other letters did not develop between this period and the time of the Ahiram sarcophagus or even later (some *hets*, *tet*, *^cayin* without pupil and *taw*). The absence of this mainstream *alep* from inscriptions of the eleventh–tenth centuries may be due in fact to chances of discovery.

The closeness of the crossbar to the muzzle in the Tekke bowl *alep* is one of the characteristics militating in favour of a pre-ninth-century date (see also the discussion of *kap*). The *alep* which Cross thought he saw on the Nora fragment is actually a *kap*.

78. All the other arrowheads were found in Lebanon, and the place-names inscribed on them are in the north too – Sidon on the Gerba^cal, Abdon on the *^cAbdoniya* and perhaps Acre on the Ruweise arrowhead.

Bet

This letter was first identified by Gardiner (1916) in the Sinai inscriptions on the basis of acrophony and its similarity to the Egyptian sign for a house. It is usually rectangular in form (e.g. Sinai 345), and its source is Gardiner's sign O1. The standard Egyptian form of this latter sign is different from the Proto-Sinaitic letter, though there is a rare variant which is rectangular (e.g. Sinai 92 south, line 4; see figure 293). Other forms of *bet* can be seen in inscriptions 346, 359, 361 and 364. I previously suggested (1978, note 2) reading the variant in text 361 as *tet* but have now discarded this. Its Egyptian source may be Gardiner's sign O6 as it appears in Sinai 23, line 4. A somewhat similar letter from inscription 380 is now included in the group of unidentified letters. The *bets* in inscriptions 346 and 359 (a house with an "entrance corridor") resemble the *reshs* from texts 346, 364 and 367 (see section 3.1.8). The identification of the first as *bet* is clear from the context. The letter in inscription 359 is also probably a *bet* judging by the shortness of the lines of the "corridor", but this is not certain. These lines are usually longer in *resh* (see the discussion of the letter). On the basis of the Lachish bowl fragment, Cross (1984, 72 and fig. 3) predicted a *bet* in the Proto-Sinaitic inscriptions derived from Gardiner's sign O4. However, after *taw*, *bet* is the most common letter in Proto-Sinaitic texts (36-43 examples), making it difficult to believe that this proposed form really exists.

The *bet* on the Gezer sherd is identical to its Proto-Sinaitic counterpart. If the Shechem plaque is Proto-Canaanite, it is likely that the first sign and that incised under the last sign are both *bets*. The first letter of the Tell el-Hesi sherd, long ago identified as *bet*, must remain unidentified whatever the date of the sherd. One side is missing from the *bet* on Lachish sherd no. 7, so that it is impossible to determine whether the letter was square or resembled that on the Lachish bowl, which starts the series of *bets* with a leg. The hitherto unknown sign which appears three times on the Lachish bowl fragment has been identified by Ussishkin (1983, 155) as *bet*, and I have no better suggestion to offer. (Leibovitch, 1934, pl. IV, sign 5, claimed there were identical signs in the Proto-Sinaitic inscriptions.) This new sign, if correctly identified, represents a stage of development of the *bet* earlier than that on the well-known Lachish bowl, although it is not entirely impossible that it was actually a byform used alongside the type with a leg. There is some resemblance between the Lachish bowl fragment letter and the coiled *lamed* (which also appears on the bowl fragment); this could imply that it was not simply the ignorance of the writer of the ^cIzbet Şarṭah ostrakon which led him to confuse *bet* and *lamed* on the ostrakon (see below). Cross (1967, note 64 and elsewhere) thought that the Beth Shemesh ostrakon possessed a *bet* identical to that on the Lachish bowl, but the traces of script at this spot on the ostrakon are too faded to be sure. The ^cIzbet Şarṭah *bet* does not provide any assistance in solving the problem because of its resemblance to *lamed* as noted. Perhaps the similarity is evidence for a rounded *bet* as early as the 13th-12th centuries. Cross (1980, 9, 10) suggested that the *bets* and *lameds* may be distinguished by their stance, but nothing indicates that this is what the writer of the text intended; certainly both letters are of the same stance in the abecedary line (see the discussion of the ostrakon).

Most of the following examples of *bet* have a triangular head, but differ in the proportion between the head and leg and in the shape and angle of the

latter. I cannot discover any chronological significance in these variations. In Cross' opinion (1967, 21*), the curving leg and the leg which does not branch off directly from the base of the triangle are late elements. It is impossible to rely on this – the Gerba^cal *bet*, for example, is almost identical to the *bet* from the Lachish bowl (similar letters are found even on eighth-century seals, see below) and the *bets* from el-Khadr arrowhead V are rounded and look later. The *bets* from the tenth-century Azarba^cal arrowhead (and even later examples, see below) are also identical to some of the el-Khadr specimens. See the discussion of *zayin*, *lamed* and *nun* on the Azarba^cal arrowhead. All the *bets* in this group face left except for those from el-Khadr arrowheads II and III. The Rapa arrowhead *bet* cannot be seen clearly in the photograph. A genuinely rounded head appears first in one of the *bets* on Byblos Cone B and then becomes the dominant form; it is however possible that this may be mere coincidence, since most early *bets* appear on bronze arrowheads, on which it would have been difficult to engrave curved lines (see also the *bet* from ^cIzbet Šartah, above). The squarish form and large head of the Revadim *bet* do indeed look very archaic, though closer examination reveals this to be a mere impression: the *bet* of the eleventh-century Byblos Cone A is almost identical. Similar letters appear on Ahiram's sarcophagus, and even in the archaic text from Cyprus and the Tell Fekheriye inscription. The five (or more) variants of *bet* in the Ahiram inscription demonstrate the futility of attempting to assign an exact date to the Revadim seal, with its three different letters. An over-confident epigraphist would have spread the Ahiram *bets* over a century at least, had they been discovered in separate inscriptions (in other words such a range for Ahiram's text is probably justified). One of the *bets* of the Nora stone (*bšrdn*) looks very like the Revadim *bet*, and isolated parallels for it can be found even on eighth-century seals (Hestrin and Dayagi 1978, Nos. 118, 125).⁷⁹

There are thus two obvious chronologically diagnostic elements in the Proto-Canaanite *bet*: the absence of a leg – an early feature – and the rounded head – a late characteristic. Further discoveries must be awaited before drawing definite conclusions about the *bet* on the Lachish bowl fragment. The other variations have little if any significance. They are largely the product of the material and technique in which the inscriptions were inscribed – incised on hard bronze in the case of the arrowheads and the Tekke bowl – or of the predictable differences even within the same "handwriting" on Ahiram's sarcophagus and the archaic Cyprus inscription (4–5 variants each), the Yahimilk inscription (two variants), and the idiosyncratic *bet* in the Šipitba'al and 'Abdo texts from Byblos.

Gimel


The letter has not been definitely identified in the Proto-Sinaitic inscriptions. Its source is probably the Egyptian sign for a throwstick (Semitic *gamlu*),⁸⁰ Gardiner's sign T14, but this sign has not been found in the Proto-

79. For a slightly different "Proto-Canaanite" *bet* (with exact parallels on the el-Khadr arrowheads) on an eighth-century seal, see Hestrin and Dayagi 1979, No. 104.

80. First proposed by Eisler 1919, 108. See also Cross and Lambdin 1960, 25.

Sinaitic texts. A similar sign though it has a right angle, probably appears in inscription 367. It was identified as *gimel* even in its first publication (Butin 1932) as well as in most studies of the 1930s and 1940s, although the sign composed of two parallel right angles (see *pe*) and other signs were also identified as *gimel* then. Albright (1966) read the sign from inscription 367 as *yod*, while Cross read it as *gimel* (1967, 15*; 1979, 122. He had changed his mind by 1980, 16). For a doubtful *gimel* in Sinai 353, see the discussion of this inscription, and for the *gimel* suggested in the Lachish prism (section 4.2.3), see Hestrin, Sass and Ophel 1982.

The first more or less certain *gimel* was identified by Albright (1936, 9) on the Beth Shemesh ostrakon, on the basis of its resemblance to the Phoenician letter and to Gardiner's sign T14; it made sense in *gm^cn*, a personal name he read on the ostrakon. An earlier *gimel* (or *pe*) appears on the Lachish bowl fragment, with a different shape (see also the discussion of *šade*). The ^cIzbet Šarṭah *gimel* cannot be distinguished from *pe*. If, however, the letter in the abecedary line does indeed represent the form of the contemporary *gimel*, it is possible that this is an example of external influence on the development of the letter: it is identical to the throwstick (*gamlu*) of the god Amurru (Cross 1980, 9 and bibliography cited there). On the other hand, such a fundamental change in the letter's form in relation to that known from the Beth Shemesh ostrakon would be most surprising. As a rule, the data available are insufficient to distinguish *gimel* from *pe* in texts from the end of the second millennium (for a similar assessment, concerning the Qubur el-Walaida bowl, see Cross 1980, 3). The next *gimel* appears on the Gerba^cal arrowhead, and is identical in form to the proposed *pe* from the Qubur el-Walaida bowl. This latter example was identified as *pe* by Cross because the text would then yield a personal name with *p^cl*. The next *gimels* in the sequence appear on the Byblos spatula, and have also been read as *pes* on occasion (e.g. KAI 3); other examples come from Ahiram's sarcophagus, and one of these is identical to that on the ^cIzbet Šarṭah ostrakon (*gimel* and *pe* are clearly distinguishable on the Ahiram sarcophagus). A letter from the Nora fragment, which is exactly the same as one of the *gimels* of the Byblos spatula, has generally been identified as *pe*, so that again an identifiable word, *p^cl*, can be read.

The sign  appears on the Zarephath handle, which is written in the short cuneiform alphabet (Owen 1975). According to Greenstein (1976, 50) and Bordreuil (1979, 65) this is a Proto-Canaanite *gimel* which was included in the cuneiform alphabet and appears in several inscriptions from Ugarit.

To summarize: the original *gimel* undoubtedly had an obtuse (or right) angle, like the Egyptian throwstick sign, and retained this form as late as the Beth Shemesh ostrakon. The next *gimels*, whether angular or curved, display an acute angle. The difference between *gimel* and *pe*, at least in the thirteenth–eleventh centuries, can be determined only by the textual context where this is possible.

Dalet

The identification of the Proto-Sinaitic fish sign as *dalet* is based on the assumption that the letter name must have changed over time (Cross and Lambdin 1960, 25, and Albright, quoted there, note 28). No convincing explanation for this change has as yet been proposed, let alone for Albright's

**digg*- (see Rainey 1975, note 41, but cf. also *nahash-nun*). The proto-Sinaitic fish sign was identified as *samēk* for many years (ever since Sethe 1917, 446), until Albright in 1948 (note 67) rejected it. Although Cowley suggested the fish = *dalet* identification in the Sinai inscriptions as early as 1916 (p. 18, and also 1929, 104), he remained the sole proponent of this view until 1948. The fish, whose source is Gardiner's signs K1-5, appears in Sinai inscriptions 346, 352, 357, 358, 375 and 376, and varies in form in each text. All the inscriptions are vertical, and in all of them except the last, the fish is shown lying on its side. In text 376 it stands upright on its tail. Some scholars have attempted to assign this inscription an early date on the basis of the crude, detailed appearance of the letters, but this is to ignore the fact that palaeographic development hardly begins prior to the point at which the letters start to lose their pictographic form. One may note that also in the Egyptian inscriptions from Sinai, most of which are official texts, there is no uniformity in the fish signs, as in others. (On inscription 376 see also the discussions of *alep* and *ḥ*.)

The fish sign as *dalet* indeed fits in with the decipherment of Albright and his followers, and it bears some resemblance, however remote, to the later triangular Proto-Canaanite letter, while the Phoenician *samēk* is completely different. This conclusion is based on the assumptions that no consonant was represented by more than one letter, and that all the 22 letters that survive of the original alphabet have undergone only evolutionary changes, and have not been replaced "arbitrarily" by other forms (change of name is a different matter - see Cross' doubts on this, 1980, 10). Thus, even though the identification of the Proto-Sinaitic fish sign as *dalet* seems very reasonable, it must be noted that it is not completely certain. On the suggested identification of the Proto-Sinaitic *ḥet* as *dalet*, see the discussion of *ḥet*.

My suggestion that the A-shaped sign from the Shechem plaque might be a *dalet* (see section 4.2.1) is no more than a guess. A link to the later Proto-Canaanite *dalet* can clearly be seen, but it is harder to find a formal connection to the earlier fish sign.

From the end of the Late Bronze Age to the tenth-ninth centuries, *dalet* was triangular in shape. The earliest examples appear on the ^cIzbet Sartah ostrakon and the ^cZarephath sherd. The most common type is the triangle with one point facing left, but each triangle obviously differs slightly in its angles, the length of its sides and its orientation, and these variations do not seem to have any chronological significance. Until the orientation of the letter became fixed with the point facing left, the essence of the sign was simply its triangular shape, and every scribe would have drawn slightly different versions. For a different opinion, see Cross, first with Milik 1954, 12. If it were not for the pupil in the ^cayin on the Rehov sherd, the letter would have been identified as a *dalet*.

The next development was the short leg, which first appears on the ^cAzarba^cal arrowhead and the ^cAbdo sherd (and perhaps even earlier on el-Khadr arrowheads I and V and Byblos cone B, if this is not incidental). The legless *dalet* lingers on, as in Arad inscription 99 and the Tell Fekheriye text.

He

First identified in the Proto-Sinaitic inscriptions by Sethe (1917, 444), on the basis of its resemblance to the Phoenician-Hebrew *he* and acrophony (a man calling out - "ho"). Its source is Gardiner's sign A28, as Gardiner himself observed (1916, 14; *Sinai* II, 67, note 1), though he did not suggest a phonetic value. This sign is very common in the hieroglyphic inscriptions from Sinai, usually with a meaning different from that customary in Egypt. In Sinai, the sign served to indicate an office which is not yet fully explained (see *Sinai* II, *loc. cit.*, and Seyfried 1981, 217-218).

The letter appears in the Proto-Sinaitic inscriptions about ten times, with the legs varying in shape but always upright. It usually occurs in the string *m'hb^{clt}* and its variants. Albright suggested that an example of a *he* which does not form part of this phrase (identified here as *kap*) can be found in inscription 363, but the "hovering" form of the letter as reconstructed is illogical - Albright seems to have been influenced by the imaginary form of this letter drawn by Grimme (1923, table at the end of the book). The only example of a slightly arched *he* is that in inscription 365a, though quite different from the shape that Albright attributed to the sign from text 363. The only *he* which does not appear in *m'hb^{clt}* or a similar combination is that in inscription 379, and this too has been challenged.

A fragmentary *he* similar to the Proto-Sinaitic type, especially that from inscription 345, appears on the Nagila sherd and should probably be reconstructed as *h*; a similar form is known from the Lachish bowl fragment. The next Proto-Canaanite *he* is on the ^CIzbet Šarṭah ostrakon. It is already E-shaped, and closely resembles the form which Cross predicted as early as 1954 (p. 16). No *he* is known from any of the arrowheads. The next examples do not appear till Ahiram's sarcophagus: some are E-shaped, and some have the beginnings of a leg.

Waw

Identified for the first time by Sayce (in Cowley 1916, 19) in Sinai inscription 351; this was then the only example known (two more *waws*, in inscription 376, were discovered later). No explanation was given at the time for this identification, but it must have been based on the sign's general similarity to the (open) *waw* on the Mesha stele and on acrophony (although one could have expected the Proto-Sinaitic letter to be open too). The source for the sign may be the crook (Gardiner S38); though this is usually open, in the Egyptian inscriptions from Sinai it is sometimes closed (e.g. *Sinai* 92 south, lines 1 and 4; see figure 293). Another possible Egyptian source is one of the mace signs (Gardiner T3 and so on). In text 351, the sign is shown horizontally while in text 376 there are two vertical examples. That in the left-hand column is clear, but the second example is faint, and has been drawn differently in each copy made of the inscription. On a possible second example of *waw* in *Sinai* 351, see the discussion of this text. The sign +—O, which for a long while was identified as *tet* (see below), was subsequently identified as a *waw-taw* ligature by Sprengling (1931, 32-35). Grimme (1937, 22) also read it as *wt*, but for the wrong reasons. Albright (1966, 20) took up Sprengling's suggestion again. The proposal is indeed possible, but cannot be definitely proved (in 1955 Albright identified this sign as *yod*, on the basis of a South Arabian inscription, Jamme 863, see Sass forthcoming 1 and also on unidentified signs below). Proto-Sinaitic *waw* is similar in shape to the

^cIzbet Šarṭah *qop*, but there is no reason why non-contemporary, different letters could not, by chance, be identical in shape (see *alep* and *dalet*, in relation to the A-shaped sign on the Shechem plaque, and compare Cross 1980, 16 to 1984, 74).

A letter identical to the Proto-Sinaitic shape appears on the Nagila sherd as noted, and has been identified as *waw* by Leibovitch (1965; see also note 35). A similar sign on the Gezer sherd is generally thought to be *lamed* or *nun*. *Waw* would seem to be preferable, because of the straight line and the closed loop, but it is not certain. The Lachish bowl fragment has an identical sign. We have insufficient knowledge to determine whether in this inscription the sign should be read as *waw* or as *qop* (see above). There is no clear *waw* on the ^cIzbet Šarṭah ostrakon (Kochavi 1977, 9). Cross (1980, 10, 12 and note 18) thinks otherwise – contested here in the discussion of this text. Nor does a Y-shaped *waw* (Cross' idea) fit in well with the presumed line of development from the Proto-Sinaitic letter to that of the time of Aḥiram (see also the discussion of *šade* and *qop*). In fig. 3 of his 1984 article, Cross drew the Proto-Sinaitic form in the ^cIzbet Šarṭah column. The next examples of *waw* are in the form of a semi-circle, or rather a horseshoe, with a leg, from the Byblos spatula and Aḥiram's sarcophagus. If the ^cIzbet Šarṭah *qop* is written correctly, the contemporary *waw* would be similar to that from the sarcophagus, or slightly more closed – though not completely (Cross 1980, 10). The last letter on the Raddana handle may thus be identified not as *lamed* but as a *waw* whose leg was lost with the lower half of the handle. A similar opening-up occurred in the eighth-century Aramaic ^cayin. No *waw* is known from any of the arrowheads. *Waws* with heads similar to those from Aḥiram's sarcophagus appear later in Hebrew script, but the leg is usually longer (e.g. on the ^cAjrud stone bowl).

Zayin and d






The sign = in the Proto-Sinaitic inscriptions was first identified as *zayin* by Gardiner in 1916, on the basis of its resemblance to the Phoenician-Hebrew letter. The squeeze of inscription 351 even gave the impression that there was a vertical line joining the two horizontals, as in the later form of *zayin* (thus Leibovitch 1930; 1934; 1940, who had examined the original). This line does not really exist, as Butin noted long ago (1928; 1932). (Albright created a similar *d* in inscription 358).

If the letter's source is an Egyptian sign composed of two parallel horizontal lines, this would probably be Gardiner's sign (actually two signs) N16 and N17, though there are other possibilities; cf. Sinai 53, line 2 (figures 291, 292). The sign appears frequently in the Proto-Sinaitic inscriptions, usually as part of a combination that has been read as the pronoun *d/dt*, and it is always horizontal. Sprengling (1931, 27) and, later, Albright (1935, 338; 1966) suggested that there is a vertical sign in inscription 345, but it seems more likely that these two lines, which are shorter than usual, belong to the sign on their left (which, if taken by itself, could be *nun*), and together constitute one of the unidentified letters. Another possibility is that the sign on the left is indeed *nun*, and that the two lines are an unknown sign or remnants thereof. In Egyptian, this is the duality determinative, later also *y*, Gardiner sign Z4.

Albright proposed in 1935 (p. 337) that in the Proto-Sinaitic inscriptions, this sign represents *d*, rather than *zayin* as previously thought.

Eisler had already suggested this in 1919 (pp. 98-99). This identification is now generally accepted. The acrophonic reasoning behind the choice of the letter remains unknown, in spite of several attempts to reconstruct it.

The Proto-Canaanite texts do not provide many examples of this letter. Albright (1966, 3, 10 and fig. 1) guessed that the last letter on the Lachish dagger was the original *zayin*. The proposed *d* on the Lachish prism (section 4.2.3), which, by the way, is missing from Albright's palaeographic table (1966, fig. 1) is in fact part of an Egyptian text (see Hestrin, Sass and Ophel 1982).

I cannot accept the evolution of *zayin* proposed by Cross on the basis of the ^cIzbet Šartah ostrakon. After examining the original under a microscope, I am convinced that the lines which supposedly close off the top and bottom of the sign in the alphabetical line do not exist, and the sign in line 4 is also doubtful. Although under certain lighting conditions I have thought I could make out the sign Cross suggested in line 4, it seems preferable to read it as *shin*. The reliability of even the very "best" letters on the ostrakon is controversial, and Cross' proposed *zayin* is definitely not one of them. In any case, this suggestion, which makes use of the presumed similarity of a South Arabian letter, is unacceptable, if only because the South Arabian script did not exist at the time the ^cIzbet Šartah ostrakon was written (see Sass forthcoming 1). Besides, there is no evolutionary link between the shape of the letter suggested by Cross and the *zayin* of the Beth Shemesh ostrakon; Cross compared the inner space of the ^cIzbet Šartah sign as he reconstructed it to the thickness of the paint stroke in the Beth Shemesh *zayin*, and drew the latter sign in outline as if it too were a "hollow" sign (this letter is missing from the table of letters in Cross 1980, 16). The proper comparison of the signs, if Cross' *zayin* were acceptable, would be  or  - , and not  - . In other words, there is no relation between these two signs, while the evolutionary link between the Proto-Sinaitic *d* and the Beth Shemesh *zayin* - the addition of a vertical line - is almost self-evident (see also Cross 1967, 19*). Until proven otherwise, it seems best to assume that the writer of the ^cIzbet Šartah ostrakon did not recall the shape of the *zayin* correctly.

The next examples of *zayin* appear on several arrowheads (the letter on the Beqa^c arrowhead was omitted from the table in Cross 1980, 16) and in the early texts from Byblos. The specimens from Aḥiram's sarcophagus are almost identical in shape to the Beth Shemesh *zayin*, but after this the connecting stroke begins to get shorter; the first example of this is on the ^cAzarba^cal arrowhead. Occasionally, the tall *zayin* continues to appear alongside this later form, as in the Cypriot and Yahimilk inscriptions.

Het and ḥ

Several of the Proto-Sinaitic inscriptions found by Petrie contain the double twist sign. It was first identified as *het* (and *ḥ*) by Cowley (1916, 20), on the basis of its resemblance to the Egyptian *ḥ* (Gardiner sign V28) and a conjecture about the acrophonic consideration (*ḥwt* - thread). Gardiner (1916, pl. II) did not go further than pointing out the resemblance. In 1930 additional Proto-Sinaitic inscriptions were discovered, including (in text 362) a letter similar to the Phoenician *het*. It was immediately identified as *dalet*, however, on the basis of its resemblance to the South Arabian letter and to

the Egyptian sign for a door (Gardiner O31).⁸¹ In 1935 Albright (pp. 335, 337) suggested that this letter was *het* because of its similarity to the Beth Shemesh example, which in turn resembles the Phoenician letter; he also proposed that the double twist be read as *h*, basing this on *rht* (cow) in Sinai 353. These identifications are now generally accepted. The Ethiopic name of *h* – *harm* (netting) was thought to be the original letter-name (see Cross 1954, note 32; Cross and Lambdin 1960, 22, 25 ff.) but see the reservations expressed in Sass forthcoming 1. It is possible that the similarity of the Ugaritic *h* is not merely coincidental (see section 7.2.1).

It seems indeed likely that the Egyptian sign for a door (or rather door-leaf) was the source for *het*. Gardiner's sign O31 does not include the planks of which the door-leaf was constructed, but they are depicted in many inscriptions (e.g. the sign in Sinai 53, line 1, shown here as figures 291, 292, which is identical to the Proto-Sinaitic letter). Nevertheless, in this case (and see also *dalet*), it must be admitted that there is no answer to the question of the origin of the letter's name, unless the original name was changed. Cross and Lambdin (1960, 25–26) see the source of the name in *hot* (fence)⁸² and explain the substitution of *t* for *h* at the end of the word as a result of rhyming (*het-tet*). It is known, however, that many letters in the Proto-Sinaitic inscriptions always appear in their "correct" stance: *alep*, *he* and *resh* are always shown vertically, while *nun* is horizontal or at least has its head upright, and so on. Only letters originating in objects such as the ox-goad (*lamed*) which in reality could be placed in different positions are shown in varying stances. If the scribes of the Proto-Sinaitic inscriptions had interpreted the Egyptian door sign as a fence (Gardiner's signs O42 and O43), the *het* derived from this would have been written horizontally, whereas all the Proto-Sinaitic examples are vertical. The letter's origin thus remains obscure, though its identification as *het* seems certain judging by its resemblance to the Phoenician letter. The possibility that the grapheme "switched consonants" during the second millennium is unlikely.

H appears 7–9 times in the Proto-Sinaitic inscriptions (on the proposed examples in texts 350 and 358, see the discussion of these inscriptions). It always has two twists, except in inscription 376⁸³ where it has three (in texts 363 and 375, an unsuccessful attempt was made to draw two twists; in text 352 and one of the examples in 355, the letters are fragmentary). The three twists in inscription 376 seemed to Albright (1966, 29) and to Rainey (1975, 107) to confirm that this inscription was early.⁸⁴ But this phenomenon is as insignificant as, for instance, the varying number of zigzags in *mem*: hundreds of examples of variations of this sort exist for the two similar Egyptian signs, in Sinai and elsewhere, often in one and the same inscription. Examples with two twists can be seen in Sinai 53, line 18; three

81. The fish sign was then identified as *samek* by most scholars.

82. A hint of this may be found as early as Ullman 1927, 317.

83. Cross wanted to split this letter into *qop* and *bet*, which is not the case. See Rainey 1975, 110.

84. This supposition did not deter Albright (1966, 19) from reconstructing a *h* with three twists in inscription 350.

twists appear in Sinai 53, line 1 (figures 291, 292); and four can be seen in Sinai 110 west, second line from the end (all these texts date from the reign of Ammenemes III). The variations in the number of zigzags in the Egyptian *n* or the Proto-Canaanite *mem* are numerous. Ugaritic *ḥ*, which if influenced by the Proto-Sinaitic letter, derives from the sign with three twists, is also sometimes written with four or five cuneiform marks instead of three (see for instance De Moor and Spronk 1982, 157). *H* is not known from Proto-Canaanite texts.

Het appears in Sinai 362 and 376, and perhaps also in 367. The damaged sign in text 345 (Albright 1966, 16 etc.) is uncertain. The letter in inscription 362 is the best example, and depicts the wing of a door, composed of three boards and bearing two door-pins. The boards seem to be missing from the other two examples (as against Cross 1967, note 52 and Cross and Freedman 1971, 21. See the discussion of the Raddana *het* below).

A ladder-like sign, slightly resembling the Proto-Sinaitic *het*, is incised on the back of the Shechem plaque, but the nature of the scribbled signs there remains unexplained. One of the Sumerian signs on Milik arrowhead No. 1 (see section 4.2.3) has been identified as *het* in the past.

As in the case of *alep*, the *het* on the Raddana handle is the closest of all the Proto-Canaanite examples to the Proto-Sinaitic ancestor. The extension of the right-hand line (the two "door-pins") above and below the horizontal lines shows that typologically it is an early example. It is hard to believe that this extension of the line could be accidental, as the inscription was carefully incised. On the possible contradiction between the letters' archaic appearance and the date of the site, see section 6.3. Cross and Freedman's comparison (1971, 21) with the Beth Shemesh ostrakon *hets* is incorrect (see figures 169–174 and table 5). While one of the three Proto-Sinaitic examples of *het* had four definite horizontal bars and the others had between two and four, from now onwards the form with three horizontal bars predominates.

Only new discoveries can perhaps clarify the significance of the "advanced" form of *het* with two horizontal bars that appears on the Lachish bowl fragment – if this identification is correct; Cross (1984) identifies this letter as *alep*. A blurred letter on the Lachish bowl may be a similar *het* (as noted by Yeivin, 1939, 107–108). Securely identified examples of *hets*, different from these two specimens, appear on the Beth Shemesh ostrakon and the Zarephath sherd, which bear other letters of more significance for dating. The "legs" of the *hets* on the Beth Shemesh ostrakon show that both its sides were written vertically (as against Cross 1980, note 13).

The *hets* with three horizontal bars on the 'Izbet Šarṭah ostrakon herald the rectangular letter ("box-shaped" in Cross' terminology), which was very common until the tenth century. There is also a *het* with four horizontal bars on the same ostrakon (line 4.23).

Thanks to the arrowheads, a relatively large number of *hets* have survived from the following period. It is however evident from these that this letter is not a reliable chronological yardstick for the period in question. The *hets* from the el-Khadr arrowheads are perhaps an exception because of their vertical stance, which may be due to the vertical direction of these texts (most of the other letters were not affected by this). But even this stance,

presumed by Cross and others to indicate seniority, may be of little chronological significance. It is not certain that the "*zayin*-shaped" variant (i.e. *het* lacking two horizontal lines) on **arrowheads II and III** is actually a byform (Milik and Cross 1954, 13 ff.; see also the ^cIzbet Šartah *samek*). Such "deviations" could be the result of carelessness, as are the differences between the *aleps* on **arrowheads I and III** and the omission of letters on **arrowheads II and IV**. In any case, these variations of the letters do not constitute proof of the existence of byforms.

The next *hets* are all horizontal,⁸⁵ but differ in their proportions, in the lines which cross the edges of the rectangle, and in the number of horizontal bars (three or four). No chronological significance can be assigned to these variations. Variants appear even in the same text, as on the **Byblos spatula** and perhaps the **Rapa arrowhead**. The type that "leans" to the left (a cursive trait) first appears on the **Beqa^c** and "**King of Amurru**" **arrowheads**. However, a similar type, leaning to the right, is known from **Byblos cone A**, on **another cone** (see the end of the discussion of **cone A**) and on the **yt' arrowhead**; this again shows a cursive trait at an (at least typologically) early stage, as with the tail, or tick, of the *yod* on the **Rapa arrowhead** (see Cross 1954, note 22) which is more or less contemporary.

To summarize, the early form is that of the door with door-pins. The next, classic type is rectangular or "box-shaped", and the still later version is the leaning *het*, cursive in origin. The "box-shaped" *het* continued to exist alongside this form, at least until the time of the **Gezer calendar** and perhaps even later, depending on the date of the **Nora fragment**.

Tet

The origins of the shape and the name of this letter are unknown. It has not been positively identified in the **Proto-Sinaitic** inscriptions: in 1917 Sethe (p. 460) identified as *tet* the sign O—+ (see *waw* and **Unidentified signs**) in inscription **351**. He assumed that in the course of the letter's development the cross came to be written inside the circle. (A somewhat similar phenomenon did actually occur with *qop* between the ^cIzbet Šartah **ostracon** and the **Yahimilk** inscription.) Albright's proposal to read this sign as a ligature of *waw* and *taw* is a possibility, but ultimately no final, convincing identification of this sign has yet been made, and it is not even known whether it represents one or two letters. In 1978 (p. 185), I suggested that the **Proto-Sinaitic tet** might have been a cross within a square. A similar sign appears in the new text **380**, and in inscription **361**. It is now clear that I made a mistake with inscription **361**, which casts doubt on the identification of the letter from **Sinai 380**. See the section on **unidentified signs**.

Albright guessed that the first sign on the **Lachish dagger** is *tet*, but there is no evidence to support this. (See also Coote 1974, note 4. His suggestion that this sign may be ^c*ayin* is unfounded.)

The first *tet* which can be identified with certainty is that on the ^cIzbet Šartah **ostracon**; its shape is already the same as the early Phoenician

85. Except for one *het* on the **Gezer calendar** and other isolated examples.

letter – a cross surrounded by a circle. Coote (1974) has made the interesting suggestion that *tet* and *^cayin* were confused in a Ugarit text, RS 24.271; if he is right, then the same Proto-Canaanite *tet* form from *^cIzbet Šarṭah* must already have existed at least as early as the fourteenth century. Coote suggested that the Ugaritic scribe was copying a Proto-Canaanite text, and mistook the cross in the circle for a dot. The *tet* which Cross thought he saw on the Nora fragment is in fact an *^cayin*.

Yod

For many years, most scholars thought that the Proto-Sinaitic sign of a palm (*kap*) was *yod*. Kalinka (1920, 311) and following him, Ullman (1927, 317) were for a long time alone in their opinion based on similarity of shape and on acrophony, that the origin of the Phoenician *yod* is in the Egyptian sign for a hand (Gardiner D36). Cowley was the first to identify a Proto-Sinaitic *yod*, in inscription 346 (1929, 204, and he and Leibovitch [1930] copied this sign – which is not absolutely identical to the Egyptian prototype – almost exactly). All this was long before Cross (1954, 20–21) identified *yod* on the Lachish ewer for similar reasons. Leibovitch (1940, 105–106, 117) had already seen that the Egyptian sign for hand was the source of the Lachish ewer sign.⁸⁶ His adherence to the Meroitic theory (see Cross 1954, note 21) prevented him from drawing the obvious conclusion. Incidentally, it was the identification of the *yod* on the Lachish ewer that convinced Leibovitch (1961, 461, note 4) to abandon the Meroitic theory. Now that the evolution of *yod* is universally accepted, it seems surprising that the Lachish ewer letter was identified only as late as 1954. In 1955, Albright was still suggesting that the sign O—+ from inscription 351 was *yod* (see *waw*, *tet* and unidentified signs), even though he accepted Cross' *yod* in the Lachish ewer.

In 1954, Cross found no example of *yod* in the Proto-Sinaitic inscriptions, and drew a predicted letter identical to the Egyptian sign. In 1967 (note 47 and in fig. 1), the same sign is shown, labelled "Sinai 346" (thus until 1980, table on p. 16). A letter very similar to that predicted by Cross exists in inscription 379 discovered in 1978 (Sass 1978, 184, and cf. Cross 1984, fig. 3). At the time I was doubtful (*loc. cit.*) about the identification of the Sinai 346 sign as *yod*, but examination of the original in the Cairo Museum in 1981 has removed this uncertainty. Albright also identified the latter sign as *yod*, and his drawing, although not completely accurate, is nearer to the original than that of Cross. On real and imagined *yods* in Sinai inscriptions 346, 351, 353,⁸⁷ 367 (see *gimel*), 376⁸⁸ and 379, see Sass 1978, 184.

A letter which resembles the Proto-Sinaitic *yod* appears once or twice on the Nagila sherd (without an "elbow"), probably on Lachish Sherd No. 7 and on the Lachish ewer. Almost no development of the letter took place before the last example, but it should be remembered that another *yod*,

86. Also the *yod* in Sinai 346 and various other signs.

87. Cross (1967, 16* and note 47) does not make any mention of this *yod* proposed by Albright.

88. This *yod* still appeared in Cross' 1979 table (p. 122) but disappeared a year later (1980, 16).

different in shape, appears on the Lachish ewer. The first time I saw the Lachish bowl fragment, I thought that the second letter from the right in the lower line (Ussishkin's *resh*) was *yod* (as does Cross, 1984), but I now think that the right-hand line is too long (see *sade*, *resh* and unidentified signs). The letter on the Lachish bowl is a developed form (Cross 1980, 16) which stands between the Lachish ewer example and the F-shaped letter on the Qubur el-Walaida bowl. It is strange that this letter on the Lachish bowl should have been identified immediately it was found, while it took so many years to identify the example from the ewer. Both *yods* on the 'Izbet Sartah ostrakon are unclear. That in the alphabet line is of no use, and the other, if drawn correctly by Cross, is closer to the Lachish bowl letter than to the Qubur el-Walaida example. If Kochavi's drawing is correct, this would be *sade*.

The next *yods*, on arrowheads and in early Phoenician texts, already have the tick, or tail, of cursive origin. Cross (e.g. 1967, 22*) finds a line of development which I cannot follow in these examples (see also section 6.2). The *yod* from the *yt'* arrowhead is of interest since it is the only reversed example of this letter. It is doubly reversed – right to left and upside-down.

Kap

This was first – rather hesitantly – identified by Cowley (1916, 19; see also 1929, 207), in Sinai inscription 349. Its shape is clear – a palm with four fingers pointing upwards. The Egyptian sign for a palm, Gardiner D46, is different, and no archetype for the Proto-Sinaitic sign has been found among the variants in the Sinai Egyptian inscriptions either. It is possible that those who wrote the texts preferred a clearer image of a hand, showing the fingers separately (though why four?); this shows that a few letters were not directly borrowed from Egyptian hieroglyphs (cf. Snycer 1974, 11–12).

Gardiner (1916, 5) identified the palm as *yod*, and his opinion held sway all through the twenties and thirties. Only a few scholars (e.g. Ullman, 1927, 317) supported Cowley's opinion.

The two best-written examples of *kap*, in inscriptions 349 and 363, have four fingers each. The other examples are not very clear. A possible *kap* appears in inscription 365a. On the suggested *kaps* in inscriptions 358, 365b and 378, see the discussion of these texts, and the section on unidentified signs. It seems that there are no three-fingered *kaps* in the Proto-Sinaitic inscriptions; perhaps this is because of the shape of *sade* (see section 3.1.8). Due to the limited repertoire it is impossible to draw conclusions from the absence of five-fingered examples.

A *kap* similar to the Proto-Sinaitic one is known from the Gezer sherd. It has four definite fingers, and there might have been another one on the broken-off part of the sherd. The possibility (not certainty) that there was a fifth finger here is all that remains of the hypothesis of Albright (1948, 12) Cross (1967, 10*), Mazar (1968, 95) and Naveh (1982, 26–27) that the oldest Proto-Canaanite letters were more archaic in form than those from the Proto-Sinaitic inscriptions (see sections 6.1.3 and 6.2). A palm-shaped letter which resembles Gardiner's sign D46 appears on the Shechem plaque. If the plaque is indeed inscribed with Proto-Canaanite letters, this might be *kap*. For a suggestion that this letter may be *pe*, resembling the Proto-Sinaitic

example, see the discussion of this plaque in chapter 3. Albright read it as *ḡ* (see the discussion of this letter). On the suggested *kap* on the Beth Shemesh ostrakon see below. The *kap* in the 'Izbet Sartah abecedary line has a long leg and three fingers slanting to the right (as in Kochavi 1977, 10, against Demsky 1977, note 2). Cross (1980, fig. 9) drew five fingers, but notes in the text (p. 10) that there are only three. If the first letter in line 2 is also *kap*, it is a more complete specimen. Kochavi (1977, 10) notes only that the leg has been found in the *kaps* from the Gezer calendar onwards. Cross (hinting this in 1979, 110 and later in 1980, 10–11 and note 16) sees this *kap* as a byform of the legless type. Naveh (1978, 34; 1982, 184) draws no specific conclusions from this letter (or from the others), although one would have expected him to invoke it in support of his high chronology for the Greek alphabet (see also Demsky 1977, 22). In the case of *kap*, I agree with Naveh; although the shape of the letter is interesting and not entirely unexpected, it seems preferable to reserve final judgement until new discoveries throw more light on the development of *kap* in this period. It is noteworthy that the *kap* from the Tell Fekheriye inscription (Abou Assaf, Bordreuil and Millard 1982, 92) is identical in shape. Another *kap* with leg appears on the back of Arslan Tash ivory No. 32 (*Arslan Tash*, 105, 138 and figs. 33 and 50).

The next *kaps* have three fingers, joined at the base. Cross thought he saw a letter of this type on the Beth Shemesh ostrakon (1967, 17*–18* and fig. 3), where the writing is blurred beyond recognition. The letter has been dropped from a later palaeographic table (Cross 1980, 16). It is not clear why Cross thought that the broken letter on the Zarephath sherd was a *kap* (see the section on unidentified signs).

Martin's *kap* on the Rapa arrowhead is actually *resh*. Clear examples of the letter are known from the early Phoenician inscriptions (see table 5). As far as is known, the legless *kap* disappears after the tenth century; this provides one piece of evidence against dating the Tekke bowl to the ninth century (see also the discussion of *alep*). For the suggested *kaps* from the Ajjul and Acre handles and the Tell Beit Mirsim sherd, see section 4.2.3.

Only the two ends of the development of *kap* are as yet certain – the Proto-Sinaitic/early Proto-Canaanite examples and the early Phoenician ones.

Lamed

This is one of the letters which were correctly identified in the Proto-Sinaitic inscriptions (Bruston 1911), on the basis of its resemblance to the Phoenician *lamed*, even before Gardiner's breakthrough of 1916. The origins of both its name (**lamd*–, an ox-goad) and its shape (Gardiner V1 or a similar sign) are clear. The variants of this letter in the Proto-Sinaitic texts are generally in the form of a line, usually curving, with an open loop at one end. In several instances the loop is closed; an example is the penultimate letter in inscription 351 (which, however, may be *waw*). There are also cases which are on the borderline between *lamed* and *nun*, see section 3.1.8), as in inscription 360, though here the context clearly shows that it is *nun*. The middle letter on the Gezer sherd resembles that from Sinai 351 mentioned above, and likewise, may really be *waw* (see the discussion of that letter). Some scholars have suggested that the third letter on the Lachish dagger is *lamed*, but if

the inscription is Proto-Canaanite it would be more like a *nun* (see discussion there).

If the Tell el-Hesi inscription is Proto-Canaanite (see section 4.2.3), the second letter would be a type of *lamed* earlier than the coiled form of this letter. The coiled *lamed* is one of the most common and important hallmarks of thirteenth – twelfth-century inscriptions. The date of its first appearance is still unknown because of the lack of finds from the fifteenth–fourteenth centuries (a *lamed* of this type occasionally appears as early as the Sinai inscriptions, e.g. text 348). The Proto-Canaanite coiled *lamed* remains unchanged while several other letters – such as *bet*, *he*, *yod* and *nun* – continue to develop. Cross (1980, 9, 11) suggests distinguishing between *lamed* and *bet* on the ^cIzbet Šartah ostrakon according to stance, but both letters are in the same stance in the abecedary line (see table 6 and also the discussion of *bet* on the Lachish bowl fragment). On the *lamed* suggested by Yadin on Lachish sherd No. 7, see the discussion of *yod*. The slightly coiled letter, broken below, on the Raddana handle could be either *lamed* or *waw*.

The small, open *lamed*, rounded at first (as on the el-Khadr arrowheads) and later angular (as on the Byblos cones and spatula), is a transitional form which precedes the Phoenician *lamed*, one of whose arms becomes longer (the short *lamed* continued to exist for many years beside the lengthened form). Some of the el-Khadr *lameds* coincidentally resemble the open ^c*ayin* on the ^d*c* arrowhead and the *pe* or ^c*ayin* on the Rapa arrowhead. A degree of elongation may be recognizable as early as el-Khadr arrowhead V. Long, vertical *lameds* are known from the arrowheads of Gerba^cal, ^cAbdoniya and the "king of Amurru". The first appearance of the slanting *lamed* on an arrowhead is on the ^d*c* arrowhead; see also the Byblos cones and spatula and the Maṇahat sherd. For the *lamed* identified by Martin on the Rapa arrowhead, see the discussion of *pe* and ^c*ayin*.

The *lamed* on the Revadim seal has exact parallels in Byblos cone B, the Nora fragment and several of the Byblos spatula *lameds*, all of the late eleventh century or later. However, as mentioned above (see the discussion of *alep* and *bet*), the eleventh century should be regarded as the upper limit. Similar *lameds* are found in much later inscriptions, e.g. in an ink inscription from Stratum VI, of the early eighth century, at Hazor (Hazor II, pl. CLXIX:6) and on many eighth-century seals (Hestrin and Dayagi 1978, Nos. 81, 98, 116, 118, 133 etc. etc.). The open, angular form places the Revadim letter after the el-Khadr forms. Cross, who dates the Revadim seal to the twelfth century, before the el-Khadr arrowheads, had no easy time reconciling the Revadim *lamed* with such a high date: in 1973 (with McCarter, p. 7) he placed the Revadim *lamed* in the twelfth-century column, after the el-Khadr *lamed*, but placed the Revadim *alep* before the el-Khadr *alep*. In 1974 (p. 492) he correctly compared the Revadim *lamed* with the form appearing on the Nora fragment which he dates to the eleventh century (much too early, as proposed in section 4.2.2). In his 1980 paper (p. 16) the Revadim *alep* and *bet* figure in the twelfth-century column before their el-Khadr counterparts; the *lamed* would have been out of context there, and indeed it is omitted. The letter on the Nora fragment which Cross interpreted as a right-facing *lamed* in a left-to-right line, is probably a remnant of a normal *bet* or *dalet* in a right-to-left line.

To summarize, there are four principal shapes of *lamed*: the long **Proto-Sinaitic "oxgoad"** form; the coiled Proto-Canaanite form known in the 13th-12th centuries (the time of transition from the "oxgoad" to the coiled shape is unknown); the small *lamed* of the el-Khadr arrowheads onwards (both rounded and angular); and the early **Phoenician *lamed***, which once again becomes longer (both rounded and angular forms), at first either vertical or slanting and later always slanting.

Mem

First identified in the **Proto-Sinaitic** inscriptions by Gardiner (1916), on the basis of its resemblance to the Phoenician-Hebrew letter and acrophony. Its source is the Egyptian sign "a ripple of water" (Gardiner N35). The **Proto-Sinaitic *mem*** is always horizontal, and has from three to four and a half zigzags (six to nine lines). Albright drew a *mem* with two zigzags in column 2 of inscription 351, but this is a mistake. For letters in **Sinai 375** and on the **Shechem plaque** identified by some scholars as *mems*, see the discussion of *shin*/*ṣ*.

Mem is missing from the **ʿIzbet Ṣartah ostrakon** (Kochavi 1977, 10). Demsky (1977, note 2 and p. 22) reconstructed a *mem* with a leg, which is out of the question at this early period. Cross' identification (1980, 10, 11) of *mem* is doubtful. On the *mem* described by Dothan (1981), see note 44. The known examples of Proto-Canaanite *mems* are vertical, like the **early Phoenician *mems***, except, in all probability, for the specimen on the **Beth Shemesh ostrakon**. I have not been able to discern any chronological significance in the number of zigzags before they stabilized at two and a half, appearing first on **Byblos cone A** (the *mem* here is especially interesting since it may show the beginning of the development of a leg, although it still faces right) and on the **yt' arrowhead**. Cross attaches some importance to the number of zigzags (1979, 100). He even drew the **Qubur el-Walaida *mem*** as if it had three and a half zigzags (1980, 2), instead of four. The letter on the **yt' and "King of Amurru" arrowheads** (twice on the latter) is identical in shape to the *mem* on the **Byblos spatula** and on **Aḥiram's sarcophagus**. Another *mem* exists on the unpublished **ymn arrowhead** (see section 4.2.3). The shape of *mem* on **Byblos cone B** resembles the examples in the **Tell Fekheriye inscription**. The fourth letter on the **Tekke bowl** was identified as *ṣade* by Sznycer (1979). Cross (1980, 15) prefers *mem* on textual grounds, and the difference of opinion will only – if ever – be resolved when the bowl itself is examined. It should be noted that in the **Tell Fekheriye inscription** too, *mem* resembles *ṣade*.

Nun

First identified in the **Sinai inscriptions** by Gardiner (1916), on the basis of its **Ethiopic** name (*naḥas*), but see the reservations expressed in Sass forthcoming 1. From this clear instance of the substitution of *nun* for *naḥas*, a comparison may be made with the case of the fish (*dag-*) for *dalet*. The source of the letter is the Egyptian sign for a cobra (Gardiner I10). The form of *nun* sometimes varies, perhaps because of carelessness, as in inscription 363, and is more like a viper (Gardiner I9). The *nun* in text 360 resembles a *lamed*, but its identification is certain from the context. The *nun* in **Sinai 364** (and the inscription as a whole) is particularly linear. For the second letter of the **Gezer sherd**, see the discussion of *waw*. The third letter on the **Lachish dagger** is probably *nun*, though *lamed* is also a possibility (if the inscription really is

Proto-Canaanite). One of the fragmentary letters on the Nagila sherd (or both of them) could be *nun*.

The *nun* from the Lachish ewer is still close to the sketch of a snake. The first linear, S/Z-type *nuns* appear on the Beth Shemesh ostrakon (S-type). The two lateral lines are longer than the central line. In the next *nuns*, until Ahiram's sarcophagus, the three lines are more or less equal in length and up to the Ruweise and Beqa^c arrowheads the two outer lines are usually parallel. Cross (e.g. 1974, 491) describes the line of development slightly differently. The ^cIzbet Šarṭah *nun* is probably misshapen and does not contribute anything to the discussion (as in Kochavi 1977, 10, in spite of Cross' efforts, 1980, 11). Most of the following *nuns* are S-oriented, as in the early Phoenician inscriptions, and only four (on the el-Khaḍr, ^cAbdoniya and Gerba^cal arrowheads) are Z-oriented. Further evidence that the ^cAzarba^cal arrowhead is later than Ahiram's sarcophagus may come from the beginning of the *nun*'s leg, found on this arrowhead. The *nun* on the Nora fragment has parallels on the Nora stone, another indication of the contemporaneity of these two inscriptions (see the discussion of the fragment in section 4.2.2).

Samek

This letter has not been identified in the Proto-Sinaitic and Proto-Canaanite inscriptions. The Proto-Sinaitic fish sign was for many years thought to be *samek*, a possibility which cannot be dismissed offhand, even though *dalet* seems much more probable (see the discussion of that letter). If the early Phoenician letter preserves the shape of its Proto-Sinaitic ancestor, its source may be Gardiner's sign R11, as suggested by Leibovitch (1934, 55) and others. If so, there may be some truth in the suggestion offered by Gardiner (1916, 5) and Butin (1932, 157) that the letter's name derives from *smk/tmk*, "support".

Some scholars have identified the lower sign on the Lachish dagger as *samek*, a suggestion which is neither better nor worse than others (see also the discussion of *zayin*). It is not clear whether the *samek* on the ^cIzbet Šarṭah ostrakon is defective or incorrectly written; consequently it is of no use for our purpose (Kochavi 1977, 10). Demsky and Cross would like to reconstruct a square *samek*, because of an early variant of the Greek *xi*, but this is unacceptable (see the discussion of the text in section 4.2.1). In other words, even if a square *samek* ever existed, proof of this cannot be obtained from the ^cIzbet Šarṭah ostrakon.

The first known *sameks* are thus the early Phoenician examples. On the Byblos spatula and Ahiram's sarcophagus the vertical line crosses the three horizontals; on the Tekke bowl it only crosses the lowest one, and just touches the middle line. Typologically, this is a more developed form (compare *samek* on the Tell Fekheriye inscription), but it could be accidental. The similarity of the Phoenician *samek* to the second Ugaritic *samek* is worth noting. If it is genuine, it would provide additional evidence for the source of *samek* in Gardiner's sign R11, and at any rate not in a square sign (see Segert 1983, 202).

^c*Ayin*

The acrophonic source and Egyptian prototype (Gardiner's sign D4 or D21) of this letter are clear; Macalister (1906) identified it immediately on the

publication of the Proto-Sinaitic inscriptions. The Proto-Sinaitic and Proto-Canaanite *ayin* appears both with and without a pupil (Cross 1980, 16; 1984, 73 omitted the Proto-Sinaitic *ayin* without a pupil). In the Proto-Sinaitic texts, *ayin* is always horizontal, with one exception in inscription 346 (in a horizontal line) and perhaps another in 350, a first indication of the loss of the pictographic perception of writing. Coote's suggestion (1974, note 4) that the upper sign on the Lachish dagger could be read as *ayin* cannot be proved, and in any case would add nothing to our knowledge of the letter's development. If the Tell el-Hesi inscription is Proto-Canaanite, then the round *ayin* would place it later than the Proto-Sinaitic inscriptions; the lack of a pupil poses no obstacle here. Cross (1984, 74) has identified as *ayin* the letter on the Lachish bowl fragment which Ussishkin reads as *qop*. Both these identifications, as well as a fragmentary *waw*, are quite possible. In any event, the sign does not have a pupil. The *ayin* on the Rehov sherd is triangular, and would have been identified as *dalet* were it not for its pupil. All the Proto-Canaanite *ayins* are round except for this example.


The *ayin* with pupil continues to appear in Proto-Canaanite inscriptions alongside the type with no pupil. It used to be thought that its latest appearance was on the el-Khadr arrowheads (first, Milik and Cross 1954, 11; more recently Cross and McCarter 1973, 5), but since 1974 (discussing the Nora fragment) and 1980 (the Tekke bowl), Cross has taken the position that the *ayin* with pupil continued to exist until shortly before the time of Aḥiram's sarcophagus. Only collation of the inscriptions themselves can either prove or refute this hypothesis; the photographs are not sufficiently reliable. Röhlig (1982, 126), who has seen the Nora fragment, says that there is no pupil in the *ayin*. On the Tekke bowl even the existence of the letter is not certain. On el-Khadr arrowheads IV and V, no pupils were inscribed in the *ayins* (as against Cross' opinion). Confirmation of the preservation of *ayin* with a pupil comes from the ninth-century Tell Fekheriye inscription, although this could have been an archaism or scribal idiosyncrasy, like the baseline of *waw*. See also Sass forthcoming 3 on the *omicron* with dot. The pentagonal *ayin* on el-Khadr arrowhead II, and the rhomboid example on the *Azarba'al* arrowhead demonstrate the difficulty of incising curving lines on metal. A slightly open *ayin* is known from the *'d* arrowhead, and there may be another example on the Rapa arrowhead. In this period (the eleventh century) this is probably an accidental feature rather than a genuine palaeographic development like the Aramaic *ayin* of the eighth century onwards; moreover, the *lamed* on the arrowheads sometimes has a similar form.

Ġ

This letter has not been identified in the Proto-Sinaitic and early Proto-Canaanite inscriptions, and had doubtless coalesced with *ayin* by the time of the later Proto-Canaanite texts. Albright (1966) suggested that the Proto-Sinaitic *ġ* was a square with a short line or tick emerging from one of the corners, like the South Arabian letter, and identified a sign with this shape in inscriptions 353 and 375. With a little imagination one can find such a tick in almost every Proto-Sinaitic *bet*, besides which there does not seem to be any link between the Proto-Sinaitic and the South Arabian letter (see Sass forthcoming 1). Albright's first example is read here as *bet*; the second one is not clear, perhaps *resh*. Albright also identified a completely different sign on

the Shechem plaque as *ḡ* (1964, note 3; 1966, 10–11). This is the hand-shaped sign which may be *kap*. In short, the letter has not yet been identified.

Pe

Still not definitely identified in the Proto-Sinaitic inscriptions, and distinguished from *gimel* in Proto-Canaanite texts only on textual grounds. In the 1920s and 1930s, most scholars thought the source of the letter's name was *pe* (mouth),⁸⁹ and consequently tried to find suitable letters in the inscriptions – mostly small *ḥayins* without pupils. Sprengling (1931, 44) suggested that the source of the name might be *pi't-* (corner), and also read the fifth letter in Sinai 357 as *pe*, even though he copied it incorrectly. This letter and others that resemble it were at first generally identified as *gimels* (e.g. Butin 1932, 141); Albright was the first to propose the identification of Proto-Sinaitic  as *pe* (1948, note 71) on the basis of its resemblance to the Phoenician letter and the inscription's contents, which in his opinion ruled out the possibility of the sign being *gimel*. His identification is perfectly feasible, and I have used it here even though it has not yet been proven conclusively. The Egyptian sign for corner (of a wall) is Gardiner O38. A search through the Egyptian inscriptions from Sinai has not revealed a suitable prototype.

The third letter from the right in the second line of the Lachish bowl fragment text is probably *pe* or *gimel* (see also *ṣade*). Examples of *pe* may appear on the *ḥIzbet Ṣarḥa* ostrakon and the Qubur el-Walaida bowl. The difference between *pe* and *gimel* on the ostrakon is not clear, and may not have even been clear to the writer of the text. The letter on the bowl has been identified as *pe* rather than *gimel* because of *p^{cl}* in the personal name from the inscription (according to Cross' reading), even though apart from its stance it is identical to the Gerba^{cl} arrowhead *gimel*. It is also completely different from the round *pe* on the Rapa arrowhead, though the identification of this latter sign is also not free from doubt (see the discussion of the inscription). The next *pes* display a tendency to lengthen the leg. The Nora fragment *pe* is almost identical to the example on the Nora stone (see the discussion of the Nora fragment in section 4.2.2).

To summarize: there is scarcely a single certain example of *pe* in the Proto-Sinaitic or Proto-Canaanite inscriptions.

Ṣade (*ṣ, ḍ, ṣ*)

The sign thought to be Proto-Sinaitic *ṣade* was first identified by Albright (1948, 18 and note 63), probably on the basis of acrophony (*ṣiṣ*, see Milik and Cross 1954, 14) and textual considerations.⁹⁰ The origin of the letter name is not clear. The sign looks like a plant with one central and two lateral branches, and almost every example is different. Cross (1980, 12) suggests that the sign in Sinai 364 should be classified separately, probably because he sees it as another consonant (first in 1954, 22 and note 27). His complaint (1980, 12)

89. Cross and Lambdin (1960, 25) and other scholars repeat this.

90. Albright's *qop* was thought to be *ṣade* for many years, while the plant sign was read as *kap* and the *kap* (palm) as *yod* (for instance, Butin 1932, 149).

against the accuracy of Albright's 1966 sketches is unjustified. The *šades* drawn by Albright from inscriptions 352, 356 and 364 are correct down to the last detail, and there is an insignificant error in the sketch of the sign in inscription 358. For the sign in text 350 see the discussion of that inscription, and see inscription 353 for an attempt to see a *šade* in the unidentified sign there. In fact, Cross' drawings (1980, 16) of the letters in inscriptions 352 and 356 contain inaccuracies. The setting apart of the letter from text 364 does not seem to be justifiable; the other letters in Sinai 364 are all unusual in being particularly linear (the loop at the bottom of the letter has no link to the circle which forms part of the South Arabian *šad* (see the discussion of that letter in Sass forthcoming 1). Apart from this, the same word (*bnšr*?) appears in inscription 352 – thus also Cross (1954, note 27). The differences between the plant signs in these four inscriptions are no greater than those between the Proto-Sinaitic *hes*, for example.

It is quite possible that the Proto-Sinaitic plant sign is *šade* (see below), but it is not known which *šade* it represents – *š*, *z* and perhaps also *ḏ*, or two of these (in chapter 3 they are usually transliterated as *š*). Albright (1966, 31–32) supposes that *š* and *z* coalesced (he does not suggest what may have happened to *ḏ*). The original letter name could have been *šiš*, which later changed to *šade*, or it would have always been *šade*. Alternatively, there may have been besides the plant sign (*šiš*) another sign, *šade*, whose name later passed on to the plant sign. Certainly, the data available do not permit the reconstruction of such shifts. If Ugaritic reflects the earliest situation, then one sign represented *š* and *ḏ* and another *z*.

A possible Egyptian source for this letter is Gardiner's sign M23, which at Serabit el-Khadem is sometimes written in a form resembling M22 (e.g. in Sinai 71 front, fifth line from the right). An alternative source could be sign M16 as it appears in inscription 72, top left, which is very similar to the letter in text 356. None of these suggestions rates as more than an informed guess, however.

My proposal to identify the second letter from the right in the second line of the Lachish bowl fragment as *šade* cannot be proved either (see the discussion of *resh*). Cross (1984, 74) has suggested to identify the next letter (the third from the right) as *šade*, but this is unacceptable. The projection at the letter's corner is the end of one of the two strokes forming a *gimel* or *pe*. A similar projecting line can be seen on the middle letter in the first line; it does not seem to be a significant element of the letter. The next *šade* appears in the ^cIzbet Sartah abecedary line, and if Kochavi is correct, another one is written in line 3.1 (Cross thinks it is *yod*). The line of development from the Proto-Sinaitic sign to the el-Khadr *šade* now seems clear: *Y*–*Y*– (*Y* or *T*) – *Y* (the brackets contain two predicted alternatives), and its later development has been understood for a long time. Changes in the position of the leg are known in another letter, the late-second/early-first millennium *qop*. Cross (1980, 12) thought that the ^cIzbet Sartah *šade* was meant to be T-shaped and that its actual Y-shape was one of the scribe's idiosyncracies; perhaps this is linked to his hypothesis about a Y- or *upsilon*-shaped *waw*. Letter 1 in line 3 of the ostrakon, if it is *šade*, is definitely Y-shaped.

The further development of *šade* is well-documented on the arrowheads, from the simple type with two strokes, through the examples whose shape and stance are still not fixed (the Rapa and Gerba^cal

arrowheads), to the early Phoenician inscriptions. The early Phoenician form appears as early as the *yt'* and *Abdoniya* arrowheads, whose script has not yet finally stabilized. Cross (first with Milik, 1954, 14) thought that the *šades* on the el-Khaḍr arrowheads had not developed from the Proto-Sinaitic sign; for a different opinion, see above on the *ʿIzbet Sartah šade*. Another feature makes the el-Khaḍr arrowheads particularly noteworthy: in the discussion of arrowhead V, it was suggested that this example could necessitate lowering the date of the entire group. It was also suggested that the archaic appearance of the letters on arrowheads I–IV is the result of an "optical illusion" due to the writing technique. The *šade* is an exception to this since it closely resembles the *ʿIzbet Sartah* letter. The scribe could have easily added an extra stroke. It is unfortunate that there is no *šade* on arrowhead V which could be used for comparison, as already noted in section 4.2.1. On the *šade*(?) of the Tekke bowl, see the discussions of *mem* and the bowl. *Šade* resembles *mem* in the Tell Fekheriye inscription too. On the erroneous identification of a Sumerian sign as *šade* on Milik arrowhead 1, see section 4.2.3.

Qop

The 8-shaped Proto-Sinaitic sign has since Sethe (1916, 460) usually been identified as *šade*; only Lidzbarski (1921, 51) differed and suggested it was *qop*, on the basis of the reading of the only string of letters in which it appears (*nqb, nqbn* etc.). Albright repeated this suggestion (1935, 337, independently?) for the same reason, and this is now generally accepted. The letter seems to have been written vertically in horizontal lines, horizontally in vertical columns and diagonally in a diagonal inscription (346). Its only appearance outside the combination *nqb* etc. may be in inscription 380. On the now-abandoned suggestion of the existence of *qop* in text 376, see the discussion of this inscription in section 3.2.1. Even if Lidzbarski's and Albright's reading seems the best available, it has not yet been finally proved that this sign does not represent *šade* (or another letter?). The source of its shape and name remains obscure. If a hieroglyphic prototype is insisted upon, there are several candidates, such as Gardiner's signs S20, S23, V18 and V19, whose Sinaitic variants are suitable.

There are no similar examples in the early Proto-Canaanite inscriptions, and the line of development to the next *qop*, on the *ʿIzbet Sartah* ostrakon, is unknown. The shape of the *ʿIzbet Sartah qop* is clear, though Cross (1980, 10, 12) sees several difficulties here, in particular its resemblance to the Proto-Sinaitic letter identified as *waw*. Nonetheless, as long as no definite evidence against the identification can be offered, it seems best to accept it since it appears in the correct place in the abecedary. A letter identical to the Proto-Sinaitic *waw* and the *ʿIzbet Sartah qop* appears on the Lachish bowl fragment, in which *he* resembles the Proto-Sinaitic letter, while *lamed* is already of the thirteenth–twelfth century coiled type. In the present state of our knowledge, it is impossible to decide whether the letter in question is *waw* or *qop* (see also note 35). Ussishkin (1983, 157) has suggested that the fourth letter from the right in the second line of the bowl fragment could be the upper part of a *qop* (an 8-shaped one?) – i.e. he sees a curved line there. This actually seems to be just a slight "dip" of a straight line like that at the top of the *het* in the middle of the upper line. Cross thinks this sign is an *ʿayin* with pupil (see the section on unidentified signs).

The development of *qop* from the ^ʿIzbet Šartāh ostrakon onwards is clear. In the early Phoenician *qop* the leg generally starts inside the head, though the *qop* from the Šipitba^ʿal text is somewhat like the ^ʿIzbet Šartāh letter, and the form of a circle with leg appears at least once on the ^ʿAjrud pithoi. Masson and Sznycer (1972, 102–104) refer to this form in their discussion of a doubtful inscription fragment from Khirokitia. In the *lpqh smdr* inscription from Hazor too, the leg does not penetrate the head. The Tell Fekheriye *qop* is unusual in that its leg starts from the centre of the head.

Resh

First identified in the Proto-Sinaitic inscriptions by Gardiner (1916, 14) on the basis of acrophony and a remote resemblance to the Phoenician letter. Its source is the Egyptian sign of a man's head in profile (Gardiner D1). There are *reshs* in the Sinai inscriptions, however, which depict a head seen frontally, like Gardiner's sign D2, and there is even an example, in text 367, which has eyes. One of these letters, in inscription 364, is so square in shape that it seems almost interchangeable with the variant of *bet* in text 359. The interpretation of the first of these as *resh* was made on the basis of comparison with inscription 352, and perhaps also because of the neck, which is longer than the "entrance corridor" of the *bet*. This is one of the rare cases of different Proto-Sinaitic letters being similar in shape (see section 3.1.8). There are many variants of the Proto-Sinaitic *resh*. As in the case of *dalet* (and other letters), all that was necessary was that the pictograph should be identifiable.

Signs in the form of a human head in profile exist on the Lachish dagger and the Shechem plaque. Next appears the linear *resh*, probably on the Beth Shemesh ostrakon if the copy made from the photograph is accurate (the original has faded). Ussishkin (1983, 157) identified the second letter from the right in the second line of the Lachish bowl fragment as *resh*. One would expect a less angular letter, more like the pictographic prototype, in this archaic inscription (see *sade*). Cross too (1984, 72) rejects *resh* and suggests *yod* (see the discussion of this letter). Aharoni wanted to identify the lower letter on the Raddana handle as *resh*, but this seems improbable (see the discussion of *waw* and *lamed*). The *resh* in the alphabet line on the ^ʿIzbet Šartāh ostrakon looks like *qop* due to the scribe's ignorance, but there is another letter which looks "correct" (line 4.25). The *resh* of the Rapa arrowhead (identified as *kap* by Martin) faces right like the supposed *resh* on the Beth Shemesh ostrakon (assuming that the latter formed part of a vertical inscription). The next *reshs*, on the Gerba^ʿal arrowhead and the early Phoenician texts, face left. There are 3–4 variants on Ahiram's sarcophagus, including one (*l'ḥrm 'bh*) which looks like a contemporary *bet* such as that on the Ruweise arrowhead.

So far, *resh* has only been found in a vertical position; this may be the general rule (see Cross 1967, 15*), originating in the pictographic perception of writing, as in the case of *kap*, but see the *kap* on the Gezer sherd.

Shin and *t*

The sign of the unstrung bow was first identified in the Proto-Sinaitic inscriptions as *shin* by Gardiner (1916) on the basis of its resemblance to the Phoenician letter and on the supposition that it depicts a tooth (*š'in*). In 1935 Albright showed that Northwest Semitic originally used two sibilants, of which only *shin* had survived by the end of the second millennium, but he did not

identify the signs correctly. In 1948 (p. 14 and elsewhere) he identified the Proto-Sinaitic sign as \bar{t} (= *tann*, composite bow, first quoted in Cross 1954, 19 and note 32). The source of the letter is the Egyptian sign for a bow (Gardiner T9, T10 or AA32), as suggested by Cowley (1916, 19 though he identified it as *qop*). No example of an unstrung bow in Gardiner's signs A12, T10 and so on has been found in the Egyptian inscriptions of Sinai. There is no way of knowing what, if any significance lay in the omission of the bowstring in this letter. The letter appears frequently in the Proto-Sinaitic inscriptions, and is always horizontal with ends pointing upwards (except for the uncertain examples in texts 374 and 375; see Albright 1948, note 68). On Albright's suggestion that this letter also stands for *š*, see the discussion of inscription 353 and below.

Along with this letter, Albright (1948, note 77) identified ∇ in inscription 357 as the original *shin*, since this was the only consonant with a still unidentified letter which fitted in with his decipherment of the text. Cross (1962a, 17) and Rainey (most recently 1981, 94) agree with this. Cowley (1929, 216) and Grimme (1929, 67) had already suggested reading it as *shin*, on different grounds. The "leg" added by certain scholars to this letter (e.g. Beit-Arieh 1978, fig. 6 and Dijkstra 1984, fig. 1) does not seem to me to belong to it. Albright (1966, 23) suggested another *shin* in inscription 356, though this is unacceptable (see the discussion of this text). It is interesting that the shape of the letter in inscription 357 is identical to Gardiner's sign M44 as it appears in Middle Kingdom inscriptions from Wadi Maghara in Sinai (Sinai 28, line 5 etc.) and in other texts, e.g. on a scarab of the Middle Kingdom or the Second Intermediate Period (Martin 1971, No. 1343). The tick (or ticks) seems to be the result of hieratic influence on the hieroglyphic sign. Dijkstra (1984, note 8) attempted to trace the source of the letter in the hieroglyphic version of sign M44. The letter-name *shin* may indeed come from *tann* (for another possibility see below); in that case the name of original *shin* would remain unknown.

To return to the letter whose origin is the bow sign: a *shin* which resembles the early Phoenician form but is upside down (like the two unidentified signs in Sinai 375) appears twice on the Shechem plaque. If this inscription is indeed Proto-Canaanite, it would be preferable to read *shin* (*tann*), not *mem*, because of the number of zigzags (see also Cross 1979, note 12).

At some time during the thirteenth or twelfth century, there was a transition from the rounded, bow-shaped letter to the angular shape. This occurred at about the same time as the merging of \mathfrak{z} and \bar{t} , and may be linked with a change of name from *tann* (bow) to *šin* (tooth). The *shins* on the Lachish ewer and bowl fragment are rounded, while those on the Lachish and Qubur el-Walaida bowls are angular. The *yods* on these two bowls are also more developed. Both variants may appear on the ^cIzbet Sartah ostrakon, reflecting perhaps a transitional stage. The Rehov sherd has been placed before the Qubur el-Walaida bowl in this book solely on the basis of the *shins* (which does not constitute a strong case but this is the kind of data available); otherwise the minimum date for the sherd would have to be lowered further to some time nearer the el-Khadr arrowheads (see section 6.2). A possible argument against this is the horizontal stance of the Rehov *shin*, which resembles the *shins* on the Rapa and ^cAbdoniya arrowheads and in the early Phoenician inscriptions, unlike the late Proto-Canaanite

texts, whose *shins* are all vertical. It would in fact be quite possible to claim the opposite: the Rehov *shin* (like that on the Lachish bowl fragment) is horizontal like most Proto-Sinaitic *ts*, and thus must be earlier than the Lachish ewer *shin*. The thirteenth–twelfth centuries thus constituted the transitional period during which both types of *shin* were used interchangeably. After this, the shape and stance of *shin* stabilized.

Cross has tried to revive the scribbling on the Megiddo ring that includes a presumed *shin* (first with McCarter 1973, 7, 8). See the discussion of the ring in section 4.2.3. The Beth Shemesh *shin* was created by Cross (1967, fig. 3) and subsequently abandoned (1980, 16). The *shin* once proposed on Byblos cone B is a *mem*. See the discussion of this inscription.

š

Albright's suggestion (1966) of a *š* > *t* shift in the Proto-Sinaitic inscriptions and their representation by the same letter is unfounded (see text 353 in section 3.2.1). Cross (e.g. 1967, note 48) shares Albright's view.

Taw

First identified in the Proto-Sinaitic inscriptions by Macalister (1906) on the basis of its resemblance to the Phoenician letter. If the inventor of the alphabet could not do without a hieroglyphic prototype, he could have found it in sign Z9 and the like. The letter requires hardly any comment. A sign in Sinai 351 has been identified as a *waw*–*taw* ligature (see unidentified signs). The unusual shape of the *taw* in Sinai 376 is of interest. The +–shaped letter was most common in the second millennium and the X–shaped letter at the beginning of the first millennium (thus first Milik and Cross 1954, 13). Even so, the X–shaped form is known earlier (Sinai 346, 380, Lachish sherd No. 7 and the *yt'* arrowhead).

Unidentified signs

Of the five graphemes which disappeared from the alphabet during the thirteenth–twelfth centuries, three have not yet been identified – *zayin*, *g* and *d/z* (the original grapheme for *d* became *zayin*). Other letters, such as the early forms of *tet* and *samek*, are also not certain. They might be among the still unidentified letters of the Proto-Sinaitic and early Proto-Canaanite texts.

Sinai 345: see *bet*, *d*, *het*, *nun*.

Sinai 346: see the discussion of the inscription.

Sinai 351: see *waw*, *tet*, *yod*, *taw*.

Sinai 353: see the discussion of the inscription.

Sinai 363: see the discussion of the inscription.

Sinai 365a, 365b: see *kap* and the discussion of the inscription.

Sinai 380: see the discussion of the inscription.

Lachish dagger: see *zayin*, *tet*, *samek*, *ayin*.

Tell el-Hesi sherd: see *bet* and the discussion of the inscription.

Lachish bowl fragment: see *qop* and the section on word dividers.

For other doubtful letters, see the discussion of the inscription.

‘Izbet Sartah ostrakon: see the discussion of the inscription, especially of *bet*, *gimel*, *waw*, *zayin*, *lamed*, *mem*, *samek* and *pe*.

Word dividers

There are no word dividers in the **Proto-Sinaitic** inscriptions (as against Dijkstra 1984, 35 and note 16), but, as in the Egyptian texts, there are lines between rows or columns in inscriptions **349**, **350** and **351**. In inscription **346** (front) a short incision separates the right-hand column and the lower line. The small line in text **363** does not seem to me to be a word divider.

Word dividers in the form of vertical lines are known from the **Nagila** sherd, from the **Lachish** and **Qubur el-Walaida** bowls and perhaps from the **Lachish** bowl fragment. In the **Qubur el-Walaida** bowl inscription there are only two (as against Cross 1980, 1; see the discussion of this text). Similar word dividers are known from the "**King of Amurru**" arrowhead, the **Byblos** spatula, **Ahram's** sarcophagus, the **Nora** fragment (one or two) and elsewhere.

Cross (1980, 15) sees one or two word dividers on the **Tekke** bowl, but it (they) could be the remains of a letter.

Three dots arranged vertically on the **Lachish** ewer have been generally interpreted as a word divider. This sign only appears once, since in the other two cases where it might have been used, details of the scene on the ewer serve to divide the words. On word dividers in the **Proto-Canaanite** inscriptions, see Millard 1970, 5 and 1982, 147, and Naveh 1973a, 206-207.

Word dividers were thus in sporadic use in the second millennium inscriptions which we possess; their form, even if not standardized, was usually the most natural possible – a vertical line (all occur in horizontal inscriptions). The use of word dividers increased towards the beginning of the first millennium.

CHAPTER 6: CHRONOLOGY

6.1 The date of the Proto-Sinaitic inscriptions and the birthplace of the alphabet

6.1.1 Introduction

THE dating of the Proto-Sinaitic inscriptions is bound up with the question of where the alphabet was invented. It is generally accepted that the earliest Proto-Canaanite inscriptions date from the end of the Middle Bronze period. If the Proto-Sinaitic texts date from the beginning of the 18th Dynasty as is usually assumed, then the date of the origin of the alphabet, in Palestine, could be assigned to the eighteenth-seventeenth centuries. On the other hand, dating the Proto-Sinaitic inscriptions to the 12th Dynasty (probably towards its end) could imply that the alphabet was invented in Sinai at this time. The importance of this issue demands that we discuss the dating of the inscriptions in the minutest detail.

6.1.2 Archaeological evidence

In 1947, when they met in Cairo, Leibovitch suggested to Albright that the face of the sphinx with the Proto-Sinaitic text (Sinai 345) resembled the portraits of Hatshepsut (1503-1482) (Leibovitch 1963, 201). Albright immediately adopted this view (1948, 7 etc.), and all other scholars except for Gardiner have followed his lead. How was it that a new date was so easily accepted for a sphinx that had been known for decades? In the 1930s, the existence of the two main groups of Proto-Canaanite inscriptions was gradually recognized. The earlier of these was written in letters closely similar to Proto-Sinaitic, while the later, dating from the 13th century onwards, developed in the direction of a linear script. At the same time, the Proto-Sinaitic inscriptions were still dated to the Middle Kingdom, about 1800 B.C. (e.g. Albright 1935), following Gardiner (1916). This would have entailed a palaeographic standstill during the first 400-500 years of the alphabet's existence - a situation which would be regarded as untenable by those concerned with first millennium texts whose letters developed constantly. Leibovitch's redating of the sphinx and the Proto-Sinaitic inscriptions was thus a welcome suggestion that reduced to 200-300 years the length of the pre-13th century "standstill" (see also section 6.1.3).

Sixteen years were to pass between Leibovitch's meeting with Albright and his publication of his reasons (1963) for identifying the sphinx's face as that of Hatshepsut. Up till then, one had had to rely on Leibovitch's judgement - but now it was possible to examine the factual basis of his hypothesis. No such examination was ever undertaken, cf. for instance Cross 1967, note 1: "[Leibovitch's] arguments are unshaken".

Leibovitch compared the sphinx to two statues from Hatshepsut's mortuary temple at Deir el-Bahri, which portray the queen seated on a throne (figures 9, 10). In Leibovitch's words "...this sphinx bears much resemblance to that queen's statues". He gives no details of what, in his opinion, this resemblance consists, but probably means the portrait alone. It is not clear why Leibovitch chose to use as comparisons human rather than sphinx statues of the queen, examples of which were also found at Deir el-Bahri. The face of

one of the statues he cites (figure 9) does not resemble that of the Serabit el-Khadem sphinx. A real surprise comes with the second statue: as with many of the queen's portraits, the face of this statue was mutilated beyond all recognition in the reign of Tuthmosis III. Returning to the first portrait, its comparison to the Serabit el-Khadem sphinx is methodologically incorrect: the former is a work of art of the highest standards, made by the best sculptors of the land, while the latter is an unsuccessful attempt at carving a royal figure, produced by "a mason who had no pretensions to being an artist" (Petrie, 1906, 125, describing a head of a statue, *ibid.*, figure 131, which he compares to the sphinx's head. Petrie dated the statue to the 18th Dynasty, but gave no explanation for this). The attitude of the sphinx's head, the slipshod modelling of the lips and ears, the crooked eyebrows, the sloping forehead and the carelessly executed headdress (*nemes*?) all bear witness to the artisan's lack of expertise. In other words, it is impossible to identify the pharaoh represented by the statuette; it cannot even be determined whether it is a man or a woman. Leibovitch himself admits as much in the article mentioned above (1963, 202): "the Sinai sphinx is, of course, much weathered and damaged... at any rate it should represent somebody who is certainly not Amenemhat III". G. Posener and T.G.H. James also think that the pharaoh cannot be identified (personal communication, September 1979). B.V. Bothmer kindly gave a detailed evaluation of the Statuette: "The little sphinx from Sinai in the B.M. has nothing to do with Hatshepsut... to compare the piece with the bust of H. found by the MMA and now in Leiden is pure folly... The eyes are naturally formed, with rounded eyeballs and a real eyelid which is well set off against the eyebrow. This kind of eye is often found in the end of Dynasty XII and often in Dynasty XIII; the type of eye occurs again late in the reign of Amenhotep III and, of course,... Akhenaten... There is no reason to assume that a queen is represented..." (letter of 12 March 1984). Those who date the Proto-Sinaitic inscriptions to the time of the 18th Dynasty place them earlier than Amenophis III. There is no alternative thus to dating the sphinx (Sinai 345) to the late Middle Kingdom.

Leibovitch (1947, especially p. 4) notes that female sphinxes – those with the body of a lioness – first appear in Egypt at the time of Hatshepsut. Albright (1948, 10) sees this as significant, and later (1966, 6) refers to Leibovitch's article of 1963 in the same context. Leibovitch's work has no bearing on the Serabit el-Khadem sphinx, whose body is that of a male lion. Albright (1948, 10) claims that "though the female human-headed sphinx may have been known earlier, it must have remained excessively rare until the early fifteenth century...", and then goes on to discuss sphinxes from Mari, Ugarit and Megiddo which have no relevance to the matter at hand. At least six sphinxes of queens and princesses are known from the 12th Dynasty,⁹¹ about a quarter of all the statues of female royals known from this dynasty. True, the *nemes* headdress was only worn by the monarch, but the gender of the pharaoh of our sphinx is uncertain, and besides, the carving of the Sinai 345 headdress is so poor that it is doubtful whether a *nemes* was intended.

91. In Vienna (Vandier 1958, 224, note 1); in the Bibliothèque Nationale in Paris (*ibid.*, 223); from Tell ed-Dab^ca (*ibid.*, 215, note 2; 600); from Qatna (du Mesnil du Buisson 1928, 10–11); in the Brooklyn Museum (Aldred 1980, 133); probably from Matariya (Heliopolis), now in a private collection in Paris (Wildung 1984, 86).

The identification of the Serabiṭ el-Khadem sphinx was considered to be a cornerstone of the New Kingdom dating of the Sinai inscriptions, since it seemed to provide the sole solid fact from the site itself; the rest of the evidence (both for a Middle and a New Kingdom date) is circumstantial at best. Now that the sphinx can no more prove a New Kingdom date (its support for a Middle Kingdom date is equivocal too), it is necessary to re-examine all the chronological evidence collected in the past. It is presented below more or less in the order in which it was published.

Petrie (1906, 131) dated the Proto-Sinaitic inscriptions to the time of Hatshepsut and Tuthmosis III, for four reasons:

1. The block statuette with an inscription (Sinai 346) was found in the Serabiṭ el-Khadem temple in the Sopdu court, which he thought was built at that time.

2. In Mine L, near which most of the Proto-Sinaitic texts were found, a pottery sherd of the New Kingdom was discovered.

3. The sphinx (Sinai 345) is made of red sandstone, which was not used at Serabiṭ el-Khadem after the reign of Tuthmosis III.

4. A *serekh* between the paws of the sphinx may contain an element of the name of Snofru, who was venerated in Serabiṭ el-Khadem in the time of Hatshepsut.

Gardiner (1916, 13 and *Sinai* II, 36–37) refuted Petrie's reasons as follows:

1. The Sopdu court was built during the Middle Kingdom.

2. The New Kingdom pottery is evidence of some sort of activity in the mine at this period, but does not provide evidence of the beginning or end of exploitation of the mine.

3. The use of red sandstone is far from being decisive proof, and in any case, Petrie himself wrote that this sort of stone was not used *after* Tuthmosis III.

4. The cult of Snofru is attested at Serabiṭ el-Khadem during the Middle Kingdom (see also the end of this section).

Gardiner (1916, 13–14) had three arguments supporting a 12th-Dynasty date:

1. Semites are mentioned at Serabiṭ el-Khadem only during the time of the 12th Dynasty. They include individuals of some standing and even the brother of the prince of Retenu – Ḥebded.

2. In inscription Sinai 351, as in all the Egyptian inscriptions of the Middle Kingdom at Serabiṭ el-Khadem, the figure of the god Ptaḥ inside a shrine appears. In the New Kingdom inscriptions, Ptaḥ is depicted without the shrine.

3. On the Bir en-Naṣb saddle, a Proto-Sinaitic text is incised next to a Middle Kingdom inscription (see also Gardiner 1962).

These points are not entirely unambiguous – a fact which Gardiner himself has noted: as a rule, the New Kingdom inscriptions at Serabiṭ el-Khadem contain less historical data than the Middle Kingdom ones. Moreover, there is an Egyptian inscription of the New Kingdom which was discovered at Serabiṭ el-Khadem in 1979, which mentions a Semite (Giveon 1981; Görg 1983). As for the depictions of the god Ptaḥ within a shrine, even though at Serabiṭ el-Khadem they are restricted to the Middle Kingdom, in Egypt similar representations exist from New Kingdom times (*Memphis* I, pl. VII ff.; cf.

already von Bissing 1920, 6). The argument based on the Bir en-Naṣb text is untenable, see Sass 1982, note 21. It is not surprising that as long as the Proto-Sinaitic inscriptions did not raise the chronological problem mentioned at the beginning of the chapter, Gardiner's position was accepted by most scholars. For all its weak points, it still has a certain degree of validity, whereas Petrie's suggestions have been easily refuted.

In 1948 (pp. 9–12) Albright tried to scrape together some more evidence, besides that of the sphinx, for an 18th-Dynasty date:

1. He repeats Petrie's reasons without being necessarily convinced by them himself.

2. He was taken with the article by von Bissing (1920) who assigned the block statuette (Sinai 346) to the New Kingdom. However, he does not reveal von Bissing's principal conclusion (*ibid.*, 14, 19 etc.) – that the Proto-Sinaitic inscriptions date to the Amarna period at the very earliest and are almost certainly later. In fact, the best parallels to Sinai 346 are two statues found in Winlock's excavation of the tomb of the archer Neferhotep at Deir el-Bahri (JE 47708–9, Vandier 1958, pl. LXXX:2, 3). Winlock dated the tomb to the 11th Dynasty, but Evers, and following him Vandier, corrected this date to the late 12th–early 13th Dynasty. B.V. Bothmer agrees with this.⁹²

3. Another of Albright's arguments may be summarized thus: there are three types of early tomb structures in Sinai – the *nawamis*, the large tumuli at Serabit el-Khadem (smaller than the *nawamis*), and small tumuli, also at Serabit el-Khadem. The *nawamis* have been dated by the objects discovered in them to the end of the fourth–beginning of the third millennia B.C., the large tumuli at Serabit el-Khadem are dated on the basis of Egyptian inscriptions to the Middle Kingdom, while the small, hitherto undatable, tumuli, in some of which Proto-Sinaitic inscriptions have been found, must be of New Kingdom date following this "the smaller the later" line of thought. Albright's idea speaks for (or rather against) itself. Not only did he stick to this theory to the end of his life (1969, 45), but on another occasion he dated the small tumuli at Serabit el-Khadem to the 15th century on the basis of the Proto-Sinaitic inscriptions (1957, 249).⁹³ It is to Albright's credit (1948, 11–12) that it was he who identified the small tumuli as tombs, an identification which had been disputed until then.

Albright's attempt (1966, 12, 20) to link the Proto-Sinaitic texts with the descendants of the Hyksos is unfounded (see section 3.2.1, inscription 351). His scenario of pitiful Hyksos survivors being condemned to forced labour in the mines of Sinai and Nubia at the beginning of the New Kingdom is not based on a single scrap of historical evidence. On this issue, see also section 6.1.5 and Donner's review (1967, 276) of this study of Albright's.

Other recent scholars such as Cross (e.g. 1967, 8*), Sznycer (1974, 11), Garbini (1979, 86), Naveh (1982, 26–27) and Millard (1986, 393) have contented

92. I would like to thank Prof. Bothmer, who at my request examined the statue from Serabit el-Khadem in the Cairo Museum and confirmed the comparison to the Neferhotep statues and their date (letter of 12 June 1984).

93. A misprinted reference to the same paper appears in Albright 1966, note 33.

themselves with repeating the current views (mainly Albright's) of the date of the Proto-Sinaitic inscriptions.⁹⁴

To the best of my knowledge, the dates of the two busts, Sinai 347 and 347a, have never been considered in relation to the dating of the Proto-Sinaitic texts. The accepted date for busts of this type is the New Kingdom, based on the rich finds from Deir el-Medina. This type of sculpture, however, existed as early as the Middle Kingdom (Keith-Bennett 1981, 49).

Let us return now to the *serekh* between the sphinx's paws (Sinai 345; see figures 2, 8). The sickle sign, *m³ct*, if it has been correctly identified, is indeed a component of the Horus name of Snofru (*hr nb m³ct*), venerated at Serabit el-Khadem as a god. There is no single certain occurrence of Snofru at Serabit el-Khadem from the time of the 18th Dynasty. All the mentions of the name which can be definitely dated are from the 12th Dynasty (Sinai II, 83-84). It is not impossible, however, that it is the name of the reigning king that was inscribed in the *serekh*. In that case too, we are drawn into the Middle Kingdom; not one king of the 18th Dynasty had a Horus name which contained *m³ct*. The Horus name of Ammenemes II of the 12th Dynasty (1917-1882 or 1875-1840), however, was *hr hkn m m³ct*, and at Serabit el-Khadem alone this appears nine times (Sinai 47-49, 71, 73-76, 78).

The following picture emerges from the archaeological evidence: all the support hitherto considered definite in favour of an 18th-Dynasty date for the Proto-Sinaitic texts falls by the wayside, and this negative determination exhausts all the certain evidence we possess. Two of the four statuettes with Proto-Sinaitic inscriptions are definitely of the Middle Kingdom, and the other two belong either to the 12th or the 18th Dynasty. The other archaeological evidence is ambiguous. Only new data can decide between a 12th Dynasty and an 18th Dynasty date.⁹⁵ The dating of the Proto-Sinaitic texts is thus still open, although indirect and circumstantial evidence seems to tip the scale in favour of a 12th-Dynasty date (see below).

6.1.3 Palaeographical evidence

It is possible – though not certain – that the earliest Proto-Canaanite texts date from the eighteenth-seventeenth centuries B.C., in other words, between the 12th and 18th Dynasties. It is generally accepted that comparison between the letters of these inscriptions and those of the Proto-Sinaitic texts indicates the lower date, around 1500, for the latter group. A letter-by-letter examination of the earliest Proto-Canaanite inscriptions (see section 6.2) reveals that this hypothesis is based on a single "finger" of a single *kap* (from the Gezer sherd), which is not actually preserved but has been presumed to exist for this specific purpose. Cross (1967, 10*) was also aware of this difficulty: "The earliest of the [Proto-Canaanite] series gave the impression

94. Beit-Arieh (most recently 1985, 116) repeats Petrie's view that a find of New Kingdom date from inside a mine can be used to date the inscriptions from the mine and its neighbourhood.

95. I have altered my opinion on this point slightly from the view I expressed in 1980, but see Sass 1978, note 1.

of being more archaic or *at least as old as* [emphasis mine, B.S.] the pictographs from Sinai..."

The inscription on the Lachish prism, dated to Amenophis II, long served as the authoritative evidence for the low date for the Sinai inscriptions (for instance Albright 1966, 6, 10; Cross 1967, note 1); but a new examination of the prism (Hestrin, Sass and Ophel 1982) has revealed that it is entirely Egyptian and thus irrelevant to the matter at hand.

Another assumption indirectly expressed by several scholars has been stated explicitly by Leibovitch (1963, 202): "There should be between these [the oldest Phoenician] inscriptions and the Proto-Sinaitic a space of time sufficient to allow development to take place. The time which separates them from the XIIth Dynasty is much too long." This line of reasoning, which I do not share, is phrased slightly differently at the beginning of the present chapter: the dating of the Proto-Sinaitic texts to roughly 1800 B.C. entails a palaeographic "standstill" of 400-500 years in the Proto-Canaanite alphabet. Such a long period need not present a difficulty in our case: in MBII and LB Palestine the written languages were Akkadian or Egyptian. The Proto-Canaanite script thus did not enter a vacuum, and time was needed for it to establish itself alongside well entrenched scribal traditions. It is almost certain that the transition to linear forms in Proto-Canaanite texts in the 14th-13th centuries B.C. occurred as a result of its greater application in daily affairs. There is no direct evidence of the situation in the 14th century (see section 7.2.3), but the few earlier Proto-Canaanite texts which have come to light are very brief, mostly dedicatory inscriptions, and pictographic letters were sufficient for this. This phenomenon is to some extent reminiscent of the hieroglyphic and hieratic scripts in Egypt and their different roles, although in Egypt, unlike Palestine, the pictographic script continued in use alongside the hieratic script.

6.1.4 Linguistic evidence

If, as is generally accepted, most of the Proto-Sinaitic inscriptions have not been deciphered (see section 3.3), then their chronological framework cannot be further investigated by linguistic means. I would like nonetheless to touch upon a methodological aspect of the problem. Albright (1966, 6) considers that the certain attribution of the Proto-Sinaitic inscriptions to the 15th century allows them to be discussed in the linguistic-historical framework which also includes the Ugarit texts and the Canaanite elements in the language of the Amarna letters. Some lines later he notes that the language of the Proto-Sinaitic texts confirms their 15th century date, since his decipherment produced no evidence of earlier features such as mimation. Albright himself admits (*loc. cit.*) that the absence of mimation does not prove the date, but rather that chronological considerations preclude the interpretation of some *mems* as examples of mimation. It is interesting to speculate on what would be the fate of the decipherment if most of the Northwest Semitic texts available for comparison were from the beginning of the second millennium and not from its second half. The possible existence of a diphthong in inscription 379 may serve as a hint (though no more than that) at a date before the 15th century, as may the non-assimilation of *nun* in 'nt (see section 3.3.2).

6.1.5 Summary and conclusions

Since the archaeological, palaeographic and linguistic evidence concerning the high or low dating of the Proto-Sinaitic inscriptions is equivocal, we are reduced to evaluating bits of circumstantial evidence in dating these texts. Such hypotheses must take account of two questions:

1. Was it during the 12th or during the 18th Dynasty that a more appropriate background to the writing of the Proto-Sinaitic inscriptions existed in Sinai?

2. Was Sinai during the 12th Dynasty, or was Palestine during the Second Intermediate Period a more likely place for the formation of an alphabet most of whose letters derive from Egyptian hieroglyphs?

The answers to these two questions must themselves correspond: if the Proto-Sinaitic texts date from the 18th Dynasty, then this implies that the alphabet was invented in Palestine, since the first Proto-Canaanite inscriptions are earlier than that dynasty as far as is known.⁹⁶ But there is an equal chance that the alternative possibility is correct – that the Proto-Sinaitic texts belong to the time of the 12th Dynasty, and that Sinai could have provided the appropriate background for the invention of the alphabet:

Egyptian activity at Serabit el-Khadem continued with little interruption throughout the time of the New Kingdom (*Sinai* II, 39). Thus if the Proto-Sinaitic inscriptions are from the time of Hatshepsut, one could expect this script to continue into the time of the 19th–20th Dynasties; in other words, that inscriptions would be found at Serabit el-Khadem whose letters were displaying linear forms, as happened in Palestine in the 13th–12th centuries. However, all the Proto-Sinaitic texts are pictographic, even though there are differences in the quality of drawing of the pictographs (see the discussion of *Sinai* 376 in chapter 3, and of *alep*, *dalet* and *h* in chapter 5). Genuine palaeographic development began only as the signs were losing their pictographic character.

Therefore, if the Proto-Sinaitic texts were a short-lived phenomenon in Sinai, as is generally agreed,⁹⁷ could they have been written by Canaanites in the Middle Kingdom? With the cessation of Egyptian activity in the area at about the middle of the eighteenth century, alphabetic writing too vanished

96. It has been occasionally suggested that the alphabet was invented in Sinai at the time of the Hyksos (Sethe 1917, 465–468) or in Egypt during the Middle Kingdom (Petrie 1921, and see on the *Kahun* inscriptions in section 4.2.3) or the Second Intermediate Period. These are all possibilities, but there is not much point in discussing them as long as they have no firmer basis than the fact of their having been suggested. It is interesting to note that another possibility has never been raised: the only Palestinian inscription whose MB date is certain is that on the *Lachish* dagger, but it may not be Proto-Canaanite. The other two Proto-Canaanite inscriptions considered earliest, the *Nagila* and *Gezer* sherds, probably date from the fifteenth century or even later. Why should we not suppose hyperbolically that the alphabet was invented in Sinai about 1500, and was brought to Palestine in the course of the following century?

97. There is in fact no way of proving (or refuting) this, and palaeographic analysis (see chapter 5) is of no assistance here.

from Sinai and surfaced in Palestine, at first on a small scale. With this in mind, the reign of Ammenemes III (1859–1814 or 1817–1772) seems most appropriate time for the Proto-Sinaitic inscriptions, since this was the period that saw the height of Egyptian activity at Serabit el-Khadem, even in comparison with the reigns of Hatshepsut and Tuthmosis III (see for instance Albright 1948, 12). In the time of Ammenemes III, Semites are often mentioned in the Egyptian inscriptions, among them Hebbed, the brother of the Prince of Retenu, as noted. In this context, Černý (1935, 385) made the interesting suggestion that the Semites were brought to Sinai by the Egyptians as dragomans and as intermediaries between the Egyptians and the local population.

The solutions I would propose to the second question tend in the same direction: there is no doubt that the Proto-Sinaitic and Proto-Canaanite letters are mostly derived from hieroglyphic prototypes (see table 3). Thus the alphabet must have crystallized in some place where speakers of a Semitic language came into contact with Egyptians who wrote hieroglyphic inscriptions. At the moment we have only two possible candidates – Sinai towards the end of the 12th Dynasty or Palestine in the Second Intermediate Period (see the beginning of note 96). We must ask ourselves which of the two answers this requirement better?

If the alphabet was invented in Palestine towards the end of the Middle Bronze period, one should probably look for its origin in a Hyksos centre in the south of the country, perhaps Tell el-Ajjul (Kempinski 1974, 6–7; Millard 1986, 395). Egyptian writing in such places, however, would have consisted chiefly of hieratic script written on papyrus. Hieroglyphic texts from this period are almost unknown in Palestine, except for the hieroglyphs which appear in great numbers on scarabs. Should we look to scarabs for hieroglyphic prototypes of alphabetic letters? I think not, for the following reasons:

1. If the script on the scarabs had really influenced the development of the alphabet, we could expect to find scarabs with Proto-Canaanite inscriptions from the Middle Bronze period – but no such scarabs have been discovered.⁹⁸

2. Several hieroglyphs adopted in the alphabet, such as the ox's head, do not appear as far as I know on scarabs of the Middle Bronze II period. These signs are common, on the other hand, in Egyptian inscriptions at Serabit el-Khadem (and of course elsewhere): the ox's head, the origin of *alep*, for example, appears countless times at Serabit in the Egyptian formula "a thousand loaves and beer, oxen and ducks for the soul of..."

As for the four statuettes which bear Proto-Sinaitic inscriptions: the sphinx (Sinai 345), if the modelling of the eyes can serve as a chronological yardstick, should be dated to the end of the Middle Kingdom or to the reign of Amenophis III and onwards. The second of these possibilities is obviously untenable. The *serekh* between the sphinx's paws may indicate a Middle Kingdom date. The block statuette (Sinai 346) is also from the end of the

98. I do not mean the "Hyksos script" – apparently meaningless combinations of hieroglyphs which have intrigued several scholars (Albright 1966, 15; Kempinski 1974, 7 and others). The link between this fascinating question and the Proto-Canaanite alphabet is indirect, if it exists at all.

Middle Kingdom. The two busts (Sinai 347 and 347a) have parallels from the Middle and New Kingdoms. Anyone who wishes to date the Proto-Sinaitic texts to the New Kingdom has to assume that the sphinx, the block statuette and perhaps both the busts, originally uninscribed, belonged to the Middle Kingdom Hathor temple at Serabit el-Khadem and that only 300 years later did some Semites write dedicatory texts on them.

Nobody would deny that at Serabit el-Khadem Canaanites met Egyptians who wrote in hieroglyphs. The Egyptian inscriptions of the Middle Kingdom, especially those from the reign of Ammenemes III, show that Canaanites came to Serabit el-Khadem as free men, and it is not impossible that they included literate individuals. Albright (1966, 12; see section 3.2.1, inscription 351 and section 6.1.2) has no proof that the people who wrote the Proto-Sinaitic texts were slaves. Would slaves serving as manual labourers have used writing in the second millennium B.C.? At the same time, it is quite certain that it was not the local inhabitants who inscribed the Proto-Sinaitic texts. The distribution of the inscriptions, which overlaps with that of the Egyptian texts, bears witness to the fact that the people who wrote them came to the place for the same reason as the Egyptian mining expeditions. Hebbed and the other Semites in Sinai during the Middle Kingdom had at their disposal a selection of hieroglyphic inscriptions (and also hieratic and semi-hieratic graffiti, cf. *Sinai* II, 28) which included prototypes of almost all the Proto-Sinaitic letters whose values are known and of the majority of those whose meaning is still unknown (see chapter 5). Ullman (1927, 313, note 2) suggested that the signs of one Egyptian inscription, *Sinai* 53 (see figures 291, 292), could by themselves have sufficed for the origin of most of the Proto-Sinaitic letters. To this I would add at least *Sinai* 92 (fig. 293), in which Hebbed is mentioned, the god Ptaḥ is depicted standing in a shrine, and the shape of the letters is reminiscent of the Proto-Sinaitic inscriptions. Could it have been written by a Semite literate in Egyptian, if unskilled in the cutting of hieroglyphs? Ullman (*loc. cit.*) has even demonstrated that certain Proto-Sinaitic letters come from Middle Kingdom Egyptian signs from Serabit el-Khadem, which were written in a way not usual in Egypt itself (see chapter 5 and table 3, and compare also Butin 1936a).

The possibility of a link between the invention of the Northwest Semitic alphabet and the Egyptian system of writing foreign names, which, in the 12th Dynasty was almost alphabetic, cannot be ruled out (see Sass in press). During the reigns of Sesostri III and Ammenemes III the names of Semites who lived with the Egyptian mining expeditions were written in this way in Sinai. Some of these inscriptions mention that the Semites came from Syria-Palestine, though the origin of others is not specified (see also the beginning of note 96). We shall probably never know how exactly the idea of the alphabet came to the mind of its inventor(s). But if this person was literate in Egyptian, then he was not unfamiliar with the concept of breaking up words into their component consonants: the Middle Kingdom system of writing foreign names employed at least twenty, out of 27-29, of the consonants of his own language. All he had to do to complete the alphabet was to analyze nine consonants, or less, correctly. Even if I am right in assuming that the Northwest Semitic alphabet is not an independent creation, its invention still demanded a level of phonetic analysis requiring literacy and ability of abstraction.

There is no doubt that the entire picture would be much more satisfying if it were possible to prove that the alphabet developed in a southern Palestinian administrative centre during the Hyksos period (or even in Byblos in the Middle Kingdom),⁹⁹ on a background of established literary activity. The desire to draw a parallel from the Ugaritic alphabet also contributes to this impulse. While such a development is theoretically possible, there is no shred of evidence to prove it. At present, the only basis for this theory is the feeling that "this is how it should have happened". True, were it not for the discovery of the Proto-Sinaitic inscriptions at Serabit el-Khadem, nobody would have come to seek the birthplace of the alphabet in this remote mining region. But if I am right in preferring a Middle Kingdom date for the Proto-Sinaitic inscriptions, and lacking similar contemporary material elsewhere, we have in Sinai the oldest documentation of the Northwest Semitic alphabet.

To return to the Ugaritic alphabet, I would like to point out two ways in which it differs from the pictographic alphabet. In Ugarit, an existing, tried system was adopted, while in Sinai a new system was being experimented with. In Ugarit, the adoption of the alphabet in the fourteenth century has to be regarded as an official act, since within a very short time all types of documents – administrative and legal, literary texts and letters – were written in this script. In contrast, there is nothing official in the pictographic alphabet at the beginning of its history – just the opposite: the inscriptions include some dedicatory texts and some private inscriptions in Sinai, but nothing else.

In short, there is no unambiguous evidence for the date of the Proto-Sinaitic inscriptions, either in the 12th Dynasty or in the 18th; both dates are possible from the archaeological and palaeographic (and linguistic?) points of view. And concerning the sum of indirect and circumstantial evidence available, I would suggest that it does not contradict, and to a certain extent it even reinforces, the dating of the Proto-Sinaitic inscriptions to the 12th Dynasty (cf. Sass 1978, note 1). Nor is there solid evidence for locating the birthplace of the alphabet, but lacking 12th-Dynasty alphabetic inscriptions in Palestine and Egypt after more than a century of intensive excavations, it is Sinai we are left with.

6.2 The Proto-Canaanite inscriptions, palaeography and relative dating

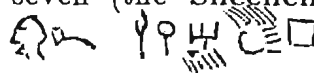
The inscriptions in this section have been arranged according to their palaeographic development, and only their distinguishing elements are discussed (for a more detailed treatment see chapter 5). It should be noted that minor palaeographic differences need not have chronological significance and may simply be the result of differences in the materials used or in the age, training and handwriting of the scribe.¹⁰⁰ In transitional periods (and in

99. Thus Millard 1976a, 139. The Byblian pseudo-hieroglyphic inscriptions are not dealt with here, but see note 58.

100. Compare, for instance, the different hands on the stone bowl and the pithoi from Kuntillet ^cAjrud. If the interpretation of the archaeological finds from ^cAjrud is correct, the site was only inhabited once, for a short period.

reality, every period should be seen as transitional), there probably would have been a certain amount of palaeographic "overlapping", when for instance the *alep* in one inscription would be more developed than the same letter in another text, while the *bet* of the first inscription would be archaic in comparison to that of the second. An example of this phenomenon can be seen in the relationship of *dalet* and *lamed* on the Gerba^cal and ^cAbdoniya arrowheads. The differences between the inscriptions on the Ruweise and Beqa^c arrowheads, Byblos spatula and Ahiram's sarcophagus are so small that any attempt to deduce some chronological sequence, in the absence of additional archaeological, linguistic or historical data, would be doomed to failure. Only a few Proto-Canaanite texts can be assigned absolute dates on the basis of their archaeological context (see section 6.3); linguistic and historical data are almost completely lacking. The terms "early" and "late", therefore, in this section at least, refer mainly to the degree of development of the script. The inscriptions presented in section 4.2.3 are not discussed here.

Succeeding the Proto-Sinaitic inscriptions are the texts on the MB Lachish dagger, the Nagila sherd from the late MB-early LB period(?) and the Gezer sherd which possesses no archaeologically based date. The letters of all three texts are pictographic, and no internal order can be determined. They barely differ even from the Proto-Sinaitic inscriptions, and their placement in second position is the result of other factors, described in section 6.1. It is difficult to accept the claim (Albright 1948, 12; Cross 1967, 10*; Mazar 1968, 95; Naveh 1982, 26-27) that the Lachish, Nagila and Gezer texts seem archaic in comparison with the Proto-Sinaitic ones. Since this topic is of such great importance for the question of the birth-date and birthplace of the alphabet (see section 6.1), it has to be discussed at some length: of the four letters on the Lachish dagger, only two (if any) have Proto-Sinaitic parallels. Only three of the six whole or fragmentary letters on the Nagila sherd have any relevance in this context. There are only two identifiable letters on the Gezer sherd. If these inscriptions are indeed Proto-Canaanite, the total number of letters relevant to our discussion would amount to seven (the Shechem plaque is excluded for reasons discussed in section 4.2.1):


 Lachish Nagila Gezer

A quick glance at table 4 shows that none of these letters is more archaic than its Proto-Sinaitic counterparts. It is only natural that there should be differences in the way the pictographs were drawn, and this does occur even within the same inscription – e.g. the *nuns* in Sinai 352, the different numbers of zigzags in the *mems* of Sinai 357, the two types of *bet* in Sinai 346 and 361, and the different *aleps* in Sinai 363.

Even if the *kap* on the Gezer sherd had five fingers, this would not constitute proof of its seniority over its Proto-Sinaitic counterparts. Although the Proto-Sinaitic *kaps* have four fingers, it should not be forgotten that this is based on only two certain examples, which do not prove that five-fingered Proto-Sinaitic *kaps* did not exist. There are examples among the Proto-Sinaitic inscriptions themselves of "accurate" and "defective" letters, such as the ^c*ayin* with and without pupil. What conclusions might have been drawn if ^c*ayin*, like *kap*, had been a rare letter and only one of these types had been known? In any event, even if negative evidence is ignored in favour of existing data, there is a break in the Gezer sherd right after the fourth finger. To summarize, as long as the pictographs

were in use and there had been no transition to linear forms, no chronological conclusions should be drawn from differences in the letters.

The Gezer sherd has been treated here together with the Lachish dagger and the Nagila sherd, as is customary, but in the absence of any archaeological date for the sherd it could be placed later (see below on the Lachish bowl fragment). The available data do not permit us to establish the relative position of the Shechem plaque. The Tell el-Hesi sherd, if its inscription is Proto-Canaanite, should be later than the Proto-Sinaitic texts, because of the shape of the *ayin*, and before the coiled *lamed* currently known from the thirteenth-twelfth centuries and not earlier.

The earliest possible date for the Tel Rehov sherd is some time after the Proto-Sinaitic (and early Proto-Canaanite?) inscriptions, judging from its *ayin*, which is no longer elongated. There is too little evidence to determine the latest possible date; perhaps it was written before the arrowheads, judging from the freely-drawn *mem* on the sherd. If there is any significance in the difference between the rounded and the angular *shin*, the Tel Rehov sherd's lower date would rise to before the Qubur el-Walaida bowl.

The chronological range of Lachish sherd No. 7 is also wide because of the small number of letters. The *bet*'s range runs from the Proto-Sinaitic texts and the Gezer sherd down to the Lachish bowl – depending on the reconstruction of the missing stroke. The *yod* ranges from the Proto-Sinaitic inscriptions to the Lachish ewer, and perhaps also the Lachish bowl.

The *alep* and in particular the *het* on the Raddana handle seem to point backwards, nearer the Proto-Sinaitic texts, while the third letter seems later. If it is *lamed*, this would be one of the earliest appearances of the coiled form (see also the Lachish bowl fragment). However, the relative position of the Raddana handle in the sequence would not change even if it is *waw*. In either case, if the Rehov and Lachish No. 7 sherds and the Lachish bowl fragment are not earlier, the script on the Raddana handle is the most archaic of the late Proto-Canaanite inscriptions (but see its discussion section 6.3).

Our knowledge of the Proto-Canaanite script is too scanty to assign the Lachish bowl fragment a definite position in the sequence. Judging from the shape of *bet*, however, there is no doubt that the bowl fragment is later than the Gezer sherd and earlier than the well-known Lachish bowl. Its relationship to other inscriptions – the Nagila sherd, the Raddana handle, Lachish sherd No. 7 and the Lachish ewer – is still unclear. The letters it shares with the Nagila sherd – *he* and *waw*(?) – are almost identical in both texts, which casts doubt on the early dating of the sherd. The Raddana *lamed* – if this is what the letter really is – does not differ from the Lachish bowl fragment example. The *hets* of the two inscriptions (presuming the identification of the Lachish example is correct) are completely different but difficult to compare, because of the unique form of the letter from the Lachish bowl fragment; it is not clear how this fits into the line of development of *het*. *Bet* appears on both Lachish sherd No. 7 and the bowl fragment, but is not particularly useful for comparative purposes since the No. 7 example is incomplete. The relationship of the Lachish ewer to the bowl fragment is especially interesting. At first glance, the script of the bowl fragment seems more archaic (thus also Cross, 1984, 71), but upon re-

examination this impression seems to have no foundation: the only common letters are *lamed* and *shin*, and they are almost identical in both inscriptions. The texts possess both developed letters and archaic forms which differ little from the Proto-Sinaitic prototypes – *yod* and *nun* on the ewer, and *he* on the bowl fragment.

The Lachish ewer has been placed after the Raddana handle because of its more developed *alep*, and the Lachish bowl has in turn been listed after the ewer because of its *yod*, already reminiscent of the F-shaped form known from the Qubur el-Walaida bowl (and the ^cIzbet Šarṭah ostrakon?). Of the other three letters which appear in both of the Lachish inscriptions – *lamed*, *shin* and *taw* – the first and last are very similar. The bowl's *shin* is more developed, if my assumption about the rounded and the angular forms is correct (see the discussion of *shin* in chapter 5). Be that as it may, the scripts of these two inscriptions from Lachish are quite close.

The Beth Shemesh ostrakon¹⁰¹ must be later than the Lachish ewer because of its *nun*, which is no longer pictographic, and earlier than the ^cIzbet Šarṭah ostrakon (and the Qubur el-Walaida bowl?), judging from its *gimel*, which is still reminiscent of the Egyptian archetype. It is difficult to be sure of the relationships between the Lachish bowl and the ^cIzbet Šarṭah and Qubur el-Walaida texts, and between the Beth Shemesh ostrakon and the Qubur el-Walaida bowl. In the first case, if the ^cIzbet Šarṭah *bet/lamed* indicates that the *bet* of this period was already rounded, this might provide evidence that the Lachish bowl is earlier, or archaizing (otherwise the earliest rounded *bets* are those on el-Khadr arrowhead V). The letters which appear both on the Lachish and the Qubur el-Walaida bowls are *yod*, *lamed* and *shin*. The last two are similar in both inscriptions. The *yods* are different, but I cannot determine whether this has any typological significance. As for the Beth Shemesh ostrakon and the Qubur el-Walaida bowl, the significance of the differences between the *aleps* is unknown, while *lamed* and ^c*ayin* are not relevant to our present purpose. Only if the third letter on the bowl is *gimel* would this provide some evidence for a late date, because of its sharper angle, but its identification as *pe* seems more likely.

The relationship between the ^cIzbet Šarṭah ostrakon and the Qubur el-Walaida bowl is also unclear. No chronological significance seems to be attached to the differences in the *alep* and *pe* (or *gimel*). The *lamed*, ^c*ayin* and *shin* (and *yod*, if Cross' reconstruction of the ^cIzbet Šarṭah text is correct) are similar.

There follows a summary of the relationships between the Lachish bowl, Beth Shemesh ostrakon, ^cIzbet Šarṭah ostrakon and Qubur el-Walaida bowl:

1. Lachish bowl – Beth Shemesh ostrakon, unknown, but both are more developed than the Lachish ewer (the former because of its *yod* and the latter because of its *nun*).

101. In 1971 Cross (with Freedman) dated the Beth Shemesh ostrakon to the late thirteenth century and the Raddana handle to 1200. In 1979 he reversed the order, wavering between the palaeographic evidence and the historical view as regards the Raddana handle.

2. The forms of *bet* indicate that the Lachish bowl may be earlier than the ^cIzbet Sartah ostrakon.

3. Lachish bowl – Qubur el-Walaida bowl, unknown.

4. The Beth Shemesh ostrakon is earlier than that from ^cIzbet Sartah (and than the Qubur el-Walaida bowl?), judging from the shape of *gimel*.

5. ^cIzbet Sartah ostrakon – Qubur el-Walaida bowl, unknown.

The Zarephath sherd is listed here because of the similarity of its *alep* to that of the Qubur el-Walaida bowl, but its possible chronological range is wider: the *alep* is later than that of the Raddana handle but earlier than that on the el-Khadr arrowheads. The chronological range of its two other letters is even wider.

As for the Hazor sherd, it is not known when the transition from the Proto-Sinaitic *lamed* with a long arm to the coiled type took place. Any thirteenth-century or even earlier date is possible from a palaeographic point of view. The archaeological context only fixes the lower chronological boundary (see section 6.3).

The el-Khadr arrowheads begin the series of inscriptions with a script resembling early Phoenician while still preserving a few archaic elements, in particular the direction of writing and of the letters, and to a lesser extent, the forms of some of the letters. Most of the texts are characterized by small, open *lameds*, either rounded (C-shaped) or angular (V-shaped). Some lengthening of one of the arms starts to appear here. The el-Khadr arrowheads are perhaps the first in this series because of the vertical direction of the texts on arrowheads I–IV – the last occurrence of this in the Proto-Canaanite inscriptions – and perhaps also because of the particularly archaic form of *šade* (though see the reservations on this in the discussion of *šade* in chapter 5). On the Rapa arrowhead, as on the el-Khadr ones, several letters are sinistro-dextral. The horizontal direction of this inscription would not by itself indicate a late date for the Rapa arrowhead, since most of the Proto-Canaanite texts – including the earliest – are horizontal.¹⁰² The *šade* thus remains the only advanced feature. In any event, the discovery of el-Khadr V put the el-Khadr arrowheads on the heels of the Rapa arrowhead palaeographically speaking. Their exact relationship remains obscure, among other reasons because of the lack of *šade* on el-Khadr V.

Byblos cone A is more developed than the el-Khadr arrowheads; its angular *lamed* is the earliest of its kind. Its relationship to the Rapa arrowhead is unknown: *het* and *nun* do not provide any clues, and the *bet* on the arrowhead is not clear. The *šade* on the Gerba^cal arrowhead is more developed than that of the Rapa arrowhead, and its *lamed* may be more developed than that of Byblos cone A.

It is impossible to establish the relationships between the *yt'* and ^cAbdoniya arrowheads. On neither is the direction of writing constant; on

102. Naveh (e.g. 1982, 178) suggests that the Greeks adopted the alphabet from the Phoenicians only after vertical writing went out of fashion.

the first, the script is more crude on the verso, but this may be the result of the scribe's lack of skill. The differences in *bet* and *het* exist also in both less and more developed texts. There appears to be no significance in the differences in *yod*; even the strange letter on the *yt'* arrowhead is probably only an example of the scribe's carelessness. *Alep*, *zayin*, *nun* (except for its direction) and *šade* are very similar in both texts. The differences in script between these two arrowheads and the Rapa, Byblos A and Gerba^cal inscriptions are very slight. The *nuns* on the *yt'* and ^cAbdoniya arrowheads are more advanced than that of the Rapa arrowhead, though the *nuns* on el-Khadr arrowhead V are almost identical to the ^cAbdoniya example. The *lameds* of Gerba^cal and ^cAbdoniya are very similar (but for the direction); they are perhaps the earliest to show a distinctly long arm. The only distinguishing feature is the *šades* on the *yt'* and ^cAbdoniya arrowheads, which are more similar to the early Phoenician letter than to the *šades* on the Rapa and Gerba^cal arrowheads. (The latter differ among themselves.) For this reason alone, the *yt'* and ^cAbdoniya arrowheads have been placed last in the Proto-Canaanite sequence (see also tables 2 and 5), though in fact all the later Proto-Canaanite texts are very close to each other, and there may be very little chronological significance in the slight variations in their script. The *lamed* and *nun* on the Gerba^cal arrowhead, the *dalet* and *nun* of the ^cAbdoniya arrowhead and the *aleps*, *het* and *yod* on the *yt'* arrowhead are all sinistro-dextral. Apart from this, most of the letters are very similar to those of the Ruweise and Beqa^c arrowheads and the rest of the early Phoenician inscriptions which have no independent archaeologically determined date. These arrowheads have been included among the Proto-Canaanite texts because of their reversed letters; but in fact a transitional period of some decades with both stabilized and non-stabilized inscriptions can be expected.

Cross dates the Ruweise arrowhead,¹⁰³ Beqa^c arrowhead, Manahat sherd, Byblos cone B and spatula, Nora fragment(?) and Tekke bowl to the end of the eleventh century, a little before Aḥiram's sarcophagus. The scripts of these inscriptions, however (apart from the Nora fragment and Tekke bowl), are so close to that of Aḥiram's sarcophagus that it would be preferable to date them all together around 1000 B.C., if this indeed is the date of Aḥiram's burial. Cross (1967, 22*), on the basis of *yod*, arranges the inscriptions in the following order: Ruweise and Rapa, Gerba^cal, the spatula and Aḥiram. It is difficult to discern any line of development in these *yods*, which are all very similar. If any differences do exist between the various examples, they would be between the Rapa, spatula and Aḥiram examples on the one hand, and the Gerba^cal and Ruweise specimens on the other (see table 5). In any case, the variations are so small (and accidental?) as to be of no significance. Indeed, Cross' final order (1967, 23*) is: Rapa, Gerba^cal, Ruweise, Beqa^c, spatula, Aḥiram. The script of the "king of Amurru" and 'd^c arrowheads resembles that of the early Phoenician inscriptions, including Aḥiram's sarcophagus. According to Starcky (1982, note 8) there is no pupil in the ^cayin of the "king of Amurru" arrowhead, and

103. Mazar (1964, note 15) notes that the script of the el-Khadr arrowheads is very close to that of the Ruweise arrowhead, lowering the date of the former by many decades compared with Cross' dating. On the possible lowering of the date of the el-Khadr arrowheads to the second half of the eleventh century, see also above and section 6.3.

the photograph is misleading on this point. The only possible reason for assigning this arrowhead an early date remains its straight *lamed*, which is similar to the examples on the Gerba^cal and ^cAbdoniya arrowheads.

Several letters on the ^cAzarba^cal arrowhead are more advanced than their counterparts on Ahiram's sarcophagus: the *dalet* with the beginnings of a leg, the low *zayin*, the developed *lamed* and the elegant *nun* with a leg (the beginnings of the leg can be seen as early as Ahiram's sarcophagus). In fact, most of the more and the less advanced forms were used interchangeably at this period. As far as the Tekke bowl is concerned, we will have to await its collation before it can be verified whether it bears an ^cayin, and whether the ^cayin has a pupil. If this turns out to be the case, it would lend some support to Cross' assignation of the inscription to the eleventh century. Meanwhile, the shapes of the clear letters point to an eleventh–tenth century time span, and the archaeological context (see section 6.3) might narrow this down to the late tenth century.

I have no doubt that Cross' eleventh-century date (1974) for the Nora fragment is too high; if palaeography is not misleading here, the fragment should be dated to the beginning of the ninth century or slightly earlier, as has been maintained for years, and reaffirmed by Röllig (1982). Most of the letters have parallels on the well-known Nora stone. The "box-shaped" *het* on the Nora fragment looks archaic, but a similar example is known from the Gezer calendar, which is usually dated to the end of the tenth century (there is no *het* on the Nora stone). In the eleventh–tenth centuries, both the box-shaped and the slanting, cursive forms were used. If the box-shaped *het* was employed up to the beginning of the ninth century, it would be quite reasonable to date the Nora fragment to the same time as the Nora stone, or alternatively, to assume that the fragment was slightly earlier. In any event, the dating of the two Nora inscriptions and the Gezer calendar is based solely on the letters' forms, which are very similar.

The relationship between the Tekke bowl and the Nora fragment is interesting. The bowl's legless *kaf* is no doubt the more archaic. However, there is evidence which suggests that the forms with and without leg were used side by side at an earlier period (see chapter 5), and it may be possible to infer this for the period in question too. The letters' forms certainly do not imply a long gap between the two texts. The *kaf* and *pe* from the Nora fragment are more developed than their parallels on Ahiram's sarcophagus.

The combination of the three letter forms on the Revadim seal is possible between the eleventh century (in all likelihood not from its beginning) and the end of the ninth or slightly later, a time span of 250–300 years. The seal is in any case later than the el-Khaḍr arrowheads, because of its developed *lamed* (the *alep* and *bet* have parallels in earlier texts too). The *alep* sets the lower chronological boundary for the Revadim seal at about 800 B.C. The *lamed*, and to a lesser extent the *bet*, appear later too. The seal legend has a wide chronological range, largely because of the small number of its letters (on a possible reduction of this range on the basis of criteria other than palaeographical, see section 6.3), but a twelfth-century date is out of the question because of the *lamed* – unless the el-Khaḍr arrowheads and the following inscriptions should also be dated to the twelfth century.

To summarize, the ^cAzarba^cal inscription is probably more advanced than Aḥiram's sarcophagus; the Nora fragment is more advanced than the Aḥiram and Tekke texts. The remaining palaeographic relationships between the Aḥiram, ^cAzarba^cal, Tekke, Nora and Revadim inscriptions are unclear. I wish once again to emphasize the problems inherent in relying exclusively on palaeographic development for dating the Proto-Canaanite and early Phoenician inscriptions. It is quite possible that more and less advanced forms were used simultaneously, as illustrated by those which appear at the short-lived site of Kuntillet ^cAjrud, or even in a single inscription like the *bets* on Aḥiram's sarcophagus. Absolute dates which are based solely on palaeographic criteria should be treated with scepticism, if only because of the paucity of the evidence. Only when the palaeographic evidence is corroborated by historical, linguistic or archaeological data can it serve as a firm basis for dating (see the following section).

6.3 The Proto-Canaanite inscriptions, archaeological context and absolute dating

If the date of the Proto-Sinaitic inscriptions should indeed be towards the end of the Middle Kingdom (about 1800 B.C.), the earliest Proto-Canaanite texts could be assigned a date slightly later than this. Only one comes from a secure archaeological context: The Lachish dagger was found in an eighteenth or seventeenth-century tomb. The Nagila sherd comes from a building whose date is probably at the end of the Middle Bronze/beginning of the Late Bronze period (but see section 6.2). The Nagila sherd may thus be later than the Lachish dagger. The Gezer sherd was found on the surface, and its typologically-determined date – from the MBII to Iron Age I – is of no assistance here. The Gezer text could thus be either the earliest Proto-Canaanite inscription known, or else from the fourteenth century – a later date is ruled out by palaeographical considerations. Both dates and the time span between them are entirely possible: the script resembles that of the Proto-Sinaitic inscriptions, and it remains to be discovered how long before the thirteenth century the *bet* with leg developed and the pictographic *kap* disappeared (see chapter 5 and section 6.2).

The Shechem plaque almost certainly dates from the seventeenth century (and in any event its iconography precludes a date later than the sixteenth-fifteenth centuries), but its inscription may be a later addition. If the Tell el-Ḥesi sherd is a fragment of a MBII-LB carinated bowl and not of an Assyrian Palace bowl, it should be dated to the eighteenth-fourteenth centuries (its fine clay and shape do not seem to carry on into the thirteenth century). The letter forms fit in with this chronological range, but cannot narrow it down.

Among others, the Raddana, Lachish and ^cIzbet Ṣarṭah inscriptions date from the late LB and Iron Age I. As stated above, the script of the Raddana handle seems the most archaic of this group, but it is difficult to determine from the published data whether its archaeological context would confirm this. Even if the handle originated in the earliest of the site's two phases, this does not solve the problem. From the published plan and photograph (Cooley 1975, figs. 2 and 6; Callaway 1983, 46–47) it can be seen that among the buildings at Khirbet Raddana is a well-built three room house with a row of squared monolithic pillars, from the first stage of settlement. Such sophisticated architectural features do not appear in the earliest stages of

other sites in the Highlands, which implies that Khirbet Raddana may be later than the beginnings of Israelite Shiloh and ⁶Izbet Sartah Stratum III (Finkelstein 1986, 123). Unfortunately, most of the finds from Raddana have not yet been published, but if in the meantime the advanced building is regarded as significant, the date of the inscribed handle would have to be lowered to sometime in the twelfth century. In this case, the Lachish inscriptions (see below) would be contemporary with or earlier than the handle, which implies that the palaeographic "seniority" of the Raddana text does not stand up against the test of absolute chronology. To assign it a date at the beginning of the eleventh century, on the other hand, would entail too vast a palaeographic shake-up. Any final decision regarding this text can only be made (if at all) after the excavation's finds have been published.

The Lachish ewer was found in Stage III of the Fosse Temple, and the Lachish bowl fragment has been assigned to Stratum VI. The latter's archaic letters imply it must be as early as possible in Stratum VI, which has been dated by Ussishkin to the first half of the twelfth century. If its stratigraphic attribution were not so certain, the inscription could be given an earlier date. Fosse Temple III is contemporary with Stratum VII of the tell, dating from the thirteenth century (Ussishkin 1983, 219) and this at least provides the ewer's *terminus ad quem*.

The "old" Lachish bowl was found in Tomb 527, which was dated by Tufnell to the same time as Stage II or III of the Fosse Temple. Its script is slightly more advanced in comparison to that of the ewer and the bowl fragment, so that its attribution to the time of Stratum VI now seems more likely. It should be remembered that Tufnell thought Fosse Temple III (see above) was contemporary with Stratum VI.

The latest possible date for the Hazor sherd is Stratum 1A of the lower city (probably the beginning of the thirteenth century – see chapter 4.2.1). For the earliest possible date, see section 6.2.

The relationship of the ⁶Izbet Sartah ostrakon to the Raddana handle is particularly intriguing. Both were found in places generally regarded as Israelite sites of the Settlement period. The ostrakon's context is not clear enough to determine to which stratum, between the thirteenth and the tenth centuries, it belonged; however, on the basis of the palaeographic data, it can almost certainly be attributed to Stratum III, whose maximum time span extends from the end of the thirteenth to the middle of the eleventh century (Finkelstein 1986, 198–200; cf. also Lemaire 1985, 15). The pottery sherd itself cannot provide any independent typological date. So poor is our knowledge of absolute dates (see the discussion of *alep* and *het* in chapter 5) that if the common "Settlement" origin for the Raddana and ⁶Izbet Sartah inscriptions were not known, the distance between them would have been set on palaeographic grounds anywhere between a few years and half a millennium. Even if the date of the Raddana handle were certain, it would be impossible to determine whether the ⁶Izbet Sartah ostrakon postdated it by several decades or only a few years.

The Qubur el-Walaida bowl was found in a pit with early Philistine sherds, usually dated to the twelfth century, but cannot be ruled out as intrusive, originating in a late LB level (Rudolf Cohen, personal communication, October 1981). The bowl is of a type known from the end of

the Bronze Age and the beginning of the Iron Age. The inscription's date could thus be in the thirteenth-twelfth centuries, though the twelfth seems more likely. It is almost certain that this is also the date of the ^cIzbet Sartah ostrakon. The possibility of an early eleventh-century date for both these inscriptions is not completely out of the question, however (see below).

Most of the inscriptions from this time onwards cannot be dated by archaeological context or typology, and any shift in their dating could affect that of the earlier texts. It is quite understandable that Cross would like to spread them as evenly as possible over the twelfth and eleventh centuries to fill in the general picture up to the time of Ahiram's sarcophagus. However, it would be equally possible to date the "king of Amurru", Ruweise and Beqa^c arrowheads, Manahat sherd and Byblos Cone B and spatula to about the same time as Ahiram's sarcophagus on the grounds of the similarity of the script. On the Nora fragment, Tekke bowl and Revadim seal, which are almost certainly later, see below and section 4.2.2. There is no archaeological or palaeographic reason (see section 6.2) to prevent us dating the el-Khadr and Rapa arrowheads, Byblos Cone A and the Gerba^cal, ^cAbdoniya and yt' arrowheads close together in the eleventh century. If, as suggested in section 6.2, their script is close to that of the early Phoenician inscriptions, the el-Khadr arrowheads and the other texts could be brought down to the second half of the eleventh century, in which case the date of the ^cIzbet Sartah ostrakon (and of the Qubur el-Walaida bowl?) could also be lowered to the beginning of that century. If this is correct, Mazar's suggestion for the date of the el-Khadr arrowheads would seem to be possible (see note 103). In fact, however, the converse is equally likely: the early Phoenician inscriptions could cover the entire eleventh century and extend as far back as the end of the twelfth century, while the date of the el-Khadr, Rapa and other arrowheads could be raised to the second half of the twelfth century, with the earlier inscriptions being redated accordingly.

The most important inference to be drawn from this sketch of the situation, which has sometimes deliberately been taken to almost absurd lengths, is that it is quite impossible to measure the pace of the letters' development in terms of absolute time on the basis of palaeography alone. In the present state of our knowledge, the range of error, even at the end of the second millennium, is 100 years and more. This does not mean that Cross' chronological scheme is impossible,¹⁰⁴ but that it is only one of several possibilities, none of which seems preferable to the others. I cannot thus agree with Cross' statement (1980, note 19): "...the Phoenician typological sequence is now intricately and precisely fixed *with absolute dates* [emphasis mine, B.S.] in the Near Eastern chronology of the 12th to 10th centuries". Aharoni's comment (*Arad Inscriptions*, 128) on the Arad texts and the comparative material is no less, and indeed perhaps more, appropriate to the Proto-Canaanite texts: "The typological distinctions accepted in the study of [Hebrew] paleography are rooted only in a general way in definite dates, and these traditions cannot be accepted as proof" (see also the end of section 6.2). The generally accepted date for Ahiram's sarcophagus (1000 B.C), which is beyond the scope of this study, should be regarded in this light, as should the

104. Some of Cross' dates are untenable in any case. For instance, the Revadim seal was dated 100-400 years too early, and the Nora fragment was also given too high a date.

other inscriptions earlier than Mesha's stele. Wallenfels (1983) suggests a complete reorganization of the dating scheme of the early Phoenician texts. And though the lowering of the date of Aḥiram's text to the seventh century (*ibid.*, 111) and several of Wallenfels' other suggestions are hardly convincing, there is definitely good reason for a re-evaluation of these inscriptions, which are conventionally dated to the tenth–ninth centuries. In any event, my use of the date 1000 B.C. for Aḥiram's sarcophagus has been purely for the sake of convenience. If future research should elicit a different date, this would have some effect on the dates given here for the later Proto-Canaanite and earlier Phoenician inscriptions (from the el-Khadr arrowheads onwards). I say "some effect" since, unlike the earlier texts, many of which are dated by means of their archaeological context, these dates are approximate anyway.

Cross suggests dating the Revadim seal to the twelfth century and the Tekke bowl and Nora fragment to the eleventh. The latter, which can be dated by palaeographic means only, will not be discussed here (see section 6.2). The Tekke bowl's script has parallels from the eleventh–tenth centuries, and, according to Coldstream, its archaeological context belongs to the early ninth century. If the inscription was written in the lifetime of the person buried in the tomb from which it came, the bowl would be from the late tenth century. An earlier date is possible, but less likely (see the discussion of the bowl in section 4.2.2). The three letters of the Revadim seal date from the eleventh, tenth or ninth centuries. The scene of the seal can be dated for stylistic reasons to the tenth (perhaps late tenth) or ninth century. In section 4.2.2 a date in the ninth century is suggested.

So far we have discussed only those inscriptions found in dated contexts or written on artefacts whose typology is of chronological significance. In the table presented below, all the inscriptions are listed in chronological order, combining the archaeological and palaeographic data. The horizontal lines mark the possible chronological range of each inscription, and a question mark indicates that the chronological span may be even wider. The vertical arrangement represents the relative (palaeographical) relationships. Inscriptions with a wide relative range have generally been arranged according to the lowest date possible (in the vertical order). The position of an inscription in the list cannot always define its precise chronological relationships (insofar as this is possible at all), and the table should be considered in the light of chapters 4 and 5.

1800	1700	1600	1500	1400	1300	1200	1100	1000
Proto-Sinaitic
. <u>Lachish dagger</u>
. <u>Nagila sherd</u> ?
. <u>Gezer sherd</u>
. <u>?Shechem plaque?</u>
.	Raddana	.	.
.	<u>handle</u>	.	.
.	Lachish	.	.	.
.	<u>?ewer</u>	.	.	.
. <u>Lachish sherd No. 7</u>
.	Lachish	.	.
.	bowl	.	.
.	<u>?frag.</u>	.	.
.	Lachish	.	.
.	<u>bowl</u>	.	.
.	Beth Shemesh	.	.	.
.	<u>ostracon.</u>	.	.	.
.	‘Izbet	.	.	.
.	Şarṭah	.	.	.
.	<u>ostracon</u>	.	.	.
.	<u>? Rehov sherd</u> ?	.	.	.
.	Hazor	.	.	.
.	<u>?sherd</u>	.	.	.
.	Qubur el-	.	.
.	Walaïda	.	.
.	<u>?bowl</u> ?	.	.
.	Zarephath	.	.
.	<u>?sherd</u> ?	.	.
.	el-Khaḍr	.	.
.	<u>arrowheads</u>	.	.
.	Rapa arrowhead,	.	.
.	<u>Byblos cone A</u>	.	.
.	Gerba‘al	.	.
.	<u>arrowhead</u>	.	.
.	yf' and	.	.
.	‘Abdoniya	.	.
.	<u>arrowheads</u>	.	.
.	early Phoeni-	.	.
.	cian texts	.	.
.	(section 4.2.2	.	.
.	?	.	.
.	Aḥiram	.	.
.	? .. ?	.	.
.	‘Azarba‘al	.	.
.	<u>arrowhead</u>	.	.
.	<u>Tekke bowl</u>	.	.
.	Nora	.	.
.	fragment	.	.
.	Revadim	.	.
.	<u>seal</u>	.	.

The Proto-Canaanite inscriptions can be divided into three groups, though this classification reflects no more than the random nature of their discovery; obviously the line of development must have been continuous. The first group dates from the Middle Bronze Age and the beginning of the Late Bronze. The second group dates from the thirteenth–twelfth centuries, and includes the Raddana handle, Lachish ewer and bowl, Beth Shemesh and ^cIzbet Šarṭah ostraca, Qubur el-Walaida bowl etc. The transition to linear letters, typified by the coiled *lamed*, took place within this group. As far as is known, only the 22-letter alphabet was in use at this stage (though cf. Cross' opinion of the Lachish ewer's fourth letter, section 4.2.1). The third group probably starts with the el-Khadr arrowheads. These inscriptions, of the twelfth–eleventh (or just the eleventh) centuries, retain only a few of the pictographic features though the direction of writing had not yet stabilized. The next inscriptions, from the (late?) eleventh and tenth centuries, may be labelled **early Phoenician**. Perhaps the only pictographic element they retain is the rare use of the ^c*ayin* with pupil.

Unfortunately we have no evidence from the fifteenth–fourteenth centuries – the period when the transition from pictographic to linear forms started – unless we assign the Gezer sherd (and the Nagila sherd?) on the one hand, and the Shechem plaque and Lachish 7, Rehov and Hazor sherds on the other, to this time. This gap in our knowledge is entirely fortuitous¹⁰⁵ and we can only hope that future discoveries will bridge it.

105. Several scholars have tried to explain this gap. S. Yeivin, for instance (most recently 1970, 28) suggested that the Patriarchs took the alphabet with them to Egypt, whence it was brought back to Palestine by the Israelites at the time of the Conquest.

CHAPTER 7: THE ALPHABET IN THE SECOND MILLENNIUM B.C.¹⁰⁶

7.1 Summary

7.1.1 History of research

IN 1905, Petrie ushered in a new era in the research into the development of writing with his discovery in Sinai of second-millennium alphabetic inscriptions, later labelled "Proto-Sinaitic". Gardiner (1916) laid the basis for the study of this alphabet with his breakthrough identification the word *b^clt*. His conclusions – that the script was alphabetic, consonantal, and was the source of the Phoenician alphabet – still constitute the foundations of our knowledge. The borrowing of most of the letter forms from Egyptian hieroglyphs on an acrophonic basis was of no particular importance in itself – compare the cuneiform alphabet of Ugarit, in which most of the letter forms were devised arbitrarily. Nevertheless, acrophony was of great assistance in identifying the phonetic values of the Proto-Sinaitic letters. Gardiner assigned the texts to the time of the Twelfth Dynasty, and they were later dated to Dynasty XVIII. For discussion of their date, see sections 6.1 and 7.1.3. Between the two World Wars, similar inscriptions were found in Palestine and Lebanon, also from the second millennium, which were designated "Proto-Canaanite". Eleventh-tenth-century Phoenician inscriptions were also found, mainly at Byblos. By the end of the 1940s, a general scheme had emerged of the development of the alphabet from the Proto-Sinaitic inscriptions through the Proto-Canaanite texts to the Phoenician script (see chapter 2).

In 1954, Milik and Cross published the texts on the el-Khadr arrowheads, followed by Cross's publication (1954) of a systematic examination of the palaeography of the Proto-Canaanite script. From the scraps of information at his disposal, Cross constructed a typological scheme which superseded all its predecessors and updated it from time to time. Many intractable problems still remain, however, especially as regards absolute chronology (see sections 6.3 and 7.1.4).

7.1.2 Material

Today we know of about thirty Proto-Sinaitic inscriptions, regarded as a homogeneous group, and of about twenty-five Proto-Canaanite texts, ranging in date from the Middle Bronze II period to Iron Age I. The surviving Proto-Canaanite inscriptions may be conveniently divided into three groups: the first is written in pictographic letters and dates from the late Middle Bronze to the early Late Bronze Age. It includes the Lachish dagger, Nagila sherd(?) and Gezer sherd. None of these has been deciphered, and their very identification as Proto-Canaanite is not universally accepted. They seem to consist solely of ownership or dedicatory texts. The second and biggest group dates from the thirteenth-twelfth (and early eleventh?) centuries, and includes the Lachish ewer and bowl, Beth Sheanesh and 'Izbet Sartah ostraca, Qubur el-Walaida bowl etc. By this stage the letters have already become fairly linear,

106. Most of the bibliographical references are not repeated in this chapter.

although pictographic elements still linger on. All the letters have been identified and several of the inscriptions have been deciphered, at least partially. It is possible that this alphabet is already the 22-letter version; at any rate, none of the additional letters present in the original alphabet have been spotted (see section 5.1). This is in contrast to the situation at Ugarit, where the long alphabet (27 + 3 letters) continued in use till the destruction of that city in the early twelfth century. Besides dedicatory texts (Lachish), there is an ostrakon, perhaps administrative in nature, from Beth Shemesh and a writing exercise from ^cIzbet Šarḥah. The script of the latest group, dating from the eleventh (and perhaps also the late twelfth) century, is close to that of the early Phoenician texts, and only differs from them in its lack of stabilization. This group includes the arrowheads from el-Khaḍr, and those of Rapa, ^cAbdoniya, ^yt' and Gerba^cal and Byblos cone A.

There appears to be a gap in the sequence of inscriptions at about the third quarter of the second millennium, though this must be due solely to the random nature of discovery. In the past it was thought that this lacuna was filled by the Lachish prism text and the St. Louis seal, but it has since become evident that the first of these is Egyptian, and the other is a forgery (see section 4.2.3). The Shechem plaque may belong to the period in question, as may one or two of the fragmentary Proto-Canaanite inscriptions, such as Lachish sherd No. 7 and the Rehov and Hazor sherds. The fourteenth-century gap is filled by the Ugarit documents (see section 7.2.3), which prove the existence of contemporary Proto-Canaanite texts.

The two letter tables – of the Proto-Sinaitic inscriptions (table 4) and the Proto-Canaanite ones (table 5) – present a complete inventory compiled for the first time. Together with the distribution map (figure 294) and the catalogue tables (tables 1 and 2) they summarize all the available evidence and some of its interpretations.

7.1.3 The Proto-Sinaitic inscriptions, results of the study

Most of the Proto-Sinaitic inscriptions were examined afresh in Sinai and Cairo especially for this study. In some cases, this has resulted in alterations to the copies made by Albright (1966) and others, principally in inscriptions 346, 349–353, 363 and 367 (the last two texts were studied from photographs). The implications of these alterations for the contents of the texts have been discussed in section 3.3.

A survey, presented in section 6.1, of the arguments favouring an early New Kingdom date for the Proto-Sinaitic inscriptions showed these arguments to be equivocal at best. The argument considered strongest – Leibovitch's attribution of the Proto-Sinaitic sphinx (Sinai 345) to Hatshepsut – is wrong. The sphinx and the block statuette (Sinai 346) have their best parallels in the late Middle Kingdom. The date of the Proto-Sinaitic inscriptions is thus open, but the statuettes and other evidence, all unfortunately circumstantial, give some preference to a late-Twelfth-Dynasty date. If so, it may be that the alphabet was born in Sinai; in other words, earlier alphabetic texts must be discovered elsewhere before it can be convincingly argued that the alphabet was *not* invented in Sinai (see section 6.1.5).

One of the most comprehensive attempts at deciphering the Proto-Sinaitic inscriptions was made by Albright (1966). However, about half of his

phonological and morphological observations are founded, to my mind, on incorrect identifications of the individual letters. Inevitably, the remaining half cannot be free of errors. Clearly, too little Proto-Sinaitic material survives to permit a reconstruction of the structure of the language, its date and exact place among Northwest Semitic languages. The Northwest Semitic affiliation itself seems secure, if only because of the association between the Proto-Sinaitic and Proto-Canaanite inscriptions.

7.1.4 The Proto-Canaanite inscriptions, results of the study

Re-examination of the Proto-Canaanite inscriptions has also led to changes in the facsimiles of many texts – the Gezer sherd, Lachish sherd no. 7, Lachish bowl fragment, Raddana handle, Beth Shemesh and ^cIzbet Sartah ostraca, Qubur el-Walaida bowl and el-Khadr arrowhead V. Another result of the reassessment is the conclusion that the identification of several letters on the Nora fragment and Tekke bowl should be suspended until the originals are re-examined (see also below). These include the ^cayin with pupil, in the light of the discrediting of the pupil on el-Khadr arrowhead V (on the ^cayin with pupil on the Fekheriye inscription see chapter 5). Though much of Cross's relative chronology has been retained, alterations made to it include, for example, extending the chronological span of the Hazor and Rehov sherds. The following are more significant for relative chronology:

1. The placing of the Raddana handle before all the thirteenth-twelfth centuries texts, though this palaeographical conclusion seems to contradict the archaeological evidence; see below.

2. The letter-forms of the Nagila sherd and Lachish ewer and bowl fragment are palaeographically very much akin.

3. The el-Khadr arrowheads have been lowered in date, because of arrowhead V, to near the Rapa and Gerba^cal arrowheads.

4. The el-Khadr arrowheads provide a *terminus post* for the Revadim seal, whose lowest (and preferable) date falls in the ninth century. The legend of the seal is too short to enable a more precise dating, but it is certainly later than the twelfth century.

5. The Nora fragment cannot belong to the eleventh century; its dating around 900 B.C. (as Röllig thinks) is as secure as an early first millennium palaeographic dating can be. This lowering of the date of the Nora fragment and perhaps of the Tekke bowl (see below) has implications for the time of the Phoenician expansion westwards (see the discussion of these two inscriptions in section 4.2.2).

It is more difficult to agree with Cross on absolute chronology: The Gezer sherd belongs to the MB II-LB II (but not late LB); a more specific date, in the MB II or later, is impossible. As to the Raddana handle, the palaeographical and archaeological data seem to contradict each other; on stratigraphical grounds the handle should date towards the end of Iron Age I. A decision might become possible when the excavation report, long overdue, is published. Dating the Lachish ewer and bowl to 1250-1220 (Cross 1967, 19*) was based on the assumption that the last LB city at Lachish was destroyed in the reign of Merneptah, and on Egyptian high chronology. If the city was destroyed under, or after, Ramesses III as is now generally accepted, this would lower the date to about 1150, according to the low chronology. The ewer, from Fosse Temple III, is contemporary with Stratum VII, whose date is in the thirteenth century, while the bowl is now dated to the thirteenth or

first half of the twelfth century – the second alternative seems preferable from the palaeographical point of view. Dating the **Hazor sherd** at about 1225 (Cross and Freedman 1971, note 7) is too precise. **Lamed**, its single significant letter, should belong to the thirteenth century as a minimum date, combining the meagre palaeographical and archaeological data.

The texts dated by Cross to the early twelfth century – the **ʿIzbet Sartah ostrakon** and **Qubur el-Walaida bowl** – should probably be assigned to the second half of this century, if not later; conversely they could be earlier, from the late thirteenth century. Available data simply do not provide the desired precision. Similarly, the **el-Khadr, Rapa, Gerba^cal, Yatō** and **ʿAbdoniya arrowheads** and **Byblos cone A** "float" within most of the eleventh century and perhaps beyond (see below). Deciding on the exact time lapse between the **ʿIzbet Sartah** and **Qubur el-Walaida** inscriptions on the one hand and the **el-Khadr arrowheads** on the other would be a matter of guesswork; twenty years and two hundred years may be defended with virtually the same arguments. Adjusting the date of one of these would inevitably necessitate altering the dates of the other. The absolute date of the **el-Khadr arrowheads** (see the discussion of **el-Khadr V** in sections 4.2.1 and 6.2) might be anywhere between the twelfth and the late eleventh century, with the mid-eleventh being my preference (for the relative dating see above).

As for the **Tekke bowl**, a late eleventh century date need not be insisted upon. The letters cannot be dated more exactly than to the eleventh-tenth centuries, and the tenth (or even early ninth) century archaeological context provides the *terminus ante*.

The scene, style and technique of the **Revadim seal** may narrow the broad time range suggested by palaeographical considerations down to the late tenth-ninth centuries. If a ninth-century date becomes possible, the seal could be placed early in the group of Northwest Semitic personal seals from Iron Age II. The seal's legend is the earliest alphabetic inscription known so far from Semitized Philistia (apart from the **Qubur el-Walaida bowl**), and its owner could even have been a Philistine.

Obviously, Cross' coherent and precise chronological scheme is much more attractive, but the poor data at hand leave such precision a desideratum. Exclusive reliance on palaeography in dating second (and even early first) millennium inscriptions is insufficient and can be misleading, as illustrated, to cite a typical example, by the first attempts to date the Aramaic version of the **Fekheriye inscription**.¹⁰⁷ Unsatisfactory though the situation may be, the present shortcomings cannot be overlooked, and expectations must be lowered accordingly. Only a combination of archaeological data (stylistic and stratigraphical) of the inscribed object and, where available, linguistic and historical information, can provide sound criteria for dating.

107. Judging from *he* and *samek*, and to a certain extent from *kap* (see chapter 5), the **Fekheriye inscription** should have been dated to the tenth-ninth centuries even before the analysis of the Akkadian text and of the statue's style. For Naveh's opinion see 1987, *passim*.

7.1.5 Origin of the alphabet, a re-examination

The order of presentation in this book runs from the earliest inscriptions, the eighteenth-century(?) Proto-Sinaitic texts, down to about 1000 B.C. This arrangement is based on the assumption that the origin of the Phoenician alphabet is indeed the Proto-Sinaitic and early Proto-Canaanite scripts. It should be possible to trace the sequence in the opposite direction too: there is a direct link back from Aḥiram's sarcophagus to the late Proto-Canaanite inscriptions, all of which have been deciphered, and from them back to the thirteenth-twelfth-century texts, some of which have been deciphered, including an abecedar (thus Millard 1979, 615). Further projection backwards is difficult both because of the gap in evidence from the fourteenth-fifteenth centuries and because the earlier inscriptions have not yet been satisfactorily deciphered. Nevertheless, those Proto-Sinaitic words which are more or less certain (*b^clt*, *rb nqbn*, *'rht?*, *'nt?*, *'n?* etc., see section 3.3.4) and the numerous Phoenician letters whose acrophonic origin is clear and which resemble Proto-Sinaitic letters, lend sufficient support to the link. The certain letters are *alep*, *bet*, *he*, *het*, *yod*, *kap*, *lamed*, *mem*, *nun*, *'ayin*, *resh*, *shin/t*, and *taw*, more than half the alphabet. The fourteenth-century gap has been filled by the Ugarit texts, and in particular by the abecedaries. The origin of the Phoenician letters in the Proto-Canaanite and Proto-Sinaitic scripts, and the borrowing of most, if not all, letter forms in the latter script from Egyptian hieroglyphs on the basis of acrophony are now seen as indubitable facts (cf. Snycer 1974, 9).

Nevertheless, some German scholars have attempted to revive the theory of a hieratic source propounded by de Rougé (1874) and others. Helck (1972) and following him Zauzich (1973, 1980) compared hieratic signs with the letters of the alphabet on the basis of formal resemblance and acrophony. Weidmüller (1974, 1979) uses a similar approach. The hieratic signs they cite are mainly from the mid-second millennium, while most of the alphabetical letters used in their comparisons come from tenth-century Phoenician inscriptions (see Snycer 1974, 6; Cross 1979, 102). In other words, these scholars treat the Phoenician letters as though they were the original alphabetical letters, and as though the inspiration for their borrowing came from Egyptian manuscripts many centuries older. In addition, they avoid confronting the generally accepted theory of the formation of the alphabet (cf. Millard 1976a, 137).

Gelb (1963, 144-146 and elsewhere) is a devotee of the theory that the letters of the Phoenician alphabet have no connection to the Proto-Sinaitic and Proto-Canaanite inscriptions and are not adopted from Egyptian hieroglyphs on an acrophonic basis, but were created arbitrarily. For a refutation of his argument, see *inter alia* Snycer 1974, 7-8, and the beginning of this section.

7.1.6 Distribution (figure 294)

The pictographic Proto-Canaanite inscriptions from the late MB-early LB come from a small area in the south of the country - Lachish, Tell Nagila(?), and Gezer. The next group of about ten texts, which appears after a gap of 200-300 years, dates from the thirteenth-twelfth centuries (before the el-Khadr arrowheads). They come from a wider area, from Zarephath in the north to Qubur el-Walaida in the south, though most of them originate in the south. Only the texts from Zarephath, Hazor and Tel

Rehov are from the north; perhaps the short cuneiform alphabet was more popular in the north (see section 7.2.3). Of twelve inscriptions in this latter script, ten are northern in origin, from **Ugarit** to **Taanach** and **Naḥal Tavor**, one is from the south (**Beth Shemesh**) and one was found in **Cyprus**. The eleventh (late twelfth?)-century Proto-Canaanite inscriptions (the **el-Khaḍr**, **Rapa**, **Gerba^cal**, **yt'** and **^cAbdoniya** arrowheads and **Byblos cone A**) and most of the early Phoenician inscriptions are from Phoenicia (except for the **el-Khaḍr** arrowheads and **Manahat** sherd). The **Tekke** bowl inscription, whatever its date may be, was probably written by a Phoenician.

The inscriptions are so few in number that it is possible that their geographical distribution is random and does not reflect reality. But if we tentatively accept this distribution as a representative sample, the following conclusions may be drawn:

1. The use of the alphabet in Palestine began in the south of the country.

2. In the thirteenth-twelfth centuries, the short cuneiform alphabet was preferred in the north, while the Proto-Canaanite alphabet was still used mostly in the south, though more widely than in the preceding centuries. The "border" between the two alphabets lay in the Jezreel Valley, though obviously this was not an impermeable barrier.

3. The cuneiform alphabet (and the Byblian pseudo-hieroglyphic script?) died out at the end of the second millennium and the Proto-Canaanite/Phoenician alphabet spread northwards.

7.1.7 Terms

As far as I know, the first to use the term "**Proto-Sinaitic**" was Albright (1926, 75), in order to distinguish between the second-millennium texts and the Nabatean rock inscriptions in Sinai which were labelled "Sinaitic". Cross and Freedman (1952, 9 and elsewhere) coined the term "**Proto-Canaanite**" as a parallel. Even though neither of these two terms is correct, they have become accepted.

In 1980, Cross proposed a new term, "**Old Canaanite**" (even used once, in 1984, 72 as the name of a period), but this is merely to trade one misnomer for another. Just as the term "**Proto-Canaanite**" implies, so to speak, that the next stage must be the "**Canaanite**", so the term "**Old Canaanite**" implies the existence at least of a "**New Canaanite**", if not of a "**Middle Canaanite**".

André Parrot long ago (1935, 418-419) suggested a logical term which never caught on - "**Proto-Phoenician**". Other possible terms could be "**Pictographic Canaanite**" (for the texts from the late MB/early LB) and "**Linear Canaanite**" (from the late LB/early Iron Age; thus Millard 1979, 615). As none of these alternatives is entirely satisfactory, I still prefer to use the old, familiar, if imprecise, terms.

In 1952 (p. 166 onwards), Gelb put forward his theory that the Greeks had invented the alphabet, since only in the Greek alphabet is every consonant and vowel represented separately. In contrast, the Phoenician script is actually syllabic since each letter represents a consonant with any vowel (or no vowel). Cross (e.g. 1967, 11*-12*) and other scholars came to the defence of the Proto-Canaanite and Phoenician scripts' status as alphabets. The undisputed facts are as follows:

1. The lack of vowel-letters in the Semitic alphabets is indeed a shortcoming, and the addition of *matres lectionis* from the early first millennium is an attempt to rectify this situation. (In Ugarit, the two vocalized *aleps* had been added as early as the fourteenth century, and limited use was made of *matres lectionis*; see Dietrich and Loretz 1983, 303; see also Sass in press).

2. The Greeks overcame this deficiency by assigning the vowels special letters. This brought the script to near perfection.

3. In the Phoenician script there is only one sign for each consonant, and the Greeks took over this writing system almost completely – the letters, their order and their names – except for some adjustments necessitated by the language and the invention of vowel letters.

The question of which of these two systems should be called alphabetical is thus mainly semantic. Millard (1976a, 137; 1979, 615), who elegantly summarized the controversy and its solution, comes to the conclusion that the Proto-Canaanite/Phoenician script should be termed "restricted syllabary", but before and after this uses the word "alphabet" to describe this script. I have also used the term "alphabet" to describe the Proto-Canaanite script. Strictly speaking, only the various Semitic consonantal scripts, which *ab initio* have *alep* and *bet*, have the right to be labelled alphabets. Another name should be sought for writing systems, such as Greek and its descendants, in which the vowels are represented by special letters. For Gelb's opinion on the origin of the Phoenician alphabet, and its refutation, see section 7.1.5.

7.2 The cuneiform alphabet and its role in the study of the Proto-Canaanite alphabet

We are concerned here with the letters – their number, order, names and forms, the source, chronology, distribution and contraction of the alphabet and the change in the direction of writing.

7.2.1 The long alphabet

The thirty letters of the long cuneiform alphabet from Ugarit, which were always written from left to right, included twenty-seven representing original Semitic consonants (with one sign for *ṣ* and *ḍ* and another for *š* and *ḥ*), and three signs which were local additions. More than ten abecedaries, the first of which was found in 1948 (Gordon 1950), demonstrate that the order of the Ugaritic letters was similar to that of today. The five letters which later disappeared (*ḏ*, *ḥ*, *ḡ*, *ṣ* and *ṭ*) were scattered among the other letters, while the three indigenous forms were grouped at the end. This shows that the Ugaritic alphabet was adapted from the Proto-Canaanite one, which at the time in question seems therefore to have contained a total of 27 letters. Some confirmation of this can be found in the sign that separates *taw* from the three extra letters in one of the abecedaries (RS 23.492; see Bordreuil 1982b, 9–10). The names of the letters were probably also taken from the Proto-Canaanite alphabet, even though there often is no link between the Proto-Canaanite pictographic form, the source of the name, and the shape of the cuneiform letter.

Cross and Lambdin (1960, and earlier bibliography quoted there) found evidence for the letter names in an Ugaritic abecedarium (RS 19.159) in which

an Akkadian sign appears beside each letter. They concluded that these signs, all monosyllabic, represented not merely the Ugaritic consonant but the first syllable of the name of the letter: *'a(lp)*, *be(t)*, *ga(ml)*, *ha(rm)* and so on. For the last-mentioned, see the reservations expressed in Sass forthcoming 1. Only 17 Akkadian signs were preserved on RS 19.159 and even some of these are problematic.

It is almost certain that the letter names in order formed sentences or rhymes that made it easier to memorize them (cf. Speiser 1951, note 6). When five letters were dropped from the alphabet in the thirteenth century, a new meaning was probably invented. On the question of the order of *het-zayin* and *pe-^cayin*, see Demsky 1977, 17–18. (On non-alphabetic acrostics from Ugarit, see Watson 1982, 267–268.)

It seems that the people who decided on the forms of the signs made it a point to choose simple and easily distinguishable cuneiform combinations. Cross (for instance 1967, 9*) thinks that none of the Ugaritic letters resembles its Proto-Canaanite counterpart, but the opposite opinion has occasionally been put forward, first by Olmstead in 1931. The forms may have been matched with Proto-Sinaitic signs, as far as this was practicable. There is a marked resemblance between such letters as *bet*, *gimel*, *h*, *he*, *waw*, *zayin*, *shin* and *^cayin* in both scripts.

7.2.2 The short alphabet

Inscriptions written in a variant of the cuneiform alphabet were first discovered in the 1930s, but their significance only became clear later (see Herdner 1948). This variant is sometimes written from right to left, and has less signs following the merging of *d-z*, *h-h*, *g-c*, *z-s* and *t-l*. Four such inscriptions were found at Ugarit and Minat el-Beida and seven have been discovered in Syria-Palestine: two at Kamid el-Loz, and one at each of the following sites – Qadesh on the Orontes, Zarephath, Taanach, Nahal Tavor and Beth Shemesh (see Virolleaud 1960; Weippert 1966; Dietrich, Loretz and Sanmartín 1974; 1975; Millard 1976b; Bordreuil 1979; Mansfeld 1986). Another inscription was found in 1981 in the excavations at Hala Sultan Tekke in Cyprus (Åström and Masson 1982; Bordreuil 1983; Puech 1983, especially 365–374).

Some letters have not been clearly identified as yet, and it is possible that the short alphabetic script is not standard in all the texts; nor is it clear whether there were 22 letters. Not all the texts have yet been satisfactorily deciphered. Greenstein (1976) has put forward the interesting suggestion that the Zarephath text is Phoenician; he has even identified a Proto-Canaanite *gimel* in it (see the discussion of this letter in chapter 5).

7.2.3 Origin, chronology and distribution

The earliest texts from Ugarit are dated by content and stratigraphical context to the mid-fourteenth century, the reign of Niqmadu, a contemporary of Shupiluliuma. It seems reasonable to suppose that the alphabet was adopted in Ugarit during the reign of this king, or a little earlier. Millard (1979, 614–615) found additional evidence for this in the seals of the kings of Ugarit. The seal of Niqmadu is in Akkadian, which would seem to indicate that the alphabet was still not universally used in Ugarit. The seal of *^cAmmittamru* (or

^cAmmiyidtamru, Bordreuil and Pardee 1984), who came to the throne in the first half of the thirteenth century, is written in the cuneiform alphabet.

There is no evidence of a formative stage; the cuneiform alphabet appears quite suddenly in its fully evolved form, including the extra letters (see below). It seems likely that the Proto-Canaanite alphabet made such a deep impression on the cuneiform-trained scribes of Ugarit that they adopted it lock, stock and barrel, with the same letter names and order (see Millard 1979, 616 and section 6.1.5). Cuneiform shapes were given to the letters in conformity with local scribal tradition, and the three extra letters were added. Two of these, 'i and 'u, were intended to fill in some of the lack of vowels, which hampered the Akkadian-trained scribes, and the third, a second *samek*, was, at least initially, used in writing foreign words. The direction of writing was uniform, from left to right as in Akkadian, and in contrast to the lack of uniformity in the Proto-Canaanite script. It is hard to imagine that very short inscriptions like the handful of Proto-Canaanite texts we possess (see section 7.1.2) inspired the adoption of the alphabet in fourteenth-century Ugarit. The scribes probably had longer Proto-Canaanite texts at their disposal, which would almost certainly have been written on papyrus or some other perishable material. Coote (1974) presents some evidence for this. He thinks that the *tet*-*cayin* confusion in RS 24.271 (*ṯwkmṯ* for *ttwkmṯ*) can only be explained by supposing that the scribe was copying a Proto-Canaanite text and mistook ☉ for ⊗.

It is thus very fortunate for us that the scribes of Ugarit chose to write their documents on clay tablets. If they too had written on papyrus, as one may assume did the scribes of southern Canaan, none of the rich literature of the Late Bronze Age would have come down to us. As Millard (1979, 616) puts it: "Ugarit provides a valuable analogy from which the nature and extent of early Canaanite alphabetic documents can be conjectured".

As for the chronology of the texts written in the short cuneiform alphabet: Hachmann (1980, 103-109), in his discussion of the date of the inscribed handle from Kamid el-Loz, comes to the conclusion that it dates from the late Middle Bronze Age! His discussion is based on stratigraphy, the ceramic assemblage found with the inscription, and the date of the dipper juglet fragment on which the text is incised. In this area of the slope of the tell (square IC15), the uppermost stratified remains date from the Middle Bronze Age. Hachmann notes that Iron Age I and later sherds were only present close to the surface. The inscription was found between two stone walls with a floor of stone slabs, on which was mudbrick debris from the superstructure of one of the two walls. The top of the mudbrick debris reached the surface. Hachmann explicitly states that the inscription was not found on the surface, but at a deeper level - the exact depth was not recorded. The few sherds found with the inscription show that there was no *in situ* assemblage here. On the evidence of the illustrations (Hachmann 1980, pl. 32) it is difficult to form any opinion about vessels Nos. 2-9, found together with the inscribed sherd, except in the cases of the two rims, Nos. 2 and 6, which seem to be of MB date. Bowl No. 11 (a crucible?) is of no chronological significance. The dipper juglet fragment with the inscription could be from any time between the MB and the Iron Age I.

Hachmann on the one hand claims that the sherd cannot possibly have worked its way down into the stratum at a later date, and on the other hand

admits that he does not know at exactly what level the inscription was found, and that it could have been very near the surface. There is also no real ceramic assemblage from the findspot, only a scattering of sherds. The ceramic discussion consists merely of a description of the sherds and a few parallels, drawn from the same site.

In conclusion Hachmann writes (p. 106): "It is thus possible to state with certainty that the inscription belongs to a late phase of the Middle Bronze Age". Hachmann's arrival at such an extreme conclusion on the basis of his excavation seems to demonstrate that there is some fundamental error in the interpretation of the excavation. The second cuneiform alphabetic inscription from Kamid el-Loz has been dated by Mansfeld (1983, 46) to the thirteenth-twelfth centuries on stratigraphical grounds.

The texts written in the short alphabet discovered at Ugarit and Minat el-Beida are obviously no later than the destruction of the city, at the end of the Late Bronze Age. The archaeological dates of the other inscriptions in this script are as follows: Qadesh - Late Bronze Age; Kamid el-Loz - see above; Zarephath - unknown; Taanach - twelfth century; Nahal Tavor - unknown; Beth Shemesh - unknown; Hala Sultan Tekke - early twelfth century. The scanty evidence available thus indicates that the short alphabet came into use in the thirteenth and continued into the twelfth century.

The short cuneiform alphabet seems to have developed outside Ugarit, while within the city the long alphabet persisted up to the city's destruction. Decisive proof of this comes from the "tablettes du four" which date from the day Ugarit was destroyed, and which are all written in the long alphabet. There are very few variations in the letters of the long alphabet (see for instance Herdner 1978, 64).

Two of the four texts in the short alphabet from Ugarit were not written on clay tablets (RS 6.411 is inscribed on a broad handle, like the Zarephath inscription; RS 9.496 was written on a votive clay nail, like the votive clay axe from Beth Shemesh). This situation is very unusual at Ugarit, and reinforces the supposition that the texts in the short alphabet came from outside the city. If it was not the conservative scribes of Ugarit, then who abbreviated the cuneiform alphabet? No particular place can be singled out, but it seems that somewhere in Syria or northern Palestine in the thirteenth century, the cuneiform alphabet was preferred to the Proto-Canaanite, probably because of an earlier tradition of cuneiform writing; as with the Proto-Canaanite alphabet in the south, the cuneiform alphabet was shortened in accordance with the merging of consonants in the spoken language. Should all the texts written in the short alphabet be assigned to a single centre? Their wide distribution and the supposed variations in the script (and the language?) tend to indicate that this was not the case. Herdner (1948) was the first to suggest that the short alphabet might have been a specifically Palestinian version.

7.3 The early history of the South and North Arabian alphabets

In spite of several pieces of evidence, most of which are still circumstantial, for the existence of a developed civilization in Arabia in the second millennium, it is difficult to suppose that there was a literate society in Southern Arabia before the end of the millennium. The great impetus which

the domestication of the camel as pack animal gave to the caravan trade at about the end of the second millennium, and the wealth which resulted from this, created both the need for and the conditions favourable to the adoption of a script in the (newly founded?) kingdom of Sheba. The evidence about Southern Arabia at this time and about the beginning of writing there is very scanty, and any conclusions cannot be considered final. The concept of the consonantal alphabet was learnt in Southern Arabia from the users of the Northwest Semitic alphabet(s), as demonstrated by the forms of some of the letters. Several of them closely resemble Phoenician letters of the eleventh-tenth centuries, and it is to this period that I have assigned the beginning of the South Arabian alphabet. The earliest historical evidence we possess about Southern Arabia – the state visit of the queen of Sheba to Jerusalem – also dates from the tenth century. For these and other reasons, I cannot accept Cross' theory that the fourteenth-thirteenth century Proto-Canaanite script was the source of the South Arabian script (for details see Sass forthcoming 1).

The South Arabians, like the people of Ugarit, almost certainly developed their alphabet in a carefully planned manner, so that there is no need to seek a formative phase. It is interesting to note that the order of the South Arabian alphabet is completely different from that of Northwest Semitic and Greek.

7.4 The early history of the Greek alphabet

The importance of Naveh's (1973b) thesis of an eleventh-century borrowing of the alphabet by the Greeks is unquestionable, but even the span of a full century is more precise than the reticent Near Eastern evidence permits: Semitic epigraphical considerations very similar to Naveh's imply that a tenth-ninth century borrowing is at least as plausible (Sass forthcoming 3). In providing this time-span, the contribution of northwest Semitic palaeography to the dating of the birth of the Greek alphabet is exhausted. Within this wide range, a ninth-century date seems to me the best choice at present for it fits the Greek data better. But should future developments in the Greek field require us to raise the age of the Cadmean letters, even by a century or more, Semitic palaeography will not stand in the way.

7.5 The alphabet versus other scripts

Cross (1967, 11*-12*; 1979, 111 and elsewhere) assigns a crucial role to the invention of the alphabet in the spread of literacy. In fact, this statement embodies two separate aspects: 1. The adoption of alphabetic scripts by formerly illiterate peoples; 2. The spread of literacy in the population. The first of these is undoubtedly correct. Almost all the peoples who adopted their first script since the end of the second millennium chose an alphabet, and not one of the syllabic or logographic scripts. Moreover, it was the Canaanite alphabet alone, so impressively simple and easy to use, that was adopted, with appropriate adjustments, in Ugarit, Southern Arabia and Greece, and eventually spread throughout most of the world. All alphabets are imitations or descendants of the Proto-Canaanite alphabet, and nowhere was the invention of the alphabet repeated independently (see Cross 1979, 101).

As regards Cross's second assumption, there is no doubt that the smaller number of signs in the alphabet as compared to earlier scripts made it much easier to learn (cf. Demsky 1971a, col. 392), but in spite of this, the

importance of the number of signs *per se* should not be over-estimated. The difference between mastering 22–30 alphabetic signs and 60–100 syllabic signs, for instance, is negligible from the point of view of the burden on one's memory and, in addition, there was the difficulty presented by the total absence of vowel-letters in the first centuries of the alphabet's existence. It should be remembered that there are also alphabetic scripts with dozens of letters, such as the Indian scripts or the **Ethiopic** script, which in fact have gone back to the syllabic principle.¹⁰⁸ It is true that the invention of the alphabet brought potential literacy within everyone's grasp; how much use was made of this potential in reality is another matter. Socio-cultural atmosphere on the one hand, and the invention of printing on the other played a far greater role in the spread of literacy than the complexity or simplicity of a writing system. Was not most of humanity illiterate until quite recently? Certainly the situation was not drastically different in the first millennium B.C., even in ancient Israel. (For a similar opinion, see Millard 1986, 396.) In contrast, hundreds of millions of people in China, Japan and Korea know at least two thousand Chinese characters, the minimum needed for reading a newspaper, by the age of ten. Even from Cross' (1979, 111) viewpoint it is impossible to assess the influence of the alphabet on literacy in ancient Israel, since the Israelites had no pre-alphabetic script (cf. Demsky 1971b, cols. 655–656). One can only guess the percentage of literate Israelites; even if this number had risen by the end of the period of the Monarchy (see for instance Demsky 1971b, col. 656), the connection between this fact and the adoption, many centuries earlier, of the alphabet is, if anything, indirect.

It was not my intention to question the advantages of the alphabet, though I have attempted to present this great improvement of the script in its true dimensions as I see them. The alphabet is easy to learn and to use, and for this reason it has been almost universally adopted. Nevertheless, the earlier writing systems were no less capable of recording their languages, and in this crucial aspect, the alphabet is not superior. None can deprive the Sumerians, the Elamites and the Egyptians of their primogeniture.

108. In fact, it was a system created to speed up writing – shorthand – that reintroduced syllabic and logographic elements.

TABLE 1: THE PROTO-SINAITIC INSCRIPTIONS
(All inscriptions are engraved in local sandstone)

Number	Written on	Dimensions (cm)	Origin (Serabit if not stated otherwise)	Finder and year of discovery	Present place and number	Direction of writing	lines/ columns
345	Sphinx	24 X 14 X 15	Temple	Petrie 1905	British Museum 41748	Horizontal	2
346	Block Statuette	22 X 17 X 30	Temple, entrance to Sopdu's shrine	"	Cairo JE 38268	Mixed	3+
347	Bust	7 X 8.5 X 13.5	Temple	"	Brussels E. 2428	Vertical	1
347A	"	7 X 7 X 11	"	"	Brussels E. 2429	"	1 or 2
348	Mountain rock?	The inscription 30 X 5	Wadi Maghara	Palmer 1868-9	Lost (in situ?) Palmer's Squeeze 47 in the British Museum	"	1
349	Steliform panel	32 X 24	Near entrance of Mine L	Petrie 1905	Cairo JE 52511	Horizontal	7
350	"	40 X 30	"	Petrie 1905, Harvard Expedition 1927	Cairo JE 52517-8	Vertical	4
351	"	32 X 22	"	Petrie 1905	Cairo JE 52514	Vertical (mixed?)	2 (+?)
352	"	30 X 19	"	"	Cairo JE 52510	Vertical	4

Number	Written on	Dimensions (cm)	Origin (Serabit if not stated otherwise)	Finder and year of discovery	Present place and number	Direction of writing	lines/ columns
353	Steliform panel	40 X 27	Near entrance of Mine L	Petrie 1905	Cairo JE 52513	Vertical	3
354	"	31 X 21	"	"	Cairo JE 52512	"	2
355	Frag. of steliform panel	14 X 10	"	"	Lost at site	?	?
356	"	20-13 X 23	"	Harvard Expedition 1927	Cairo JE 52515	Vertical	2
357	Mine rock	length of lines 71, 62	Mine L	"	<u>in situ</u>	Mixed	2
358	"	The inscription 27 X 18	Mine M	"	"	Vertical or mixed	2+
359	Frag. of plaque	15 X 19	Near entrance of Mine L?	Hjelt 1928	Cairo JE 52516	Vertical	1
360	Stele	45 X 33	Tumulus, 150 m NE of Mine K	Joint Expedition 1930	Cairo JE 53816	"	1
361	Mine rock	The inscription 28 X 39	Near entrance of Mine N	"	Cairo JE 53817	"	4
362	Frag. of plaque	15 X 14	Tumulus above Mine L	"	Cairo JE 53819	"	1
363	Plaque	17 X 14	Tumulus, 50 m S of Mine L	"	Cairo JE 53820	"	4
364	"	14 X 12	Dump in front	"	Cairo	"	1

Number	Written on	Dimensions (cm)	Origin (Serabit if not stated otherwise)	Finder and year of discovery	Present place and number	Direction of writing	lines/ columns
365	Plaque	15 X 12	"Camp of the Egyptians", on the ground	Joint Expedition 1930	Cairo JE 53822	A. Vertical B. Mixed	2 or 3 2
367	Steliform panel	26 X 14	Tumulus, 150 m S of Mine L	"	Cairo JE 53815	Vertical	1
374	Plaque (Stele?)	19 X 12	Dump in Mine M	Joint Expedition 1935	Cairo JE 65466	"	4
375	Plaque	Now 25 X 25	"	"	Cairo JE 65467	"	4
376	Mountain rock	The inscription 18 X 20	Bir en-Nasb Saddle	Gerster 1959	<u>in situ</u>	"	4
377	Steliform panel on mountain rock	Reconstructed panel 40 X 27	"	(Petrie 1905), Gerster 1959	<u>in situ</u>	Vertical?	2? (+?)
378	Panel fragment (steliform?)	19 X 15	Dump in Mine L	Beit-Arieh 1978	Jerusalem, Ex Sinai Arch. Staff Officer 79.3	Vertical	1
379	Mine rock	The inscription 18 X 11	Entrance of mine, 50 m SE of point F	Sass 1977	<u>in situ</u>	"	1
380	Mine rock	The inscription 22 X 11	"	"	"	Mixed	2 or 3

Miscellaneous

Number	Written on	Dimensions (cm)	Origin (Serabit if not stated otherwise)	Finder and year of discovery	Present place and number	Remarks
46A	Steliform panel on mountain rock	Reconstructed panel about 30 X 40	Bir en-Nasb Saddle	(Petrie 1905), Sass 1978	<u>in situ</u>	Erased inscription, Egyptian or Proto-Sinaitic
366	Plaque	13 X 9	Near entrance of Mine L	Joint Expedition 1930	Cairo JE 53823	Perhaps remnants of inscription, perhaps Proto-Sinaitic
368	Stele	31 X 19	Tumulus, c. 75 m S of Mine L	"	Cairo JE 53818	Apparently Proto-Sinaitic
369	Block statuette	20 X 22 X 53	Temple, S of Stele 90	"	Cairo JE 53833	Egyptian inscription
370	Plaque (Stele?)	21 X 14	S of Mine L (in a tumulus?)	"	Cairo JE 53825	Unidentified marks
371	Plaque	27 X 18	Tumulus, 150 m NE of Mine K	"	Cairo JE 53824	Bird and unidentified signs
372A	"	18 X 14	Tumulus S of Mine L	"	Cairo JE 53826	Unidentified sign
372B	"	11 X 8	"	"	Cairo JE 53828	Unidentified sign
373	Mine rock	The stone now 52 X 30	Entrance to extension of Mine L	"	Cairo JE 53830	Unidentified marks, not Proto-Sinaitic
373A	Plaque	31 X 18	E of Mine A	"	Cairo JE 53832	Apparently natural scratches

Number	Written on	Dimensions (cm)	Origin (Serabit if not stated otherwise)	Finder and year of discovery	Present place and number	Remarks
373B	Mine rock	The inscription 20 X 7	Entrance of Mine L	"	lost (<u>in situ</u> ?)	Proto-Sinaitic?
373C	Plaque	11 X 11	With 367	"	Cairo JE 53829	Not an inscription (natural scratches?)
375A	Plaque (Stele?)	17 X 13	Dump in Mine M	Joint Expedition 1935	Cairo or Harvard or lost	Erased inscription, perhaps Proto-Sinaitic
375B	Fragment of stele?	?	"	"	"	Unidentified sign, perhaps Proto-Sinaitic
375C	Plaque (Stele?)	22 X 16	Tumulus above Mine M	"	"	Unidentified signs
375D	Plaque	?	Sinai?	?	?	"
380A	Mountain rock	?	Rod el- ^W Air	Kovalski 1978	<u>in situ</u>	Apparently modern scratches

TABLE 2: THE PROTO-CANAANITE AND EARLY PHOENICIAN INSCRIPTIONS

Date	Item	Material and dimensions (cm)	Origin and year of discovery	Collection and number	Inscription		
					direction	Method	Transcription
MBIIB (18-17th centuries)	Lachish dagger	Bronze, 21 X 4.5	Excavations by Starkey 1934, Tomb 1502	IDAM 34.2791	↓	Incised	xrñx
17-15th centuries?	Nagila sherd (jug fragment)	Pottery, 6 X 5	Excavations by Amiran and Eitan 1963, Area A	IDAM 66-1698	<---?	Incised before firing]ñ[/]nhwý.y[
MBII-LBII	Gezer sherd (stand fragment?)	Pottery, 7 X 5	Dumps of Macalister's excavations, 1929	IDAM 54.1	?	Incised before firing	?]kxb[?
LB?	Shechem plaque (relief fragment)	Limestone, 8 X 5	German Excavations 1934	IDAM 38.1201	--->	Incised]bxxxtt ⁱ xx
Late 13th-12th cent.	Raddana handle (of jar)	Pottery, 11 X 4	Excavations by Callaway 1969, Settlement site	Judea & Samaria Arch. staff officer 5736		Incised after firing	'h1[w
13th cent.	Lachish ewer	Pottery, 45 X 28	Excavations by Starkey 1934, Fosse Temple III	IDAM 34.7738	--->	Painted in red-brown before firing	mtñ. ^y xxxt 'lt
18th-Early 12th cent.	Lachish sherd No. 7 (jug fragment?)	Pottery, 4 X 3	Excavations by Starkey 1935, Fill of Palace A	London, British Museum?	?	Painted in black (after firing?)]být[?

Date	Item	Material and dimensions (cm)	Origin and year of discovery	Collection and number	Inscription		
					direction	Method	Transcription
First half 12th cent.?	Lachish bowl fragment	Pottery, 9 X 6	Excavations by Ussishkin 1983, Area S, Stratum VI	Lachish Expedition, field No. 44048/1	--->	Painted in black after firing	?? .b h l h l ?g w ? J b x h s b x l r p q
First half 12th cent.	Lachish bowl	Pottery, 16 X 6	Excavations by Starkey 1935, Tomb 527	IDAM 38.126	<-?->	Painted in black after firing	b s l s t . y l
13th-12th centuries	Beth Shemesh ostrakon (jar fragment)	Pottery, 8 X 6.5	Excavations by Grant 1930, Residential area	IDAM I.8664	↓ ? ↗	Painted in black after firing	face A: l < z ' h l / ' b x x l / ? face B: g m < n / h n n
Late 13th-12th (early 11th?) century	Izbet Sartah ostrakon (jar fragment)	Pottery, 16 X 9	Excavations by Kochavi and Finkelstein 1976, Silo in Settlement site	IDAM 80-1	---	Incised after firing	Abecedary and additional letters
?-12th century	Tel Rehov sherd (stand fragment)	Pottery, 6 X 5	Survey by Amiran and Biran 1939, Surface	Inst. of Archaeology, Hebrew Univ. Jerusalem 3432	↓ or ↗	Incised before firing	l m x l / l s < l / l < m l / l x l
13th?-12th (early 11th?) century	Qubur el-Walaida bowl	Pottery, 13 X 6	Excavations by R. Cohen 1979, Philistine pit	IDAM 79-567	---	Incised after firing	s m p < l . ' y ' l . s x l

Date	Item	Material and dimensions (cm)	Origin and year of discovery	Collection and number	Inscription		
					direction	Method	Transcription
13th-12th? century	Zarephath sherd	Pottery, 8 X 7	Excavations by Pritchard 1971, Industrial area	Beirut, Museum or American University	<-?->	Painted in red or black before firing]d'hx[?
?-early 13th century	Hazor sherd	Pottery 2.5 X 2.5	Excavations by Yadin 1955, Surface	Lost (formerly Inst. of Archaeology, Hebrew University)	?	Painted in dark brown before firing]lt[
12th?-11th cent. (most probably mid-11th)	el-Khaḍr arrowhead I	Bronze, 10.5 X 1.5, 13.05 g	Peasant from el-Khaḍr 1953, el-Khaḍr area	IDAM 54.1	↓	Incised & punched	hṣ ^c bdlb't
"	II	Bronze, 9.5 X 1.5	"	Harvard Semitic Museum 982.1.1		"	hṣ ^c bdlb't
"	III	"	"	Amman Museum 5137		"	hṣ ^c bdlb't
"	IV	"	el-Khaḍr area, end of the 70s	Private collection outside Israel		"	hṣ ^c bdl't
"	V	"	"	Jerusalem, Spaer collection		"	^c bdlb't/bn ^c nt

Date	Item	Material and dimensions (cm)	Origin and year of discovery	Collection and number	Inscription		
					direction	Method	Transcription
12th?-11th cent. (most probably late 11th)	Rapa arrowhead	Bronze, 11 X 1.6, 12.89 g	Bought (Lebanon?)	Beirut Museum	<---	Incised & punched	ḥṣṣṣ' / bnyḥṣ
"	Byblos cone A (cone fragment)	Pottery, 9 X 8	French Excavations 1933-1938, Obelisks Temple area	Beirut Museum 1473	<---	Incised after(?) firing	l ^c bdḥmn[?]
"	Gerba ^c al arrowhead	Bronze, 8 X 1.5, 11.66 g	Bought (Lebanon?)	Beirut Museum 5137	<---	Incised	ḥṣṣṣrb ^c l / ṣḏny
"	yf' arrowhead	Bronze, now 7.4 X 1.8	Tyre area? (bought in Tyre)	De Serres collection, Paris	<---	Incised	ḥṣṣyt' / bnzm'
"	^c bdny arrow-head	Bronze, 6.5 X 1.5, 6 g	Bought (Lebanon?)	Private collection in Lebanon	<---	Incised & punched	ḥṣ ^c bdny / ṣ ^c zb ^c l
(late?) 11th-early 10th cent.	Ruweise arrow-head	Bronze, 8.5 X 1.5	Guigues 1925, disturbed shaft tomb	Paris, Louvre AO 18849	<---	Incised	ḥṣṣ'd' / bn ^c ky
"	Beqa ^c arrow-head	Bronze, now 6.5 X 1.5, 9.03 g	Allegedly from the Lebanese Beqa ^c	Beirut Museum	<---	Incised	ḥṣṣzkrb[^c l] / bnbn ^c n[t]
"	"King of Amurru" arrow-head	Bronze, 11.3 X 1.7	Bought (Lebanon?)	Beirut Museum	<---	Incised	ḥṣṣzkrb ^c l / mlk. 'mr

Date	Item	Material and dimensions (cm)	Origin and year of discovery	Collection and number	Inscription		
					direction	Method	Transcription
(late?) 11th-early 10th cent.	'd ^c arrowhead	Bronze, 9.1 X 1.5, 13.6 g	Bought	London, British Museum, WAA 136753	<---	Incised & punched	hš' d ^c / bnb ^c l'
"	Manahat sherd (jar fragment)	Pottery, 8 X 4.5	Survey by Stager & Landgraf 1965, disturbed Burial cave near Manahat	IDAM 65-1249	<---	Incised after firing	lšdh
"	Byblos cone B (cone fragment)	Pottery, 19.5 X 7	French Excavations 1933- 1938, Obelisks Temple area	Beirut Museum 1462	<---	Incised after(?) firing	l' h' mbbd
"	Byblos Spatula	Bronze, 9.5 X 5.5	French Excavations 1926- 1932, near the surface	Beirut Museum	<---	Incised	ly. l ^c zrb ^c l / tš ^c m. šlm. sg / nšb ^c (? > t. ' mnhl / tnhl. mgštk / = lk. wmgšt / = ly
10th cent.	'Azarba'al arrowhead	Bronze, 10.4 X 2, 16.79 g	Lebanon? (bought from a collector in Damascus)	Beirut Museum 677	<---	Incised	hš. ^c zrb ^c l / bn. ' dnb ^c l
11th?-10th century	Tekke bowl	Bronze, 15 X 8.5	British Excavations near Knossos 1975-6, Tomb J, Early Proto-Geometric	Iraklion Museum BR .4346	<---	Incised	^m ksš xxbnl' xn š

Date	Item	Material and dimensions (cm)	Origin and year of discovery	Collection and number	Inscription		
					direction	Method	Transcription
c. 900	Nora fragment	Sandstone, 60 X 48	Count de la Marmora 1838, Secondary use in wall	Cagliari Museum	<---	Incised	cf. Chapter 4.2.2
10th?-9th century	Revadim seal	Hard limestone, 1.6 X 1.3 X 0.75	Chance find near Revadim 1959	IDAM 80-891	<--- impression	Engraved	l'b'

TABLE 3: ORIGIN OF THE LETTERS AND THEIR IDENTIFICATION

The letter, See table 4	Its origin		First identified by	in text	based on
	Gardiner sign	Example in Egyptian Sinai text			
<i>alep</i>	F1	53,5; 166	Gardiner 1916	Sinai, <i>passim</i>	Acrophony and similarity to Phoenician letter
<i>b</i>	O1, O6	92 S,4; 28,4	Gardiner 1916	Sinai, <i>passim</i>	Acrophony and similarity to Phoenician letter
<i>g</i>	T14	54,4	(Eisler 1919, 108); Albright 1936, 9	Beth Shemesh ostrakon	Acrophony and similarity to Phoenician letter
<i>d</i>	K1-5	53,14	Cowley 1916, 18	Sinai 346	Guess based on acrophony
<i>h</i>	A28	53,9	Sethe 1917, 444	Sinai, <i>passim</i>	Acrophony and similarity to Phoenician letter
<i>w</i>	S38, T3	92 S,1	Sayce in Cowley 1916, 19	Sinai 351	Acrophony and similarity to Phoenician letter
<i>d</i> (> <i>r</i>)	N16 etc. (Z4?)	53,2	Gardiner 1916 (<i>zayin</i>); Eisler 1919, 98-99 (<i>d</i> and <i>zayin</i>); Albright 1935, 337	Sinai, <i>passim</i>	Similarity to Phoenician letter and linguistic considerations
<i>z</i>					

The letter, See table 4	Its origin		First identified by	in text	based on
	Gardiner sign	Example in Egyptian Sinai text			
h	O31	53,1	Albright 1935, 337	Sinai 362; Beth Shemesh ostrakon	Similarity to Phoenician letter and linguistic considerations
h	V28	53,7,8	Albright 1935, 337	Sinai, <i>passim</i>	Linguistic considerations
f					
y	D36	53,1	(Kalinka 1920, 311); Cowley 1929, 204	Sinai 346	Acrophony and similarity to Phoenician letter
k	(D46)	(112 S,7)	Cowley 1916, 19	Sinai 349	Acrophony and similarity to Phoenician letter
l	V1 etc.	54,5	Bruston 1911	Sinai 346	Similarity to Phoenician letter
m	N35	53,1	Gardiner 1916	Sinai, <i>passim</i>	Acrophony and similarity to Phoenician letter
n	I10 (I9)	53,9	Gardiner 1916	Sinai, <i>passim</i>	Acrophony and similarity to Phoenician letter
s	R11?	122 E, upper?	(Gardiner 1916, 5)		
c	D4, D21	53,10	Macalister 1906	Sinai 346	Similarity to Phoenician letter
g					

The letter, See table 4	Its origin		First identified by	in text	based on
	Gardiner sign	Example in Egyptian Sinai text			
p	O38?		(Sprengling 1931, 44); Albright 1948, note 71	Sinai 357	Acrophony, similarity to Phoenician letter and linguistic considerations
𐤀, 𐤁?, 𐤂?	M16? M22?	72 upper left? 71,5 right?	Albright 1948, note 63	Sinai 352 etc.	Acrophony and remote similarity to Phoenician letter
q	?	?	Lidzbarski 1921, 51	Sinai 349 etc.	linguistic considerations
r	D1, D2	53,1,6	Gardiner 1916	Sinai, <i>passim</i>	Acrophony and similarity to Phoenician letter
𐤄	M44?	28,5?	Cowley 1929, 216	Sinai 357	linguistic considerations
𐤅	AA32 etc.		Gardiner 1916 (<i>shin</i>); Albright 1948, 14	Sinai, <i>passim</i>	Acrophony, similarity to Phoenician letter and linguistic considerations
𐤆	Z9 etc.	53,8	Macalister 1906	Sinai 346	Similarity to Phoenician letter
𐤇	F35?	48 left?		Sinai 351	

TABLE 4: THE LETTERS OF THE PHOTO-SINAITIC INSCRIPTIONS

	345	346	347	347A	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365A	365B	367	374	375	376	377	378	379	380	Total		
a																																29-32	a	
b																																36-43	b	
g?																																1	g?	
d																																	7	d
h																																	9-11	h
w																																	3-4	w
q																																13-17	q	
h																																2-4	h	
h																																	7-9	h
y																																2	y	
k																																2-5	k	
l																															30-36	l		
m																																34-36	m	
n																															32-40	n		
c																																19-26	c	
p?																																4-6	p?	
s?																																4-6	s?	
q?																																4-5	q?	
r																																13-17	r	
s?																																1	s?	
L																																25-29	L	
l																															42-44	l		
Uniden- tified																																	9+	Uniden- tified
Unclear																																	1	Unclear
Total	14-16	29-30	3	2	9-10	27	13	17	26	34	7	6-7	13-14	26	9	3	12	17	2	15-16	4	16	8	6	16	22	16	3	2	4	11	392-399	Total	

TABLE 5: THE PROTO-CANAANITE AND EARLY HEBREW LETTERS

	Proto-Sinaitic (selection)	Lachish daggar	Nagila sherd	Gezer sherd	Shechem plaque	Raddana handle	Lachish ewer	Lachish sherd No. 7	Lachish bowl fragment	Lachish bowl	Beth- Shemesh ostrakon	*Isbet Sartah ostrakon	Rehov sherd	Gubur el- Walaida bowl	Zare- phath sherd	Hazor sherd	el-Khadr arrow- head I	el-Khadr arrow- head II	el-Khadr arrow- head III	el-Khadr arrow- head IV	el-Khadr arrow- head V	Repa arrow- head	Byblos cone A	Gerbe arrow- head	al-Yr arrow- head	Edon arrow- head	Ruwase arrow- head	Begat arrow- head	*King of Amurru arrowhead	*Po arrow- head	Manabot sherd	Byblos cone B	Byblos spatula	Ahram Sarcophagus	*Azarba arrowhead	Tekke bowl	Nora (frag- ment)	Revadin seal					
a					A A	U	A				↑ n	↑ n (9)		A A	A		↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
b				□	□						↑	↑					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
g											↑	↑					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
d					A A						↑	↑ (3)					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
n											↑	↑ (2)					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
u											↑	↑					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
z (g)											↑	↑					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
h (b)											↑	↑ (4-5)					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
i											↑	↑ (3-4)					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
y											↑	↑ (1-2)					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
k											↑	↑ (2)					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
l											↑	↑					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
m											↑	↑					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
n											↑	↑ (3)					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
s											↑	↑					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
e											↑	↑ (9)					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
p											↑	↑					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
o (q, z)											↑	↑ (1)					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
q											↑	↑ (6-8)					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
r											↑	↑ (12)					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
š (t)											↑	↑ (2-4)					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
t											↑	↑ (5-6)					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
uniden- tified											↑	↑					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
unclear											↑	↑					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
word divider											↑	↑					↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑

*Main variants, see also table 6

TABLE 6: THE LETTERS OF THE ^CIZBET SARTAH OSTRACON
(Kochavi 1977, fig. 4 with modifications; see also fig. 175)

	Line 1	Line 2	Line 3	Line 4	Line 5
ʔ	ʔ ₁ ʔ ₆ ʔ ₁₀	ʔ ₇ ʔ ₁₀		ʔ ₈ ʔ ₁₉ ʔ ₂₂	ʔ
b/l	9 ₂	9 ₉ 6 ₁₅		9 ₄ 9 ₂₄ 9 ₂₇ 9 ₁₀ 9 ₁₅ 9 ₂₁	9
g/p				ʔ ₃ ʔ ₇	ʔ
d	D ₄			ʔ ₁₂	ʔ
h				E ₁₁	E
[w]					?}
ʔ	? ʔ ₅	ʔ ₆		ʔ ₆ ʔ ₂₃	ʔ
[z]				? ʔ ₁₃ ←	? ʔ
t		ʔ ₁₃ ʔ ₁₆ ʔ ₁₇			ʔ
y			? ʔ ₁		ʔ
k		ʔ ₁			ʔ
l					9
[m]					ʔ
n		ʔ ₃		ʔ ₅	ʔ
[s]					? ʔ
p					ʔ
c	ʔ ₁₁	ʔ ₄ ʔ ₁₄		ʔ ₁ ʔ ₁₆ ʔ ₁₈ ʔ ₂₀ ʔ ₂₆	ʔ
ʔ			? ʔ ₁		ʔ
q/r		? ʔ ₅	ʔ ₃ ʔ ₅ ʔ ₆	? ʔ ₂ ʔ ₁₄	ʔ ʔ
[r]				ʔ ₂₅	
ʔ	ʔ ₃	? ʔ ₁₁		? ʔ ₂₈ ? ʔ ₁₃	ʔ
t	? ʔ ₇	ʔ ₂ ʔ ₈		ʔ ₉ ʔ ₁₇	ʔ
?	9,8	12	4,2		

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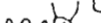
FIGURES

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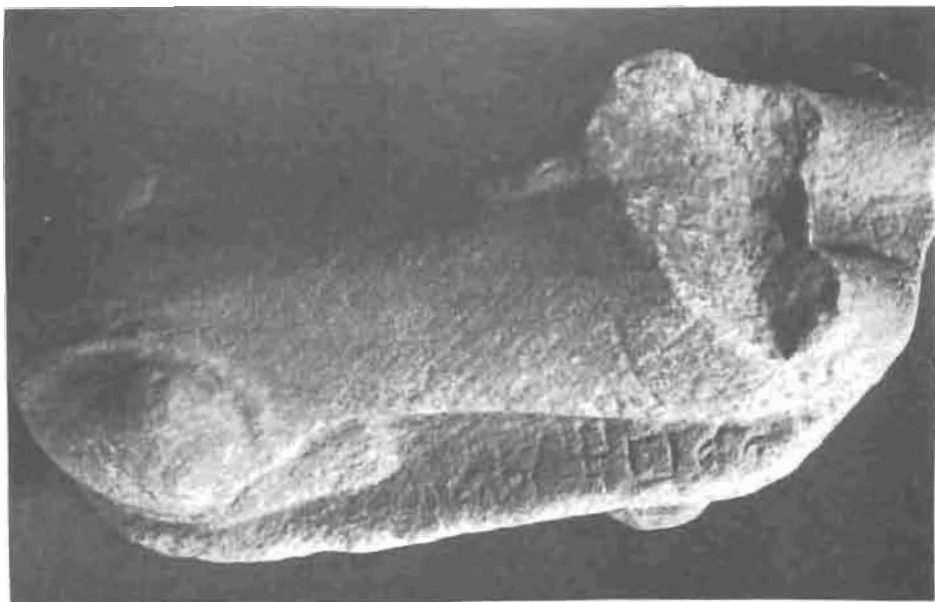
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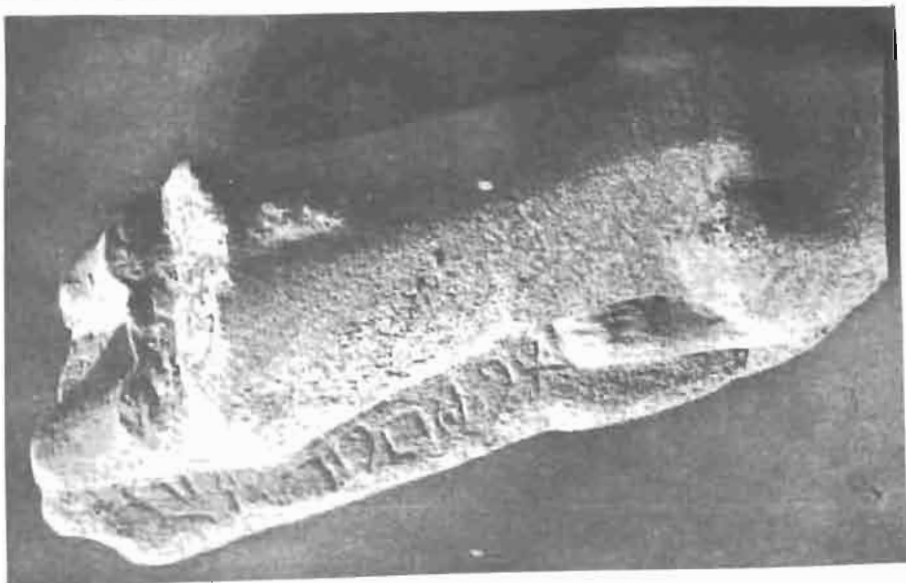
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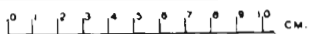
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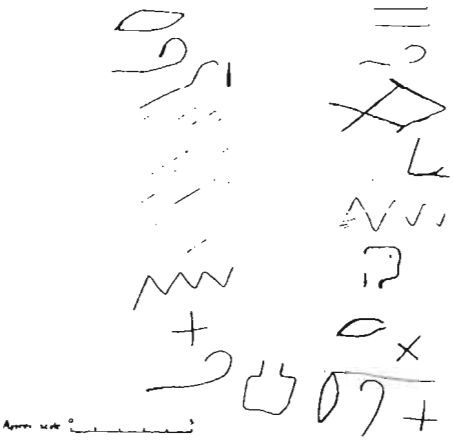


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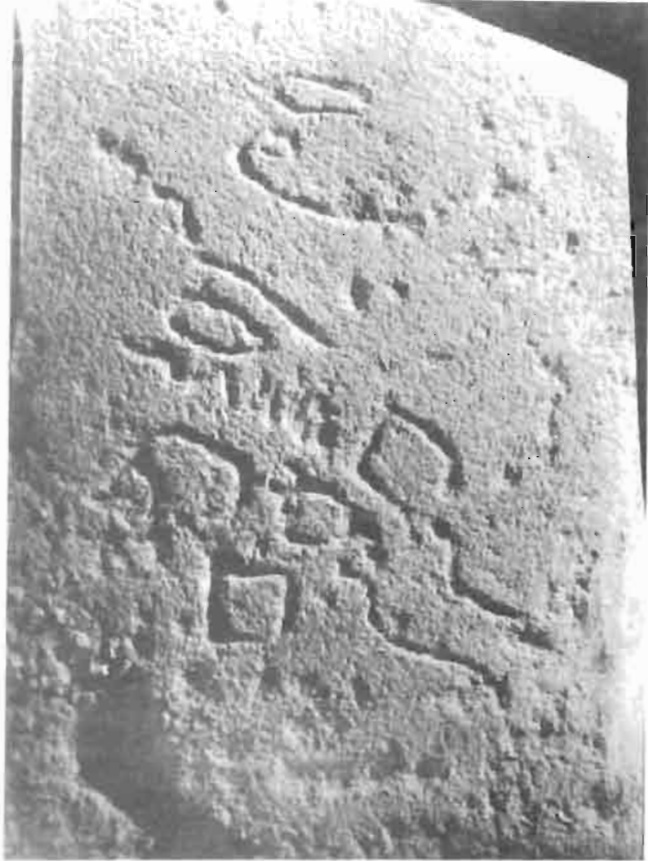
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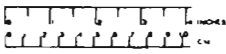
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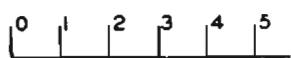
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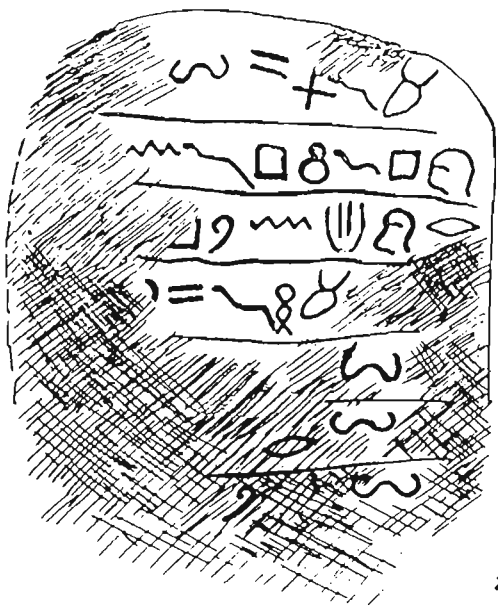
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29. Sinai 349 *in situ* (Petrie's photograph, by courtesy of the EES)



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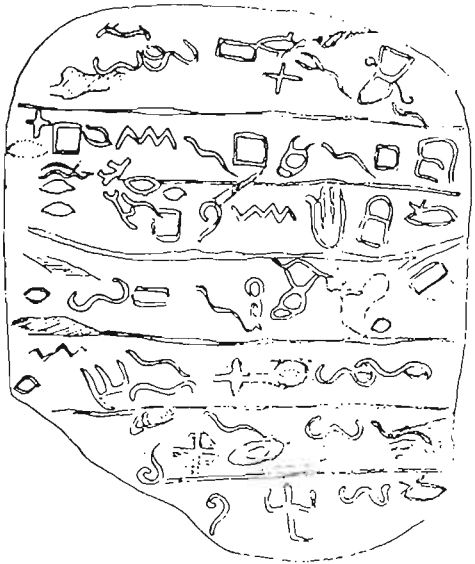
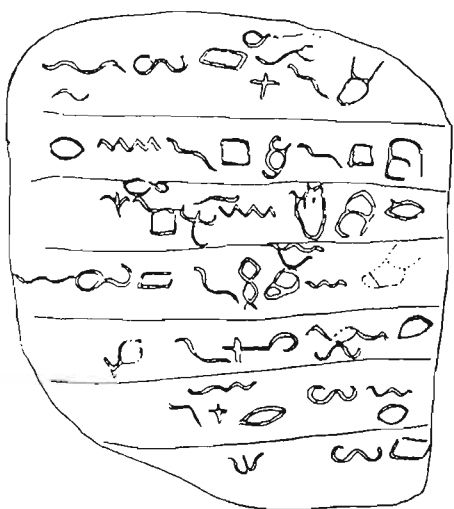
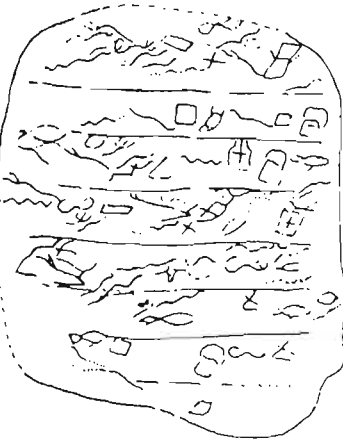


27

1923.

1929.

1937.



- Z. 1. Ich (bin) Hjtšpšw-hnmjmm.
- Z. 2. Oberster der Minenarbeiter.
- Z. 3. Hauptmann des Tempels der Ma'na [und] des Jahu [von] Sinai (sprechend):
- Z. 4. M'bb-[h]t Hjtšpšw-hnmjmm.
- Z. 5. Du warst freundlich, hast mich gezogen aus dem Nil.
- Z. 6. Und [hast mich gesetzt über] den Pro-naos de [r, s] M.
- Z. 7. Welcher [auf] Sinai [ist].

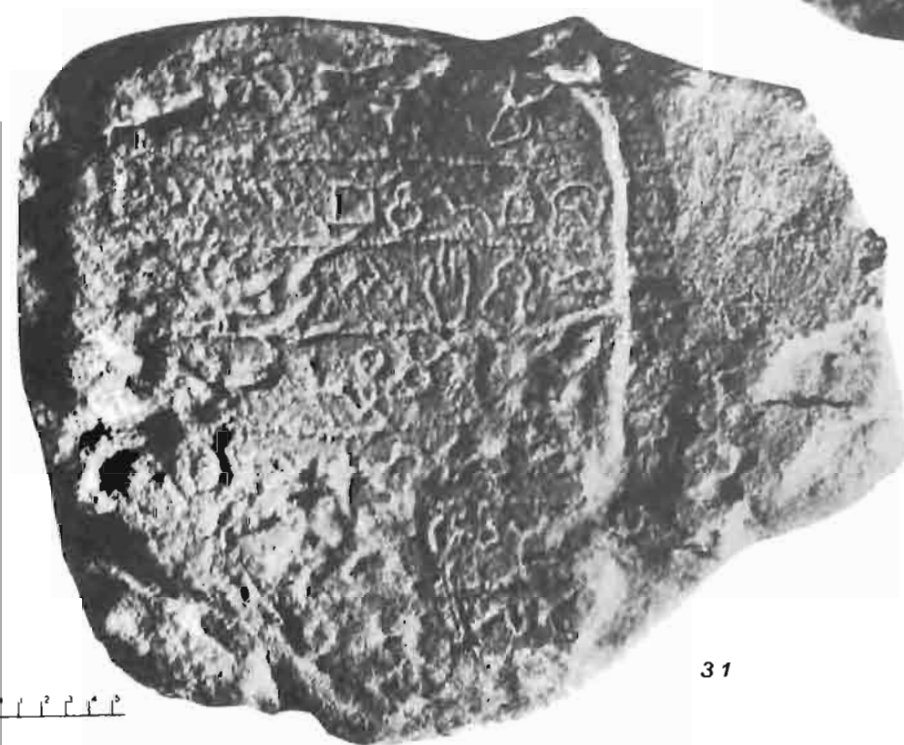
- Z. 1. Ich (bin) Hjtšpšw.
- Z. 2. Oberer der (Edel) Steinarbeiter.
- Z. 3. Oberaufseher der Wiese (?) Der Mana (?) auf Sinai (?)
- Z. 4. [Ich seufzte :?] Es ist vergeblich! Geht mir (neues) Leben! —oder— [Ich bin] verzweifelt. Geht mir.
- Z. 5. [Und] du berührtest mich...., (neues) Leben!
- Z. 6. Ich bin gerettet v[on].
- Z. 7. Meinen Sünden.

- Z. 1. Ich bin Htsepschumoseh.
- Z. 2. Verwalter des Erzgesteins und des (heiligen) Bezirks (von Sinai?).
- Z. 3. Schreiber der Fronarbeiterschaft auf Sinai.
- Z. 4. Sie hatten (—Man hatte—) vermutet : Seine Seele ist verzweifelt.
- Z. 5. Und du hast mich gegriffen heraus aus dem Nile(?) und.
- Z. 6. Ich habe mich gestützt auf.
- Z. 7. (auf) jemand, der mir Feind (—Feindin—) war.

- 30. Sinai 349 (Grimme 1929, pl. XXIII)
- 31. Sinai 349 (Butin 1932, pl. XIV)
- 32. Sinai 349 and 351 *in situ* on the same stone (Lake, Blake and Butin 1928, pl. IB)



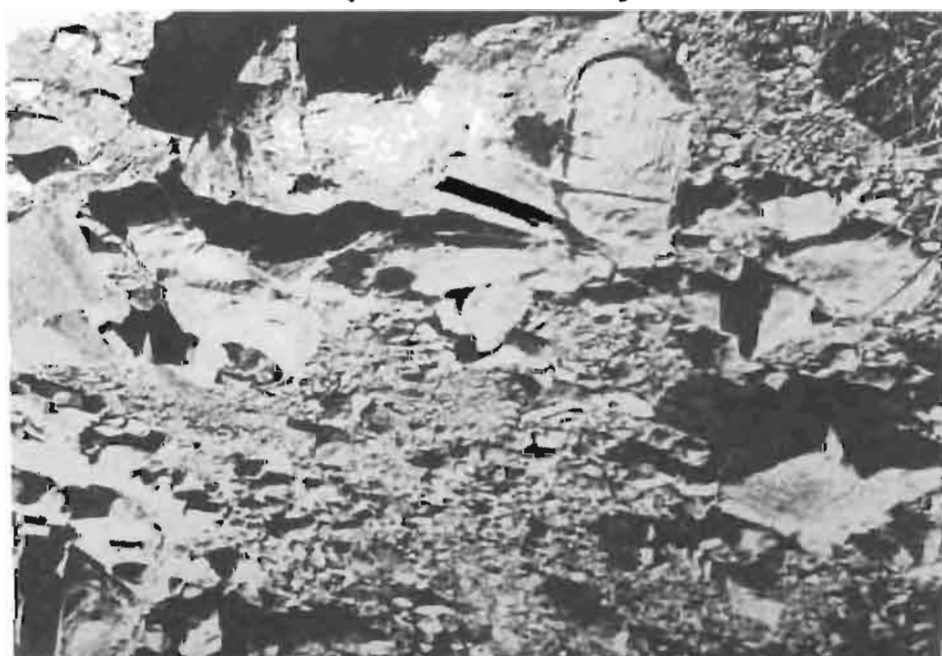
30



31

349
↓

351
↓



32

33. Sinai 350 (Butin 1932, 171 with modifications)
34. Sinai 350, most of the fragments *in situ* (Grimme 1929, pl. XVII; Petrie's photograph)
35. Sinai 350, additional *in situ* fragments (Grimme 1923, pl. 17; Petrie's photograph); see also figure 54
36. Sinai 350 in the Cairo Museum (Butin 1932, pl. XIV)
37. Sinai 351 (Albright 1966, fig. 5 with modifications)
38. Sinai 351 *in situ* (Petrie's photograph, by courtesy of the EES)



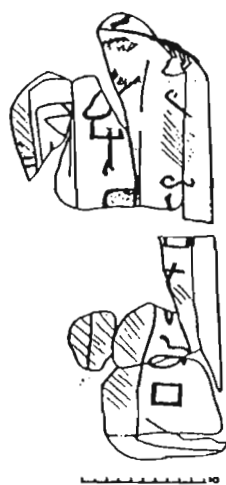
35



36



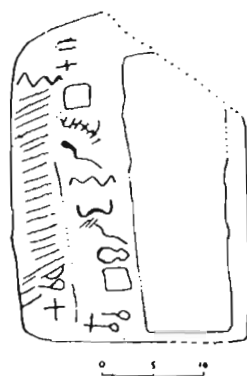
34



33

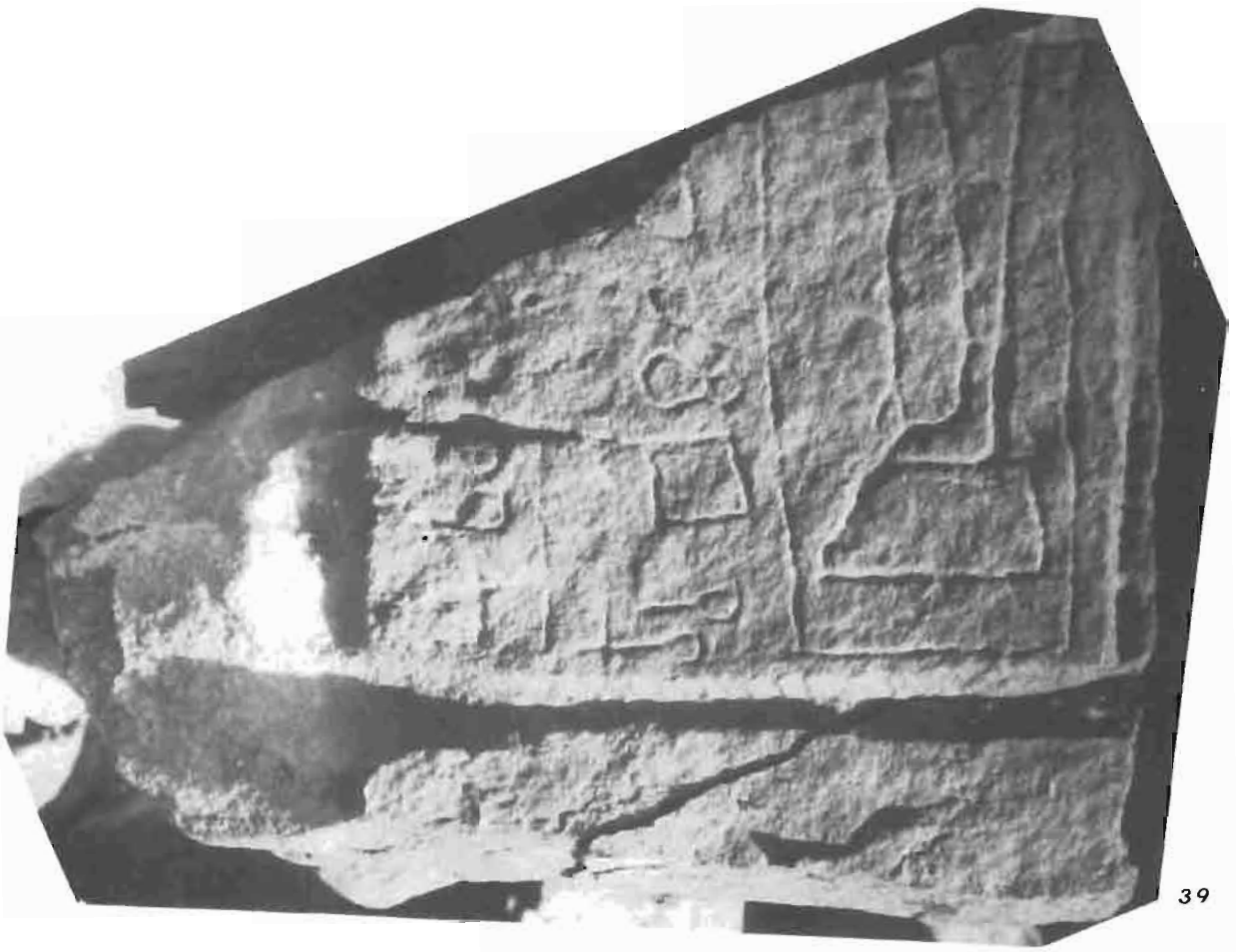


38



37

39. Sinai 351 *in situ*, detail (photographed by Lake and Blake, by courtesy of the National and University Library, Jerusalem)
40. Sinai 352 (Albright 1966, fig. 5 with modifications)
41. Sinai 352 *in situ* (Grimme 1923, pl. 18; Petrie's photograph)
42. Sinai 352 in the Cairo Museum (Butin 1932, pl. XV)



39



41



40

Approx scale 0 1 2 3



42

43. Sinai 352 *in situ*, detail (photographed by Lake and Blake, by courtesy of the National and University Library, Jerusalem)
44. Sinai 352 *in situ*, detail (photographed by Lake and Blake, by courtesy of the National and University Library, Jerusalem)



43

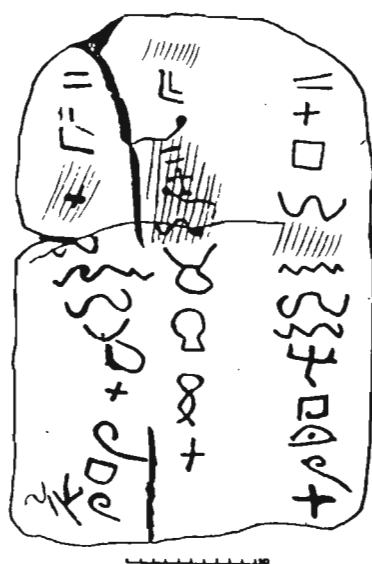


44

45. Sinai 353 (Butin 1932, 177 with modifications)
46. Sinai 353 (Lake, Blake and Butin 1928, pl. IV)
47. Sinai 353 (Butin 1932, pl. XVI)
48. Sinai 354 (Albright 1966, fig. 8 with modifications)
49. Sinai 354; fragments 7-9 were still part of Sinai 353 in 1905. 1, 4, 5, 7-9 are now in Cairo, 2, 3, 6 were lost at Serabit el-Khadem (Leibovitch 1930, pl. X)



46

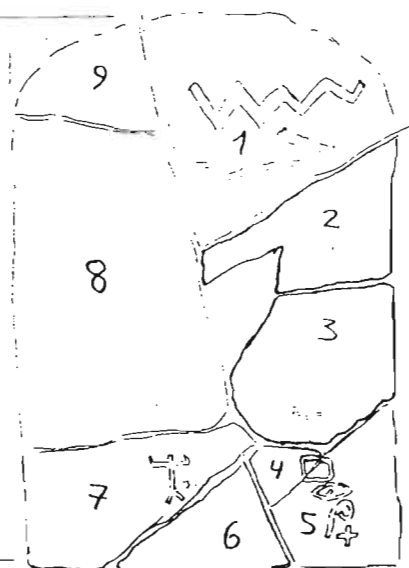


45



Après note 48

21 cm



49



47

47

50. Sinai 351, composite photograph (Petrie, by courtesy of the EES and Butin 1932, pl. XVII)
51. Sinai 353 and 354 (fragment) *in situ*, still joined (Petrie's photograph, by courtesy of the EES)
52. Sinai 355 (Gardiner 1916, 12)
53. Sinai 354 (fragments) and 355 *in situ* (Petrie's photograph, by courtesy of the EES)
54. Sinai 353 and 354 as in figure 51 and the lower part, some of which is lost, of Sinai 350 (Petrie's photograph, by courtesy of the EES); see also figure 35



51



50



53



52

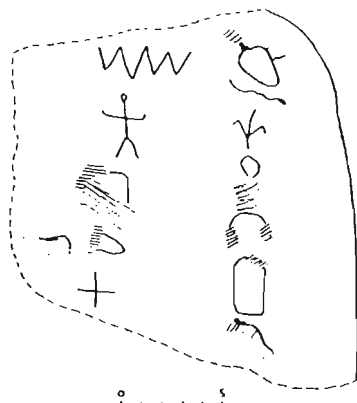


54

- 55. Sinai 356 (Albright 1966, fig. 8 with modifications)
- 56. Sinai 356 (Lake, Blake and Butin 1928, pl. VI)
- 57. Sinai 356 (photographed by Lake and Blake, by courtesy of the National
and University Library, Jerusalem)
- 58. Sinai 356 (Butin 1932, pl. XVIII)



56



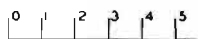
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57



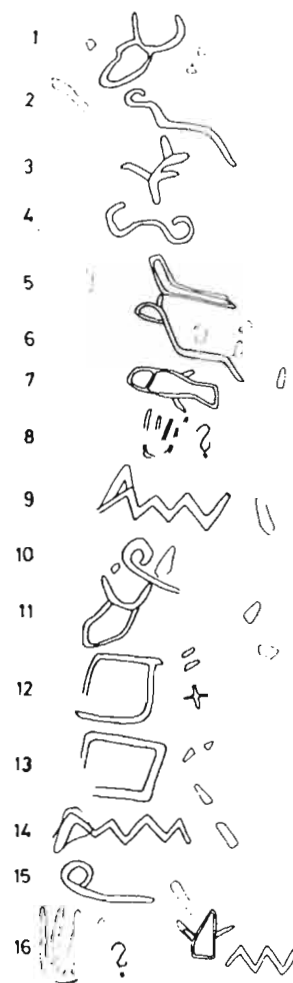
58



- 59. Sinai 357 (Beit-Arieh 1978, fig. 6 with modifications)
- 60. Sinai 357 (by courtesy of the Institute of Archaeology, Tel Aviv University)
- 61. Sinai 357 (by courtesy of Prof. I. Beit-Arieh, Institute of Archaeology, Tel Aviv University)
- 62. Sinai 357 (Butin 1936, pl. 16)



60



59

17 18 19 20 21 22 23 24 25 26

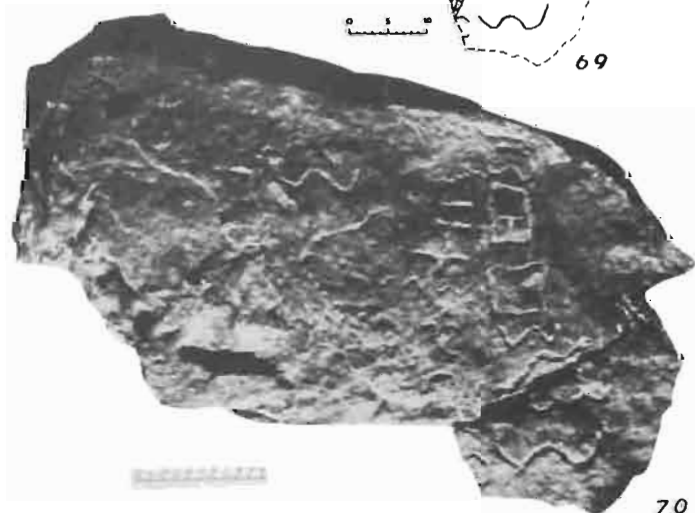
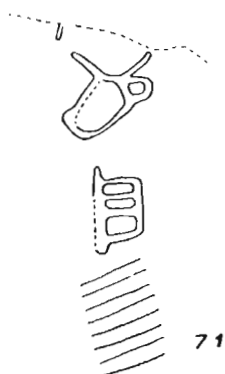
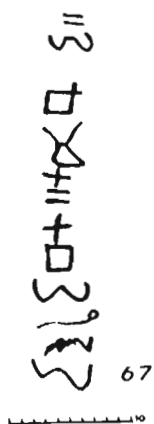


61



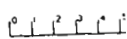
62

63. Sinai 358 (Rainey 1975, pl. 12:B with modifications)
64. Sinai 358 (by courtesy of the Institute of Archaeology, Tel Aviv University)
65. Sinai 359 (Butin 1932, 186 with modification)
66. Sinai 359 (Butin 1932, pl. XVIII)
67. Sinai 360 (Butin 1932, 186)
68. Sinai 360 (Butin 1932, pl. XIX)
69. Sinai 361 (Albright 1966, fig. 8 with modifications)
70. Sinai 361 (Butin 1932, pl. XIX)
71. Sinai 362 (Albright 1966, fig. 7)
72. Sinai 362 (Butin 1932, pl. XII)



inches

- 73. Sinai 363 (Albright 1966, fig. 10 with modifications)
- 74. Sinai 363 (Butin 1932, pl. XX)
- 75. Sinai 364 (Albright 1966, fig. 10)
- 76. Sinai 364 (Butin 1932, pl. XXI)
- 77. Sinai 365a (Albright 1966, fig. 10 with modifications)
- 78. Sinai 365b (Albright 1966, fig. 10 with modifications)
- 79. Sinai 365a (Butin 1932, pl. XXII)
- 80. Sinai 365b (Butin 1932, pl. XXII)
- 81. Sinai 367 (Butin 1932, 195)
- 82. Sinai 367 (Butin 1932, pl. XVII)



76



75



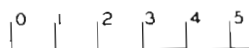
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78



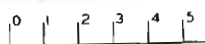
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80

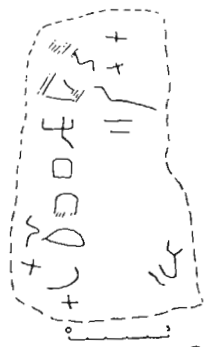


82



81

- 83. Sinai 374 (Albright 1966, fig. 8)
- 84. Sinai 374 (Butin 1936, fig. 19)
- 85. Sinai 374 (Leibovitch 1940, pl. XIV)
- 86. Sinai 375 (Butin 1936, 33)
- 87. Sinai 375 (Butin 1936, fig. 21)
- 88. Sinai 375 (Leibovitch 1940, pl. XIV)



83

85



86



84



88



87

89. Bir en-Naşb saddle, view from the well to north-east (B. Sass)
90. Bir en-Naşb saddle inscriptions (B. Sass)

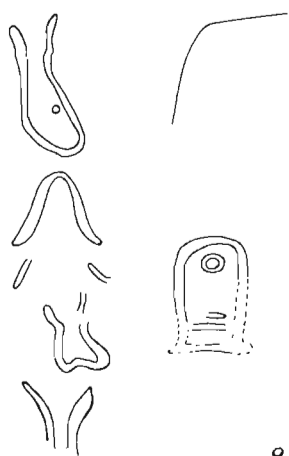


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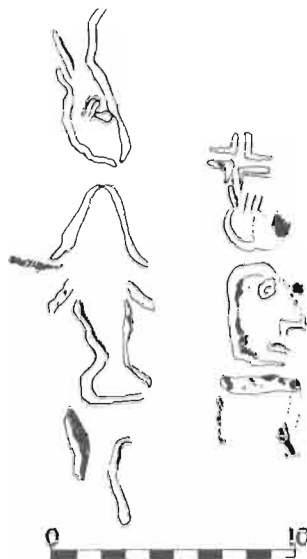
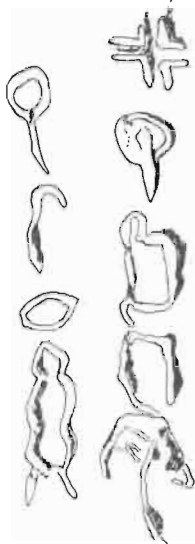


90

91. Sinai 376 (Rainey 1975, fig. 1)
92. Sinai 376, the right-hand column drawn according to Albright's description
(Sass 1982, fig. 3)
93. Sinai 376 (Gerster 1961, 65 lower)
94. Sinai 46, 46a, 377 (B. Sass)



92



91

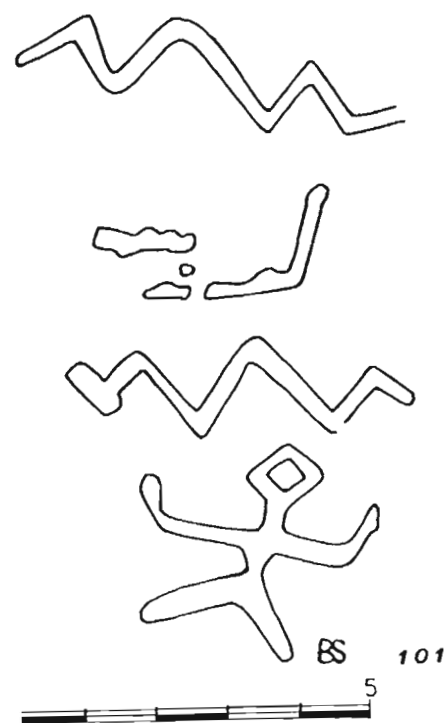
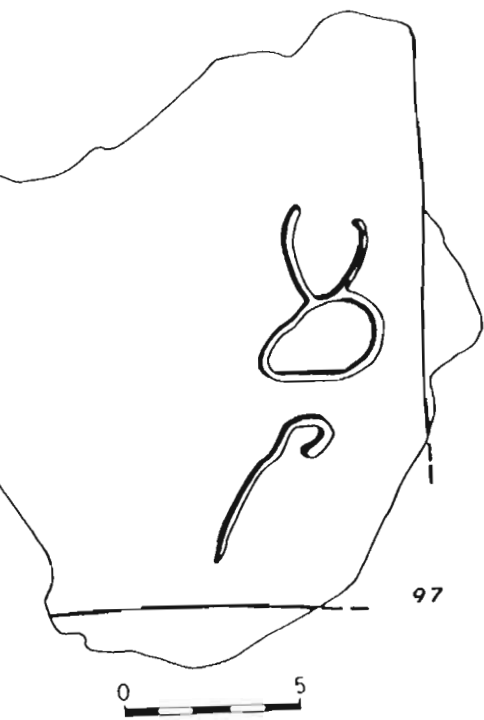


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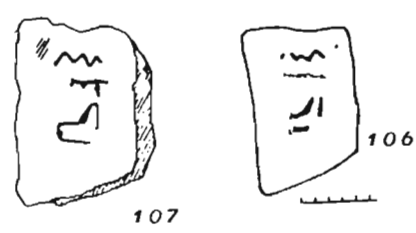


94

- 95. Sinai 377 (B. Sass)
- 96. Sinai 377 (Gerster 1961, 65 upper)
- 97. Sinai 378 (Beit-Arieh 1978, fig. 5)
- 98. Sinai 378
- 99. The mine with inscriptions 379 and 380 to north-west (Sass 1978, pl. 50:1)
- 100. The mine with inscriptions 379 and 380 to north-east (Sass 1978, pl. 50:2)
- 101. Sinai 379 (Sass 1978, fig. 8)



102. Sinai 379 (Sass 1978, pl. 51:1)
103. Sinai 380 (Sass 1978, fig. 10)
104. Sinai 380 (Sass 1978, pl. 51:2)
105. Sinai 380 (Sass 1978, pl. 52:1)
106. Sinai 366 (Butin 1932, 194)
107. Sinai 366 (Leibovitch 1940, pl. XIX)
108. Sinai 366 (Butin 1932, pl. XXIII)
109. Sinai 368 (Butin 1932, 196)
110. Sinai 368 (Leibovitch 1940, pl. XIX)
111. Sinai 368 (Butin 1932, pl. XXIV)



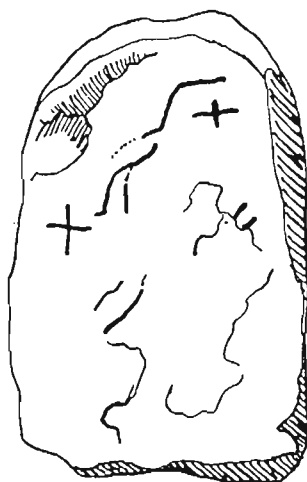
- 112. Sinai 370 (Butin 1932, 197)
- 113. Sinai 370 (Leibovitch 1934, fig. 47)
- 114. Sinai 370 (Butin 1932, pl. XXIII)
- 115. Sinai 371 (Butin 1932, 197)
- 116. Sinai 371 (Leibovitch 1934, fig. 48)
- 117. Sinai 371 (Butin 1932, pl. XXI)
- 118. Sinai 372a (Butin 1932, 199)
- 119. Sinai 372a (Leibovitch 1934, fig. 49)
- 120. Sinai 372a (Butin 1932, pl. XXVI)
- 121. Sinai 372b (Butin 1932, 199)
- 122. Sinai 372b (Butin 1932, pl. XXVI)
- 123. Sinai 373 (Leibovitch 1940, pl. XIX)
- 124. Sinai 373 (Butin 1932, pl. XVI)



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114



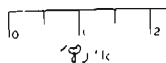
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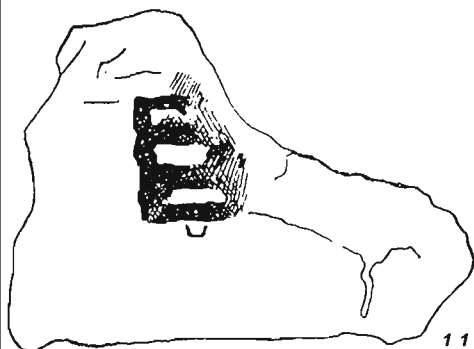
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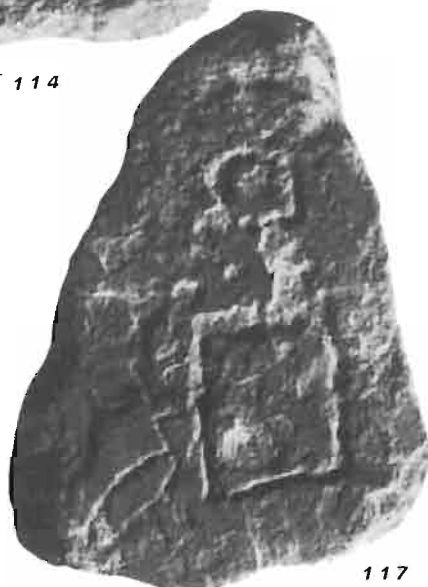
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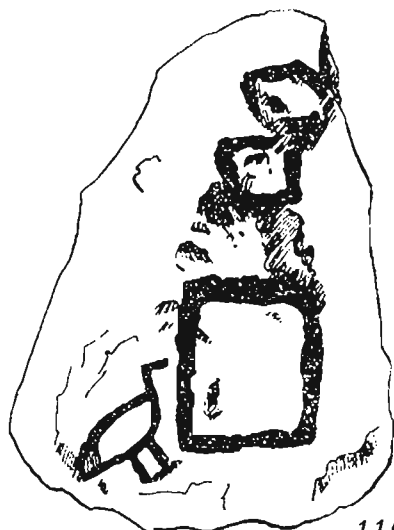
114



119



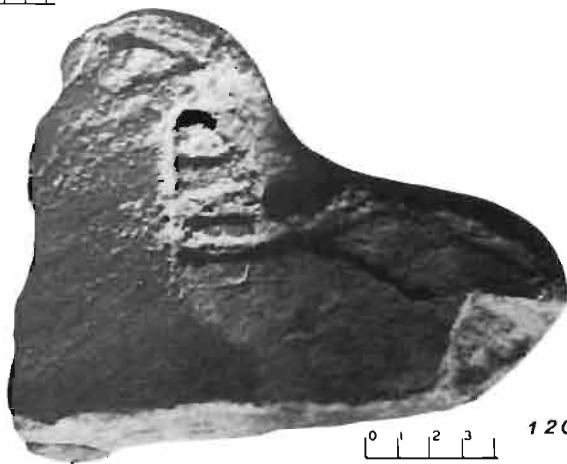
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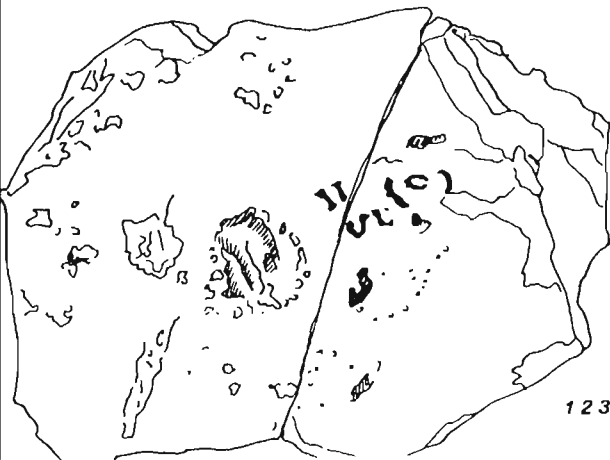
116



124



120



123

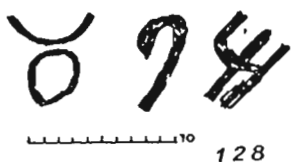


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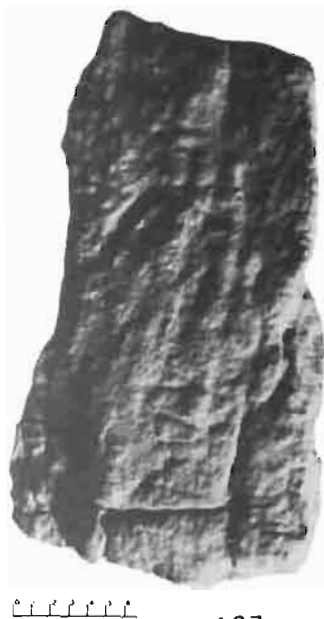


121

125. Sinai 373a (Butin 1932, 200)
126. Sinai 373a (Leibovitch 1934, fig. 52)
127. Sinai 373a (Butin 1932, pl. XXIV)
128. Sinai 373b (Butin 1932, 200)
129. Sinai 373c, obverse and reverse (Leibovitch 1934, fig. 56)
130. Sinai 373c, obverse (Grimme 1937, pl. XII)
131. Sinai 373c, obverse (Grimme 1937, pl. VIII)
132. Sinai 375a, from a photograph (Leibovitch 1940, fig. 17)
133. Sinai 375a (Butin 1936, fig. 18)



128



127



126



125



131



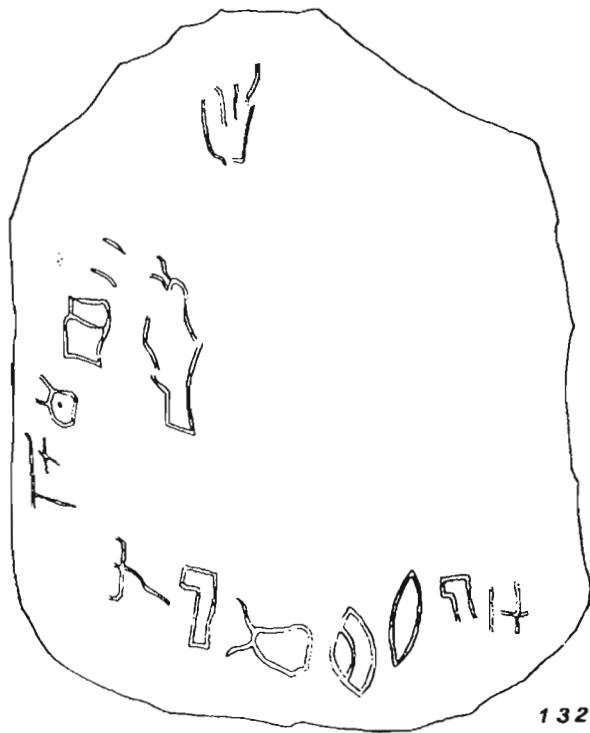
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129

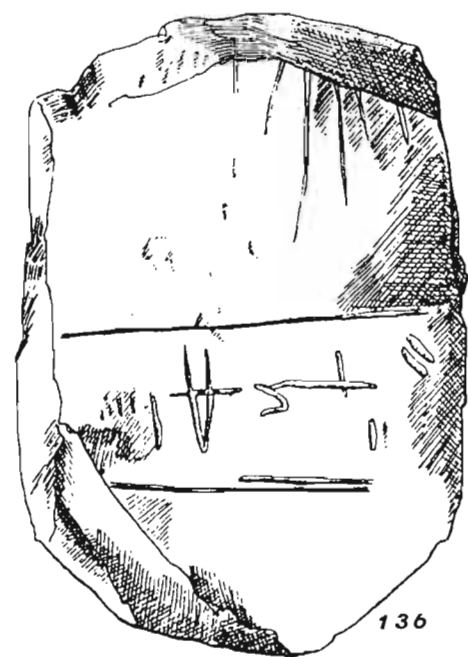


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132

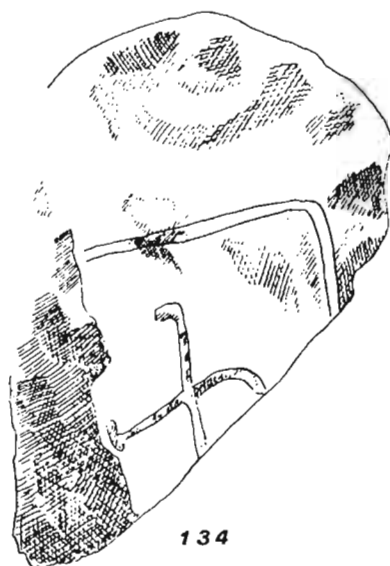
- 134. Sinai 375b {Leibovitch 1940, fig. 18:4)
- 135. Sinai 375b {Butin 1936, fig. 20)
- 136. Sinai 375c {Leibovitch 1940, fig. 20)
- 137. Sinai 375c {Butin 1936, fig. 22)
- 138. Sinai 375d {Leibovitch 1940, pl. XIX)
- 139. Sinai 375d {Leibovitch 1940, pl. XVIII)



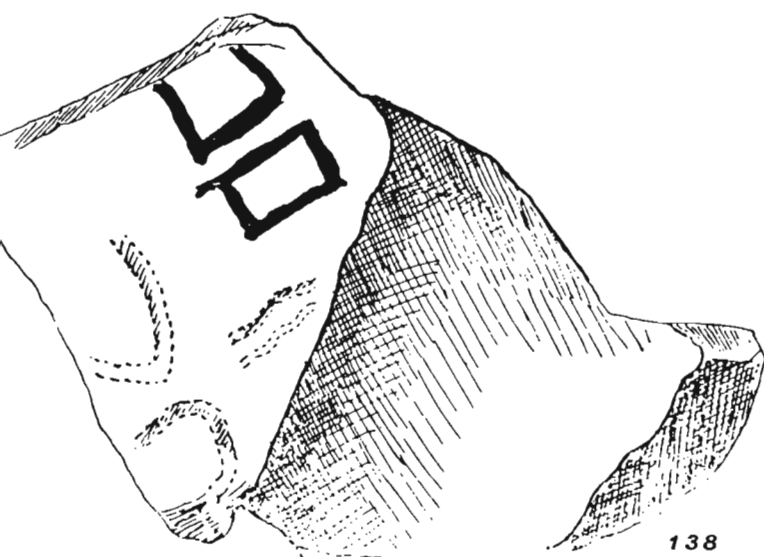
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135



134



138

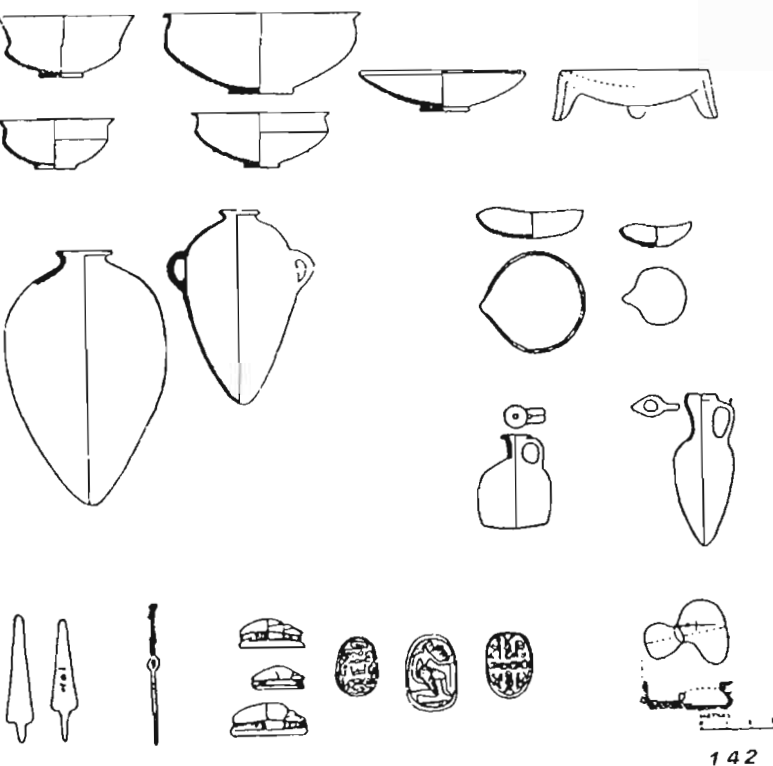


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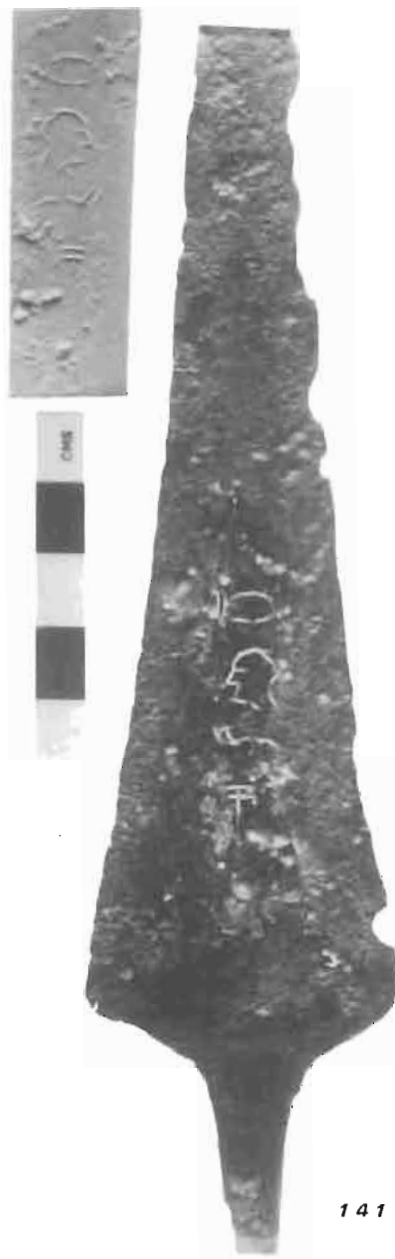


139

- 140. Lachish dagger (*Lachish* IV, pl. 42:2)
- 141. Lachish dagger
- 142. Lachish, Tomb 1502 (*Lachish* IV, fig. 6)
- 143. Nagila sherd (Leibovitch 1965)
- 144. Nagila sherd (Leibovitch 1965)
- 145. Gezer sherd (Yeivin 1939, fig. 17)
- 146. Gezer sherd (Taylor 1930a)
- 147. Gezer sherd



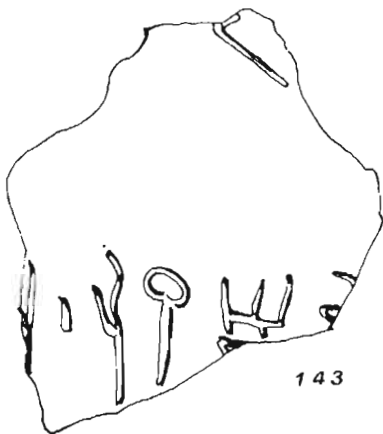
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141



144



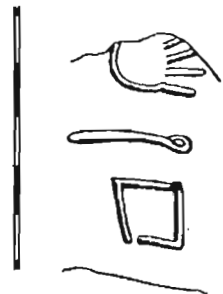
143



147



146



145



140

- 148. Shechem plaque, obverse (B. Sass)
- 149. Shechem plaque, obverse
- 150. Cylinder seal of unknown provenance (by courtesy of the Visitors of the Ashmolean Museum, Oxford, Inv. No. 1921.1198)
- 151. Cylinder seal impression from Alalakh, Stratum VII (Collon 1975, No. 14)
- 152. Cylinder seal impression from Alalakh, Stratum VII (Collon 1975, No. 60)
- 153. Shechem plaque, reverse
- 154. Raddana handle (B. Sass)
- 155. Raddana handle (Cross and Freedman 1971, fig. 3)



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151

2:1

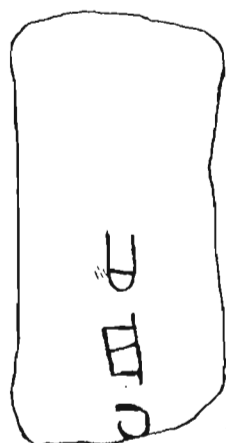


152

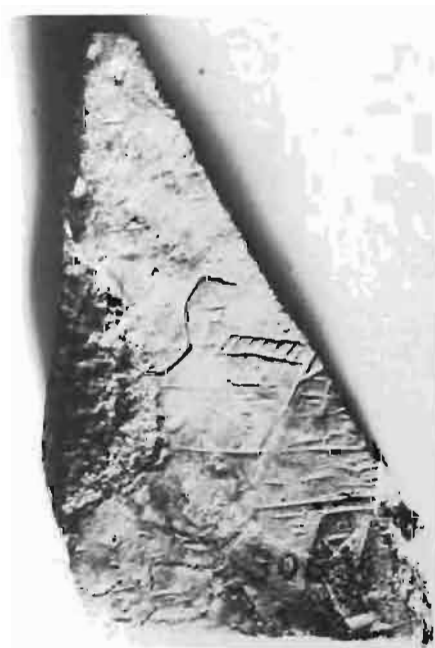
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BS



154

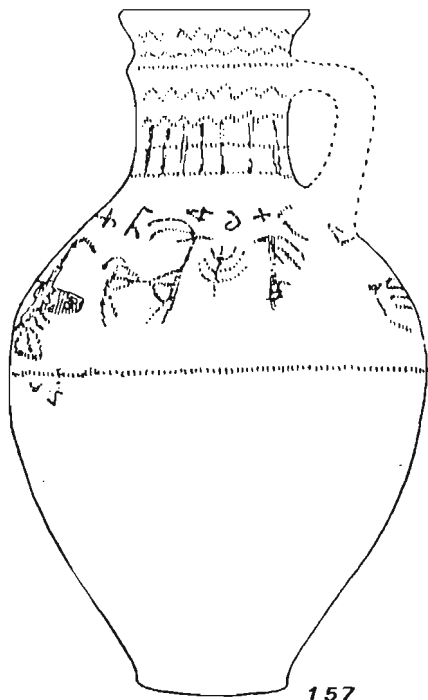


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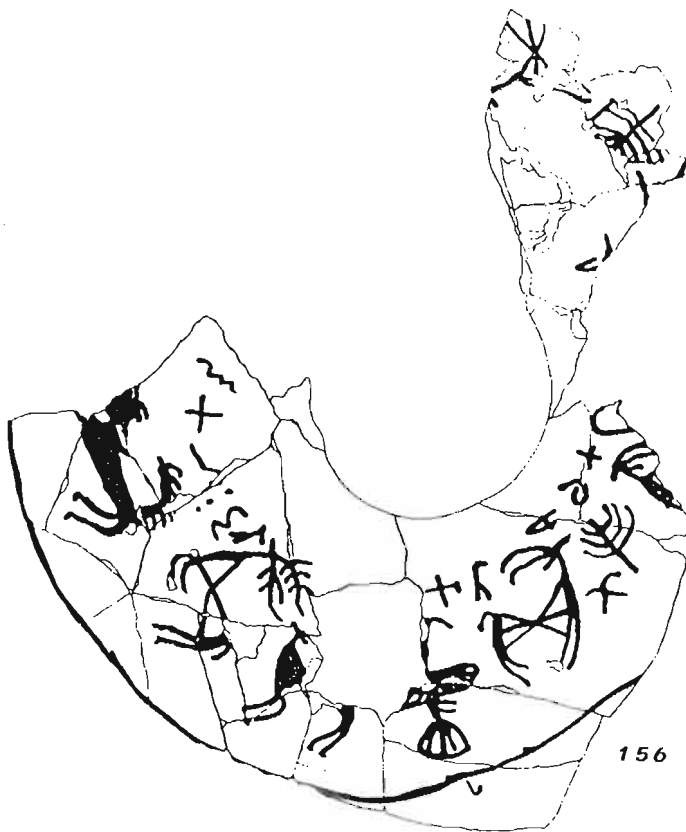


155

- 156. Lachish ewer (Starkey 1934, pl. IX)
- 157. Lachish ewer (*Lachish* II, pl. LI:B)
- 158. Lachish ewer
- 159. Lachish ewer
- 160. Lachish ewer
- 161. Lachish sherd No. 7 (inventory of finds of the Lachish expedition)
- 162. Lachish sherd No. 7 (*Lachish* IV, pl. 44:7)



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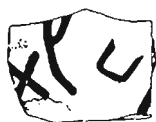
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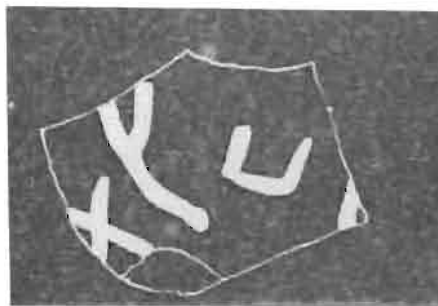
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158

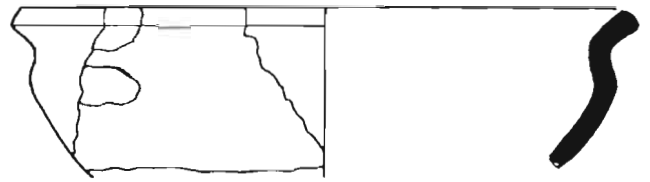


162



161

- 163. Lachish bowl fragment (Ussishkin 1983, fig. 25)
- 164. Lachish bowl fragment (B. Sass)
- 165. Lachish bowl fragment (by courtesy of Prof. D. Ussishkin, Institute of
Archaeology, Tel Aviv University)



0 10cm.

163



164

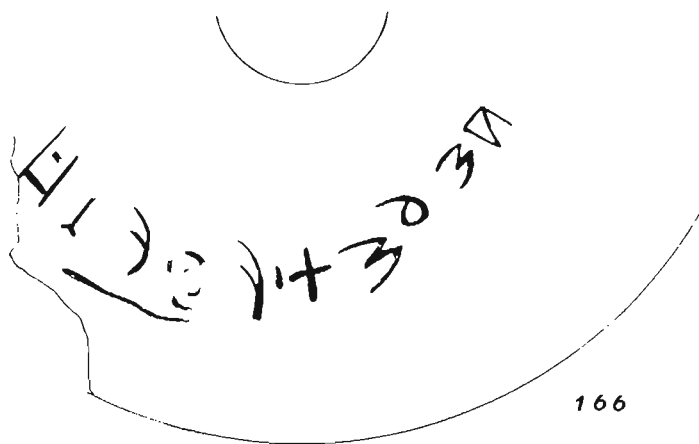
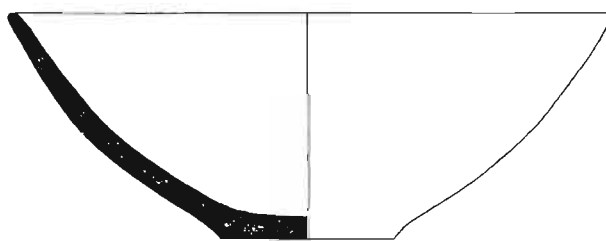


165

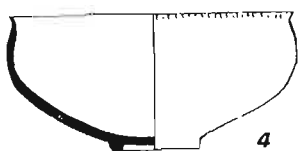
166. Lachish bowl (*Lachish* IV, pl. 44:2)
167. Lachish bowl
168. Lachish, Tomb 527: 1. *Lachish* IV, pl. 71
2. *Lachish* IV, pl. 71
3. *Lachish* IV, pl. 72
4. *Lachish* IV, pl. 71:619
5. *Lachish* IV, pl. 68
6. *Lachish* IV, pl. 69:555
7. *Lachish* IV, pl. 84:963
8. *Lachish* IV, pl. 78:790
9. *Lachish* IV, pl. 80:866
10. *Lachish* IV, pl. 81:888
11. *Lachish* IV, pl. 82



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166



4



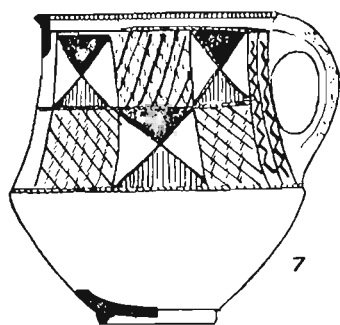
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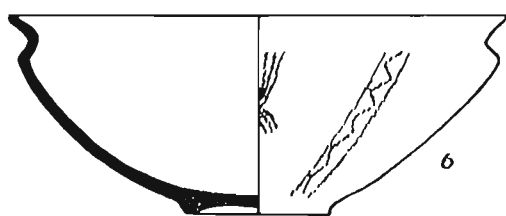
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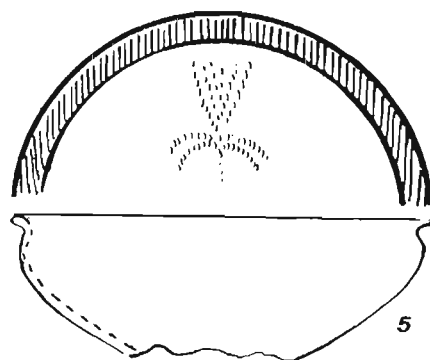
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7



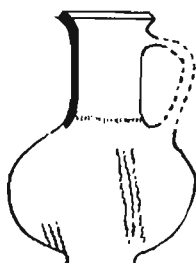
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5



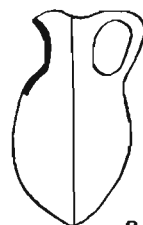
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168

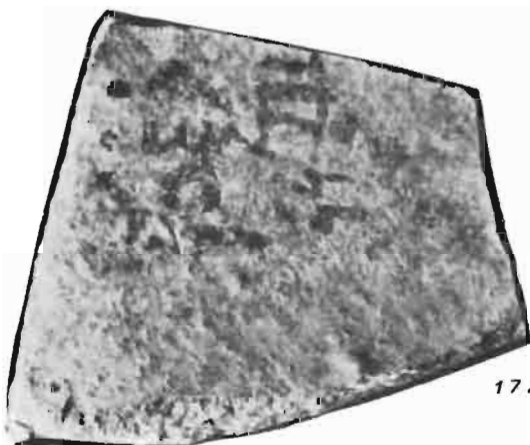
- 169. Beth Shemesh ostrakon, obverse (B. Sass)
- 170. Beth Shemesh ostrakon, reverse (B. Sass)
- 171. Beth Shemesh ostrakon, obverse (*Ain Shems* I, pl. X)
- 172. Beth Shemesh ostrakon, reverse (*Ain Shems* I, pl. X)
- 173. Beth Shemesh ostrakon, obverse
- 174. Beth Shemesh ostrakon, reverse
- 175. ^cIzbet Şarṭah ostrakon (Kochavi 1977, fig. 3 with modifications, see also
table 6)
- 176. ^cIzbet Şarṭah ostrakon (by courtesy of Prof. M. Kochavi, Institute of Ar-
chaeology, Tel Aviv University)



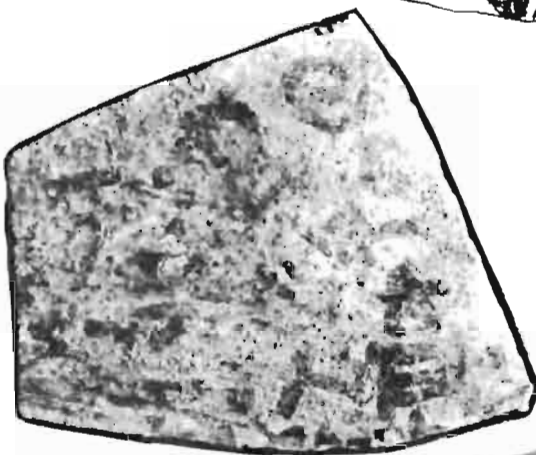
170



169



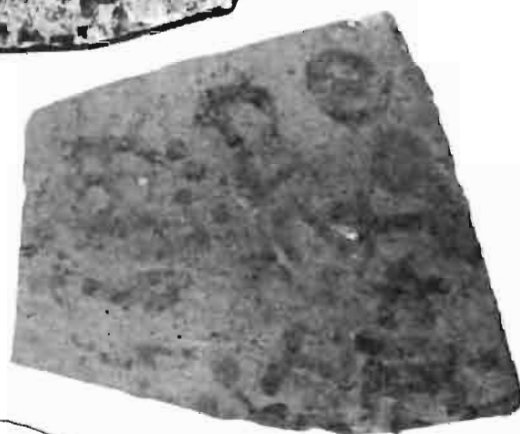
172



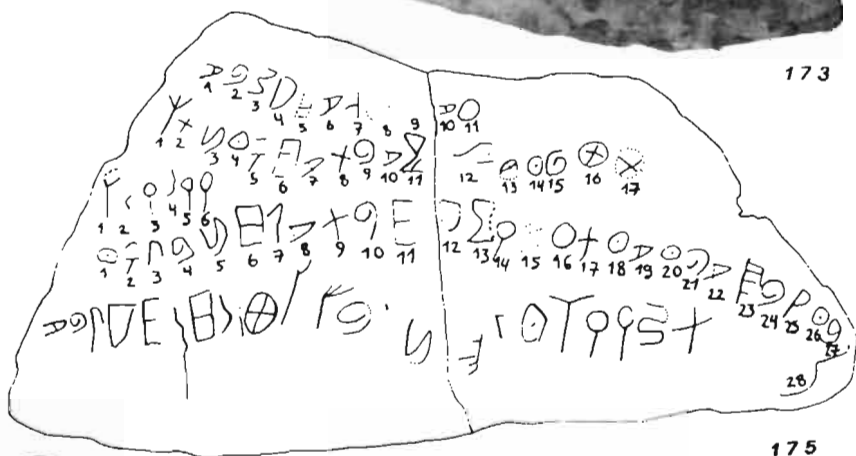
171



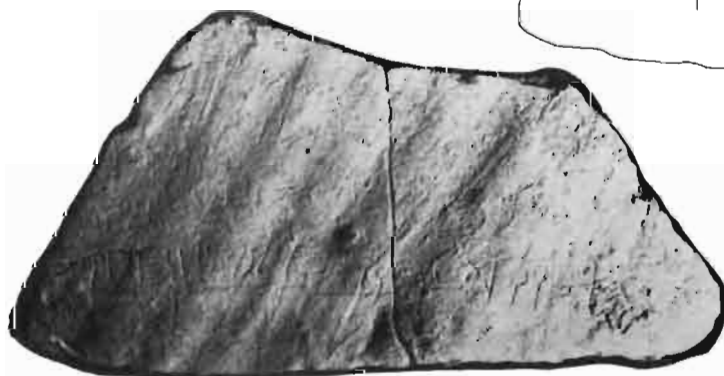
174



173

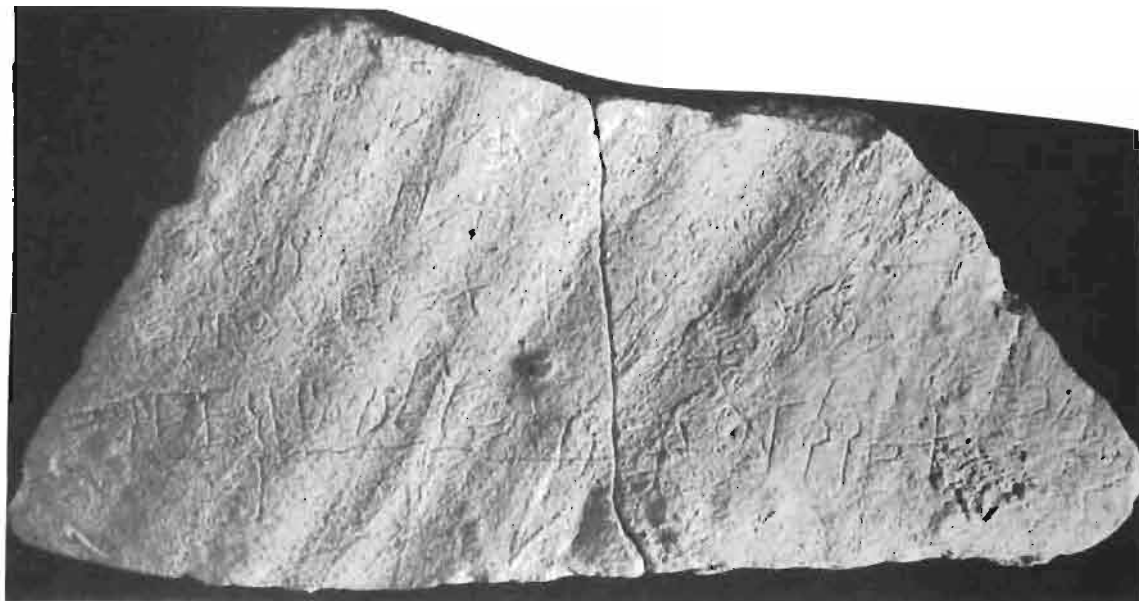


175



176

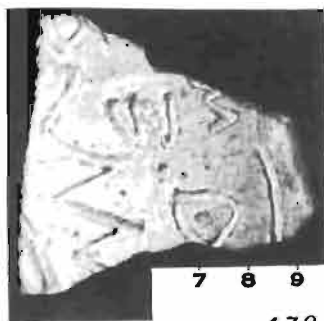
177. ^cIzbet Şarṭah ostrakon (by courtesy of Prof. M. Kochavi, Institute of Archaeology, Tel Aviv University)
178. Tel Reḥov sherd (Sukenik 1945)
179. Tel Reḥov sherd
180. Qubur el-Walaida bowl (by courtesy of Dr R. Cohen, Israel Department of Antiquities and Museums)
181. Qubur el-Walaida bowl (by courtesy of Dr R. Cohen, Israel Department of Antiquities and Museums)
182. Qubur el-Walaida bowl
183. Zarephath sherd (Teixidor 1975a, fig. 55:1)
184. Hazor sherd (*Hazor* I, pl. CLX:2)



177



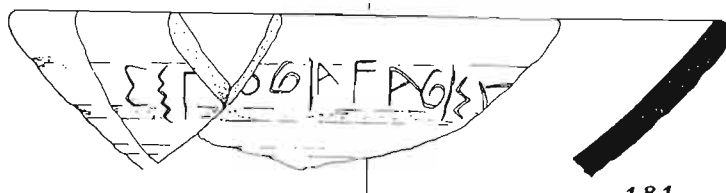
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179



180



181



182

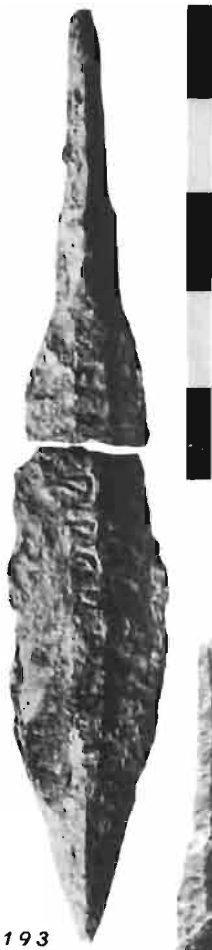


183



184

185. El-Khadr arrowhead I (composite picture from Cross and Milik 1956, fig. 2 and Mazar 1963)
186. El-Khadr arrowhead II (composite picture from Cross and Milik 1956, fig. 2 and Mazar 1963, with modifications)
187. El-Khadr arrowhead III (composite picture from Cross and Milik 1956, fig. 2 and Mazar 1963, with modifications)
188. El-Khadr arrowhead IV (Cross 1980, fig. 3 with modifications)
189. El-Khadr arrowhead V (Cross 1980, fig. 5 with modifications)
190. El-Khadr arrowhead I
191. El-Khadr arrowhead II
192. El-Khadr arrowhead III
193. El-Khadr arrowhead IV before cleaning and restoration (Z. Radovan)
194. El-Khadr arrowhead IV after cleaning and restoration (Z. Radovan)
195. El-Khadr arrowhead V (Z. Radovan)



193



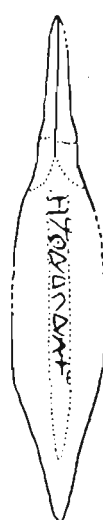
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195



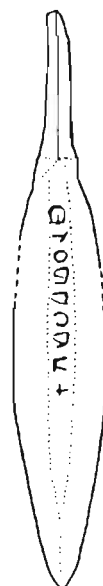
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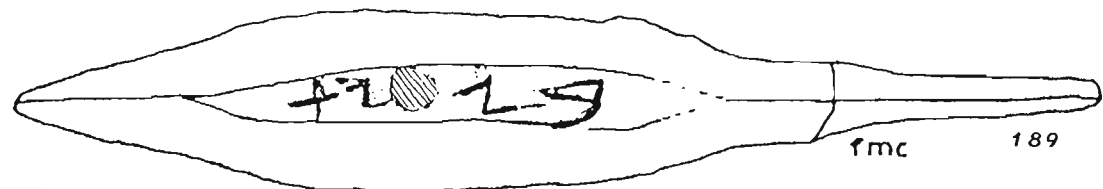
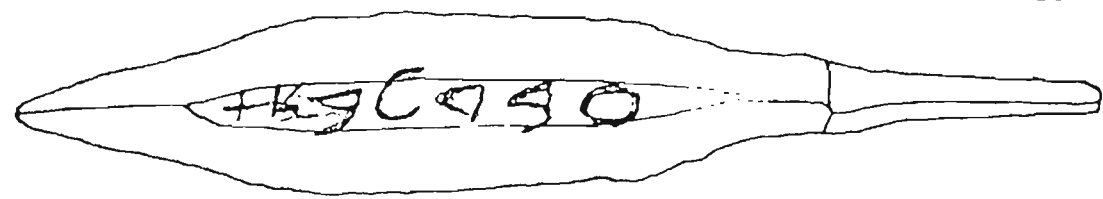
187



186



185



fmc

189



192

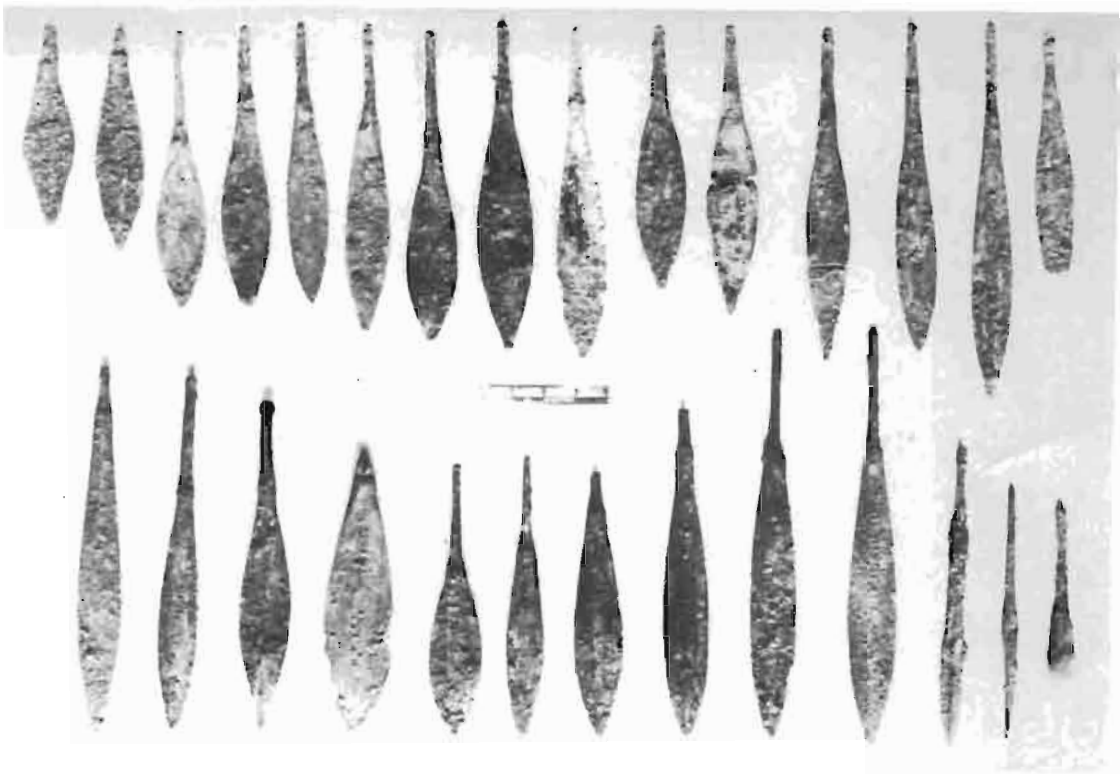


191

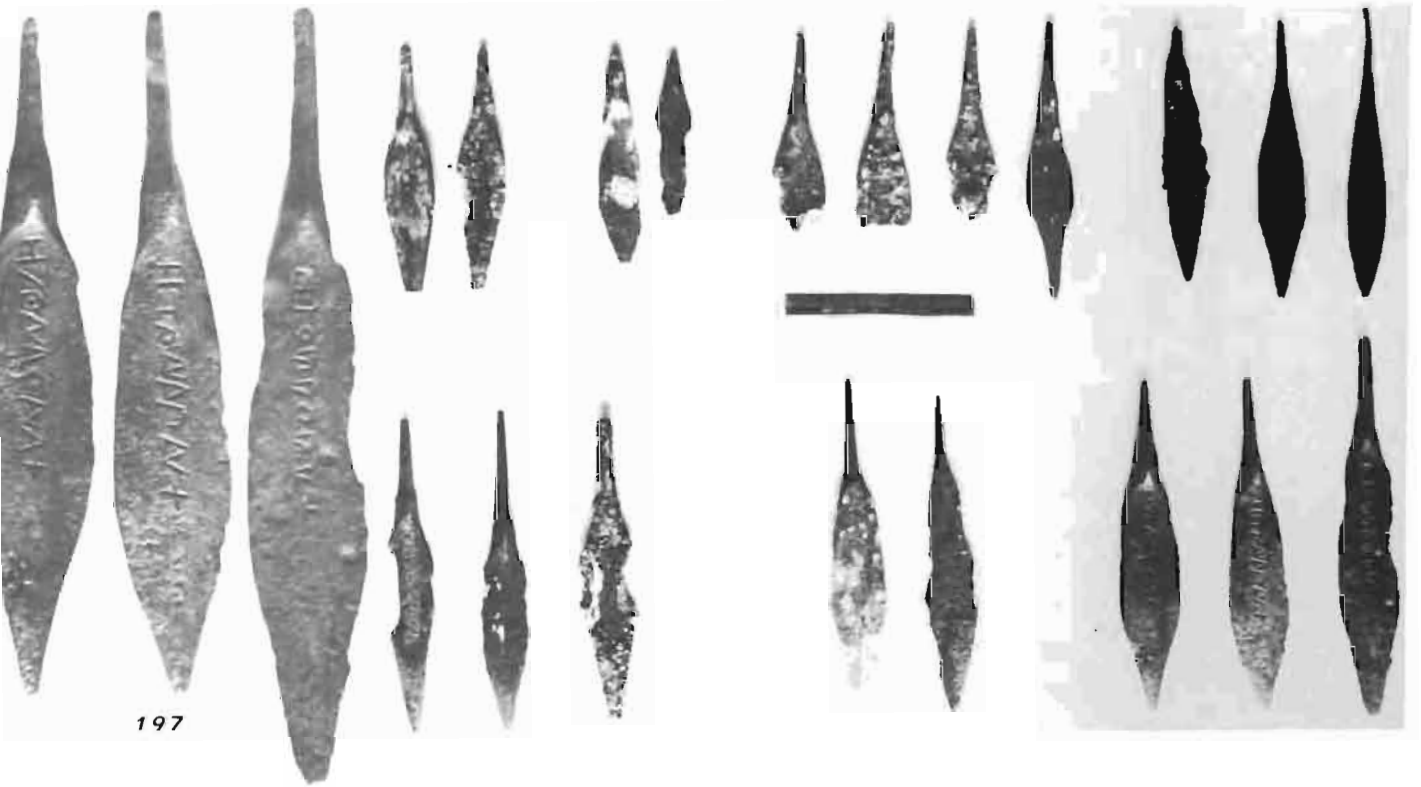


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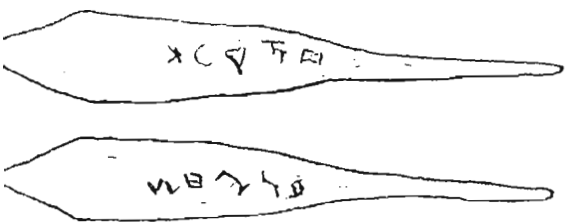
196. The El-Khadr arrowheads
197. El-Khadr arrowheads I-III, detail of fig. 196
198. Rapa arrowhead (Cross 1967, fig. 4)
199. Rapa arrowhead (Martin 1962, pl. I)



196



197



PMC

199

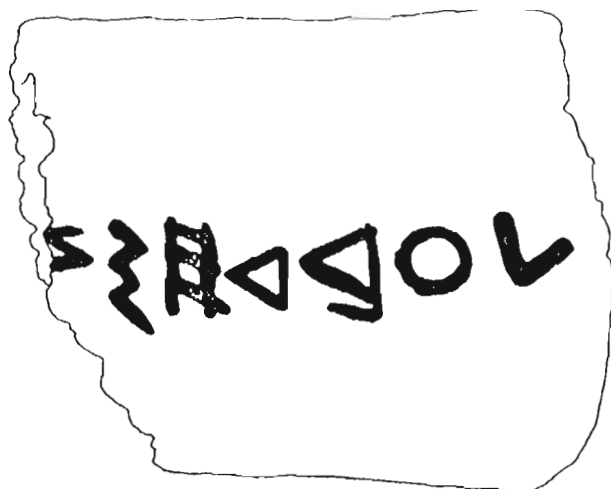


198

- 200. Byblos cone A (Cross and McCarter 1973, fig. 3)
- 201. Byblos cone A (*Byblos* II, pl. CXLIX:7765)
- 202. Gerba^cal arrowhead (Milik 1961, fig. 1:3 and B. Sass)
- 203. Gerba^cal arrowhead (Milik 1961, pl. I:3)
- 204. *yt'* arrowhead (B. Sass)
- 205. *yt'* arrowhead (*Sauvegarde de Tyr*, 31)
- 206. ^c*bdny* arrowhead (Bordreuil 1982, 188)
- 207. ^c*bdny* arrowhead (Bordreuil 1982, 188)



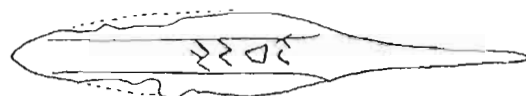
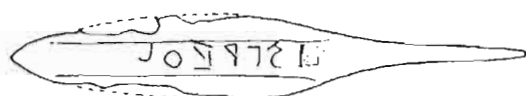
201



200



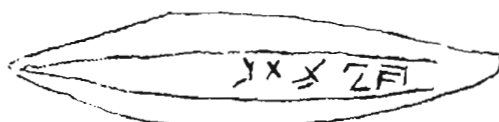
203



202



205



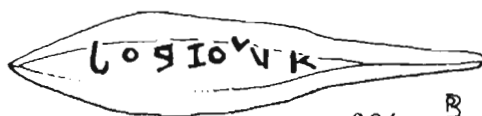
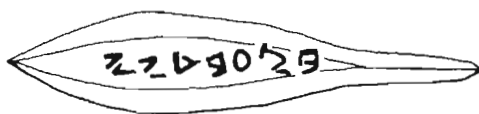
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204



207



206

B



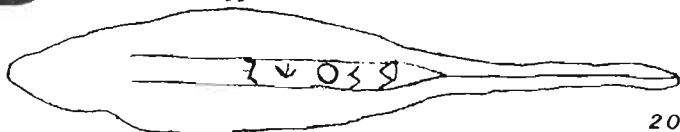
- 208. Ruweise arrowhead (B. Sass, after the original, fig. 209 and a photograph from the Louvre)
- 209. Ruweise arrowhead (Dussaud 1927, 185)
- 210. Beqa^c arrowhead (Milik 1961, fig. 1:2 with modifications)
- 211. Beqa^c arrowhead
- 212. "King of Amurru" arrowhead (Starcky 1982, fig. 2)
- 213. "King of Amurru" arrowhead (Starcky 1982, fig. 1)
- 214. 'd^c arrowhead (Mitchell 1985, 141)
- 215. 'd^c arrowhead (by courtesy of the Trustees of the British Museum)



209



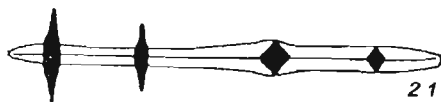
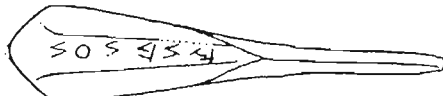
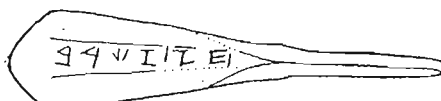
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208



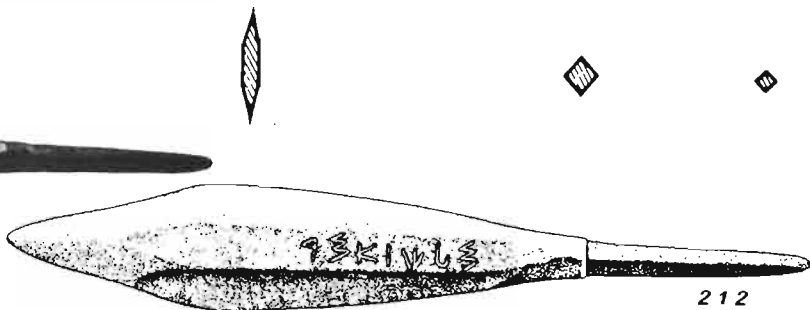
211



210



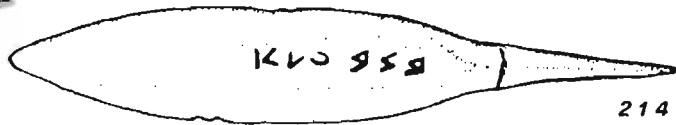
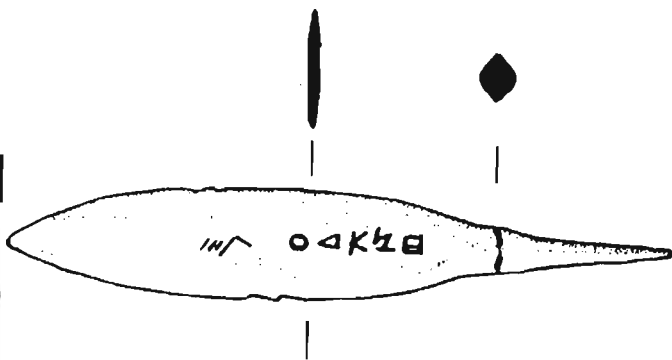
213



212

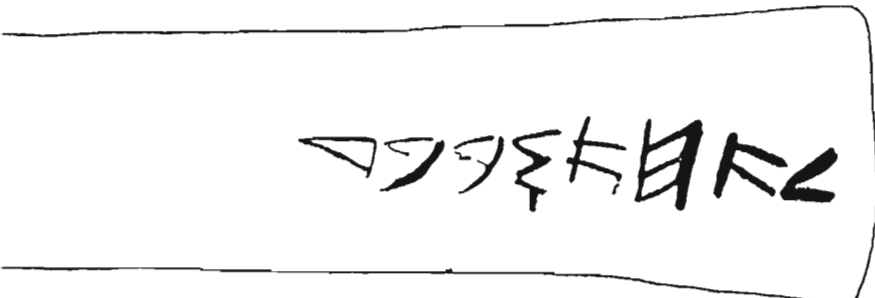


215



214

- 216. Manaḥat sherd (Landgraf 1971, fig. 1)
- 217. Manaḥat sherd
- 218. Byblos cone B (Cross and McCarter 1973, fig. 1)
- 219. Byblos cone B (Teixidor 1977, 70)
- 220. Byblos spatula, obverse (*KAI* 3)
- 221. Byblos spatula, obverse (McCarter and Coote 1973, 17 with modification)
- 222. Byblos spatula, obverse (Dunand 1945, pl. XIII:2)
- 223. Byblos spatula, reverse (Dunand 1945, pl. XIII:2)



218



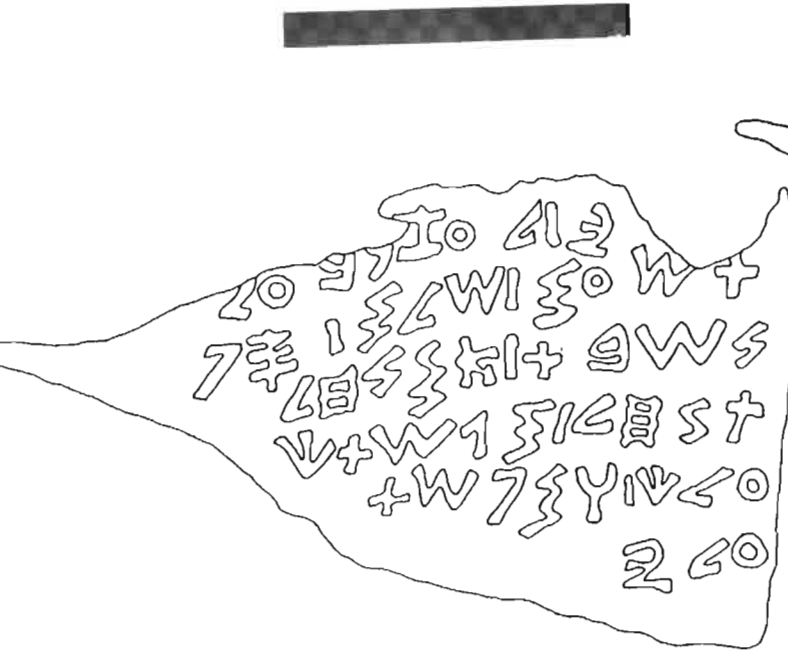
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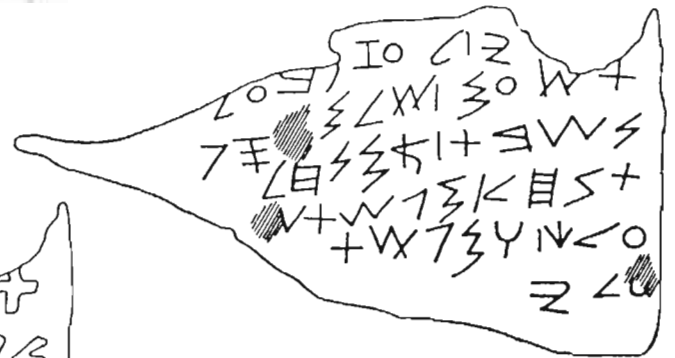
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217



221



220

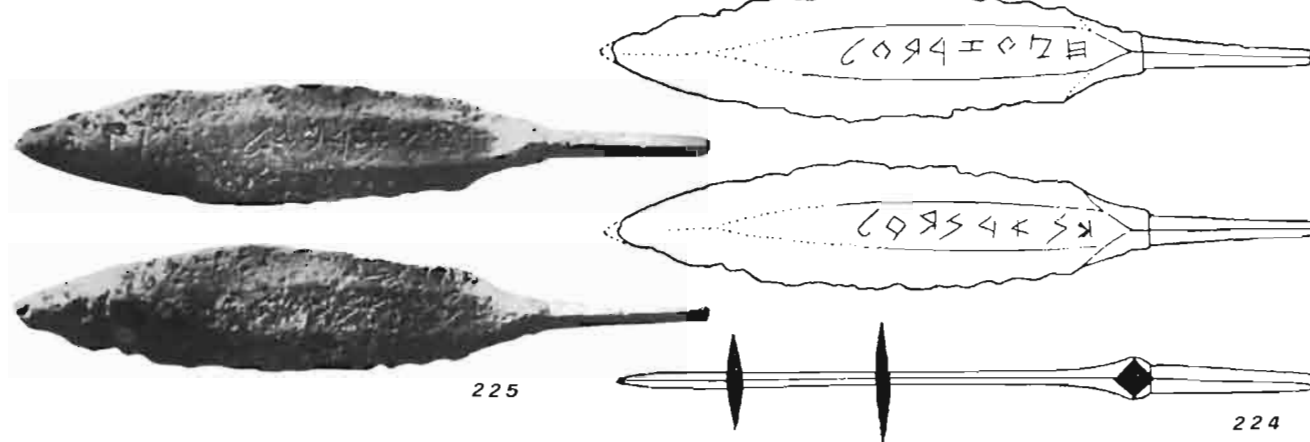


223

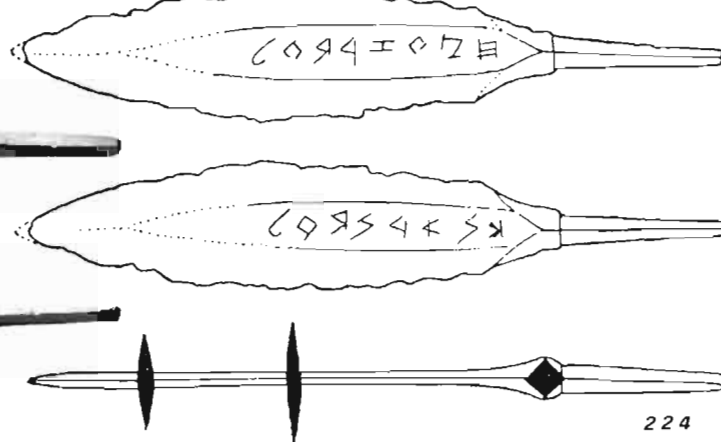


222

- 224. ^cAzarba^cal arrowhead (Milik 1961, fig. 1:4)
- 225. ^cAzarba^cal arrowhead (Milik 1961, pl. I:4)
- 226. Tekke bowl (Szzyrmer 1979, 91)
- 227. Tekke bowl (By courtesy of the Iraklion Museum)
- 228. Tekke bowl (Szzyrmer 1979, pl. I)
- 229. Tekke bowl (Szzyrmer 1979, pl. II)
- 230. Tekke, location map (Catling 1977, fig. 1)



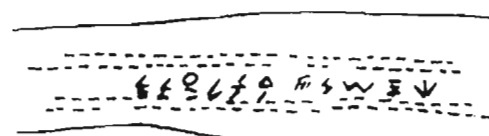
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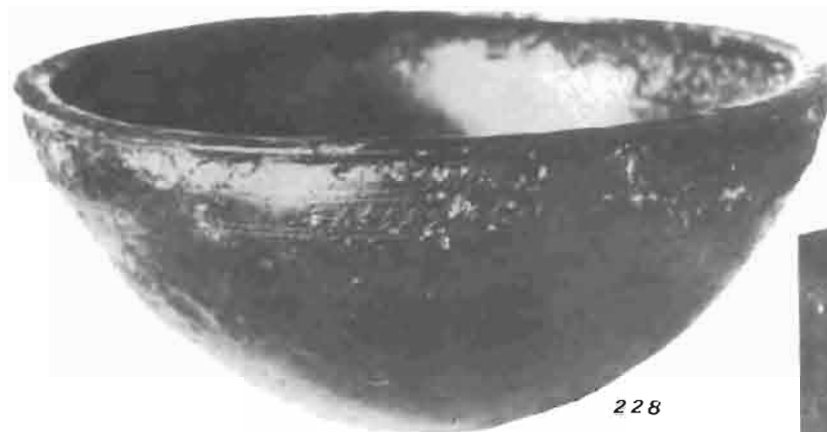
224

Σ ? K L Σ Δ ? ? Σ W F V

226



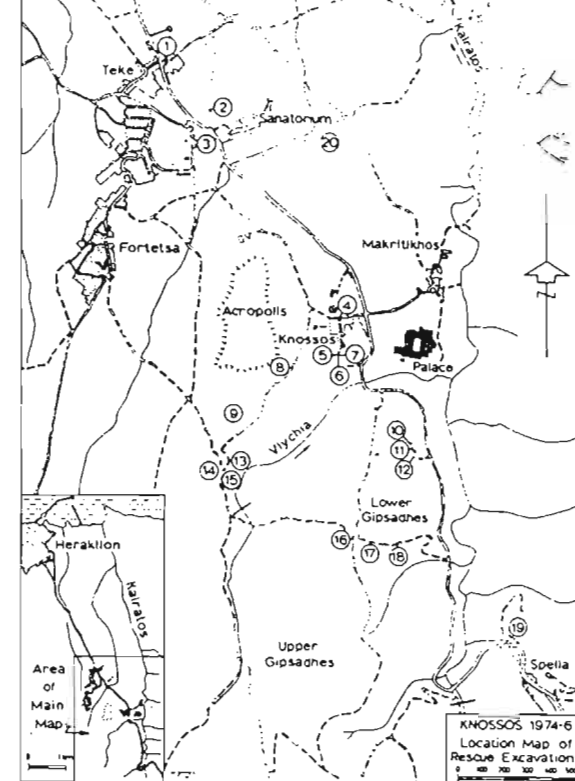
227



228

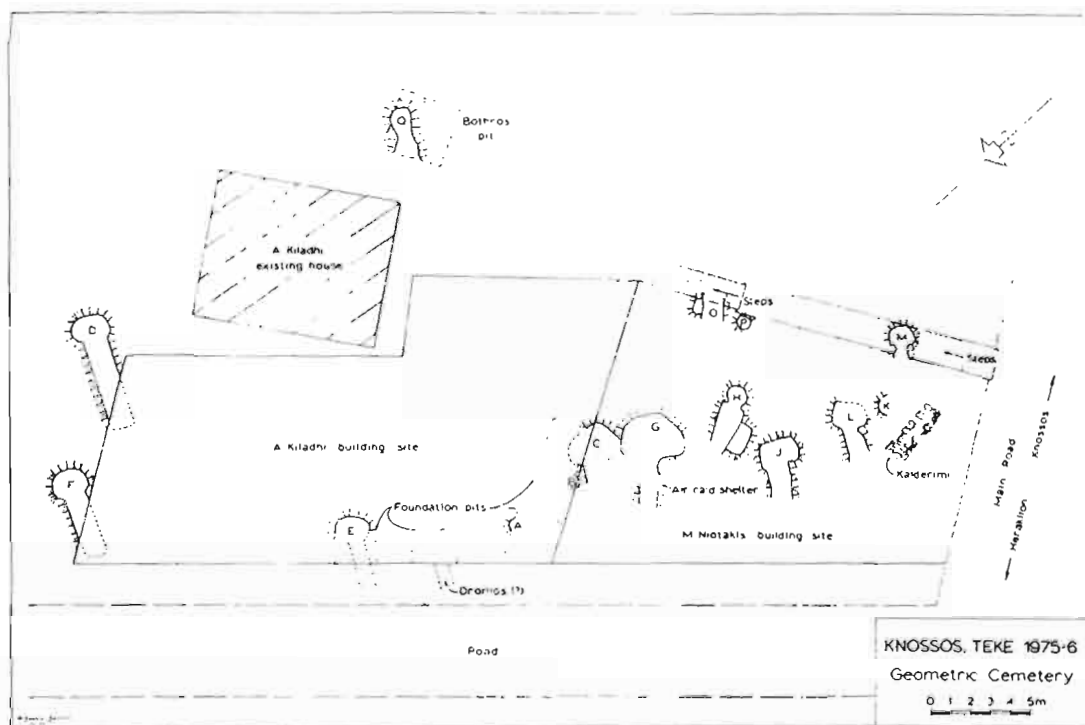


229



230

- 231. Tekke, plan of the cemetery (Catling 1977, fig. 22)
- 232. Tekke, plan of Tomb J (Catling 1977, fig. 23)
- 233. Tekke, Tomb J, finds *in situ* (Catling 1977, fig. 24)
- 234. Tekke, Tomb J, the finds:
 - 1. Imported Attic pottery (Catling 1977, figs. 29–30)
 - 2. Local pottery (Catling 1977, fig. 31)

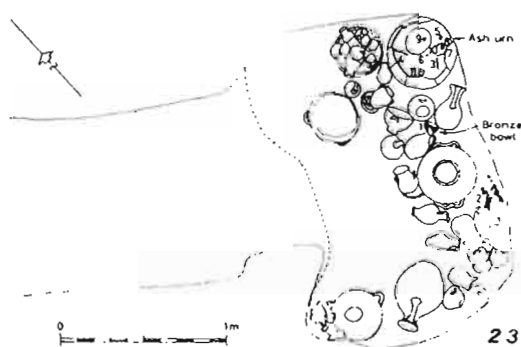


KNOSSOS, TEKE 1975-6
Geometric Cemetery

231

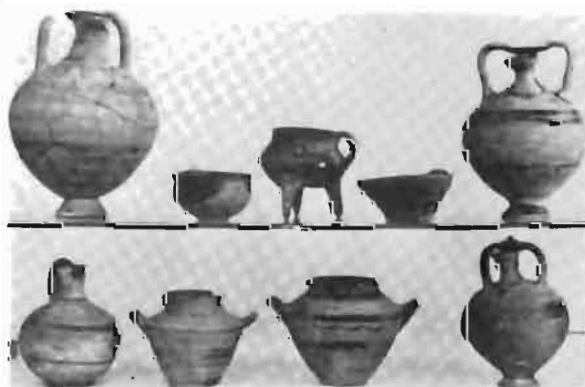


233



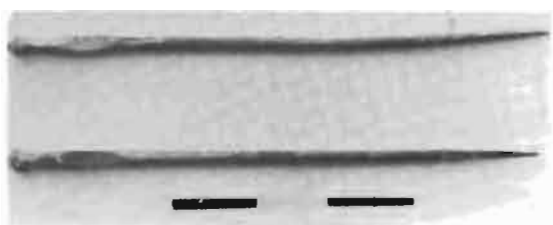
232

234:1



234:2

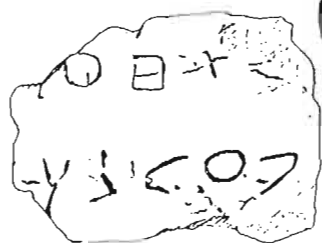
- 234. 3. Gold pins (Catling 1977, fig. 25)
- 4. Impression of seal (Catling 1977, fig. 26)
- 235. Nora fragment (Röllig 1982, 126)
- 236. Nora fragment (Cross 1979, fig. 8)
- 237. Revadim seal (Michal Ben-Gal and B. Sass)
- 238. Revadim seal
- 239. Abydos, temple of Seti I: Pharaoh presenting a statuette of the goddess
Maat to Osiris; Isis stands behind the god (*Abydos* III, pl. 4)
- 240. Scarab from Tell el-Ajjul (Keel 1982, 522, fig. 7)



234:3



234:4



235



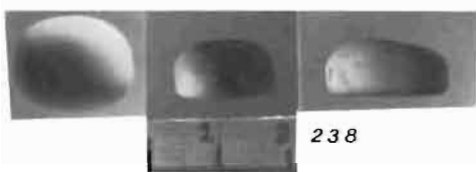
236



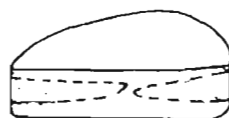
impression



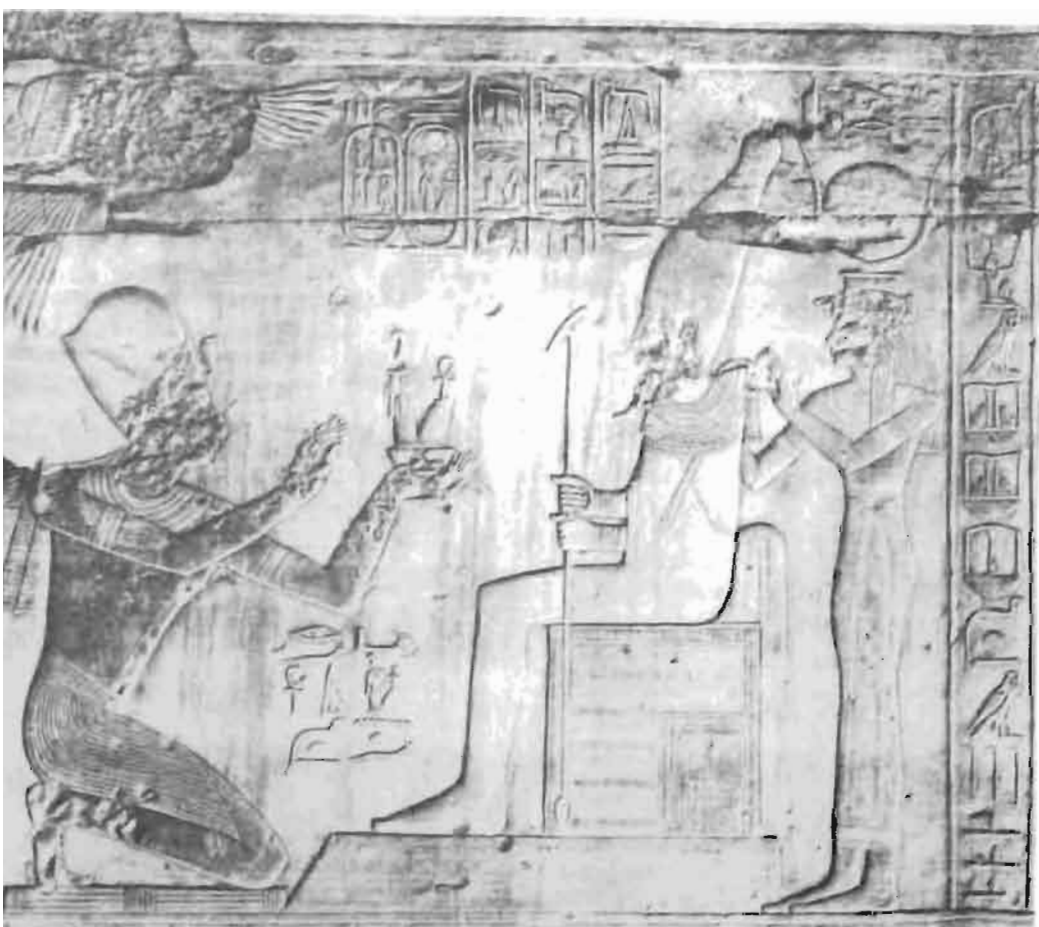
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237

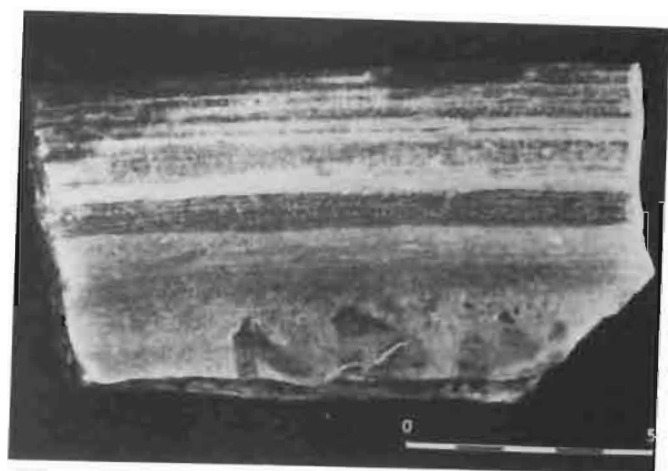
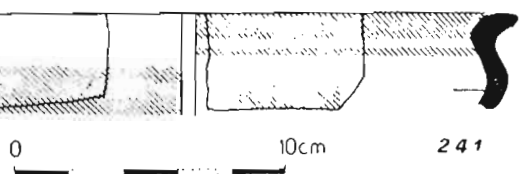
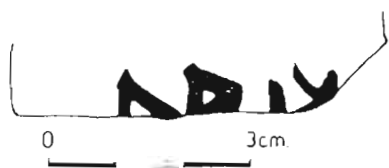


239

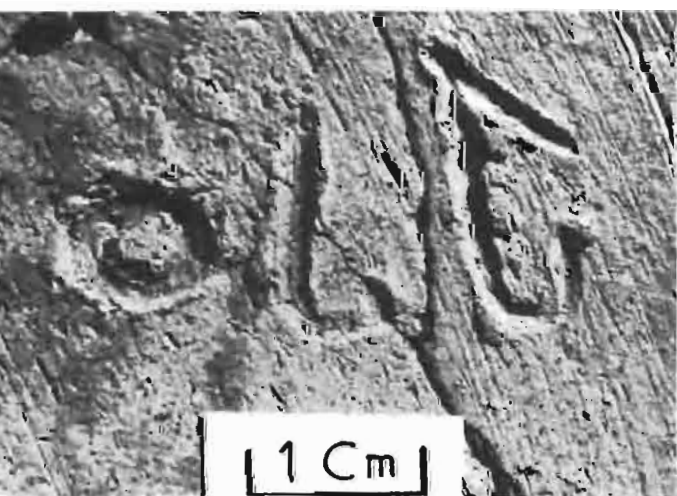
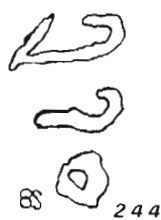


240

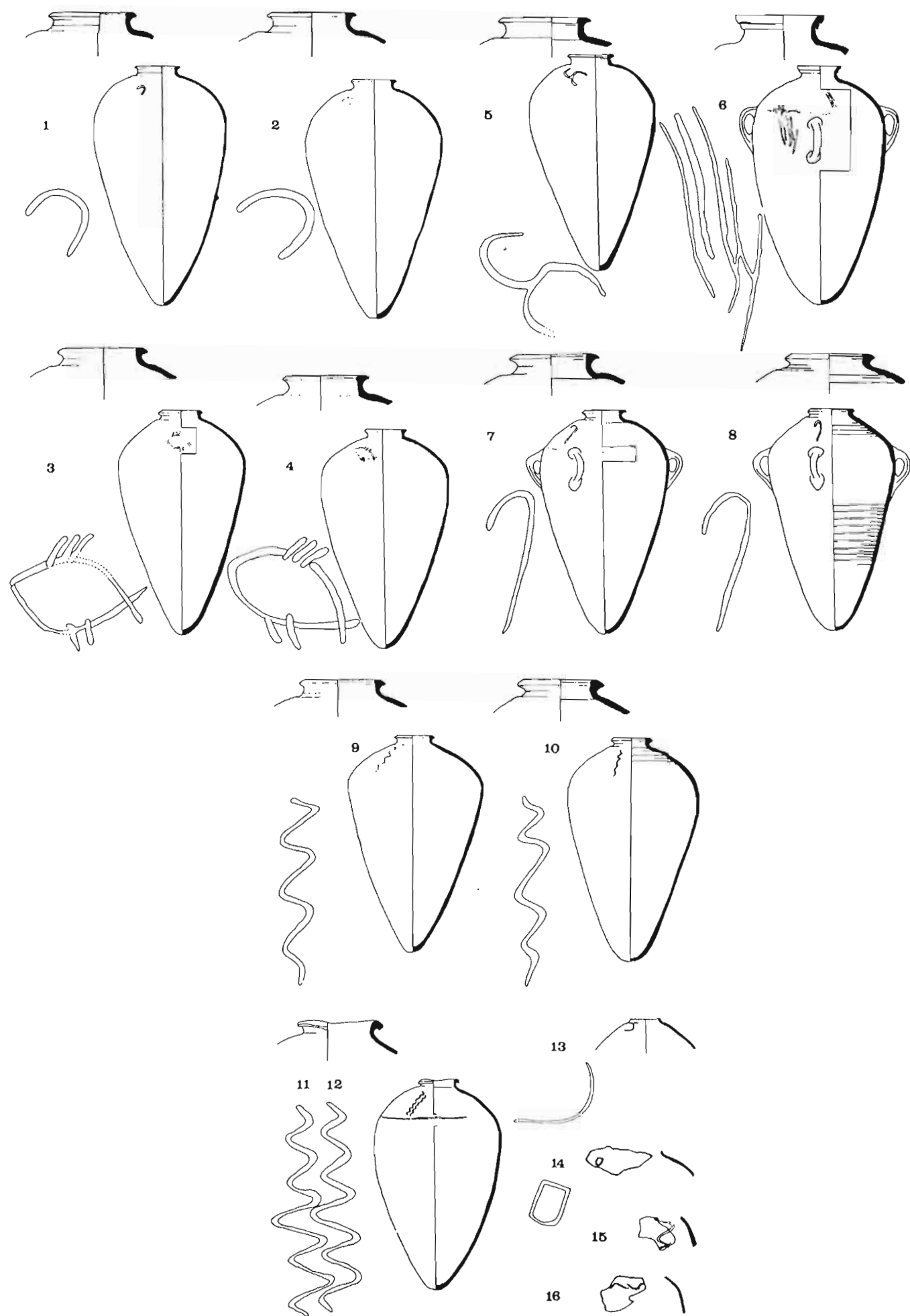
- 241. Lachish, bowl with traces of inscription (Ussishkin 1978, fig. 5)
- 242. Lachish, bowl with traces of inscription (Ussishkin 1978, pl. 9:2)
- 243. Tell el-Hesi sherd (Bliss 1894, fig. 194)
- 244. Tell el-Hesi sherd inscription, from the original (B. Sass)
- 245. Tell el-Hesi sherd, reconstructed drawing of bowl (by courtesy of the Institute of Archaeology, University of London)
- 246. Tell el-Hesi sherd (by courtesy of the Institute of Archaeology, University of London)
- 247. Tell el-Hesi sherd, detail of inscription (by courtesy of the Institute of Archaeology, University of London)



242



248. Gezer jars (Seger 1983, 484, 486, 488)



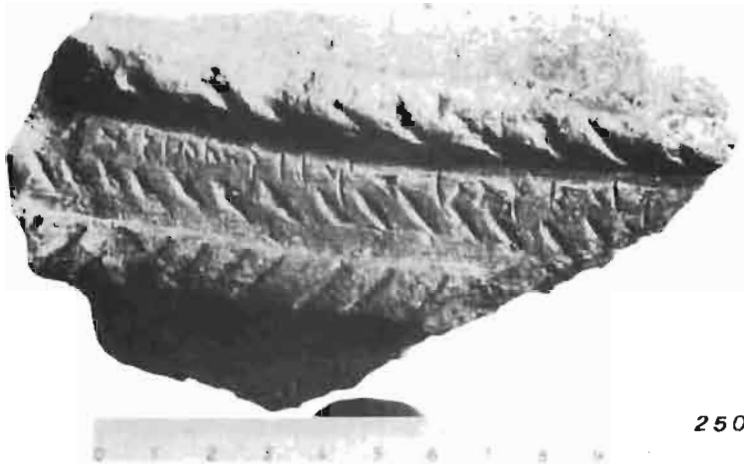
- 249. Tell Jisr sherd (Mendenhall 1971, 15)
- 250. Tell Jisr sherd (Mendenhall 1971, pl. I)
- 251. St. Louis seal (Goetze 1953, fig. 1)
- 252. Tel Halif handle
- 253. Kamid el-Loz sherds (Mansfeld 1970, fig. 7)
- 254. Kamid el-Loz sherds (Mansfeld 1970, fig. 8)

Handwritten text at the top left of the page, possibly a list or inventory number: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

249



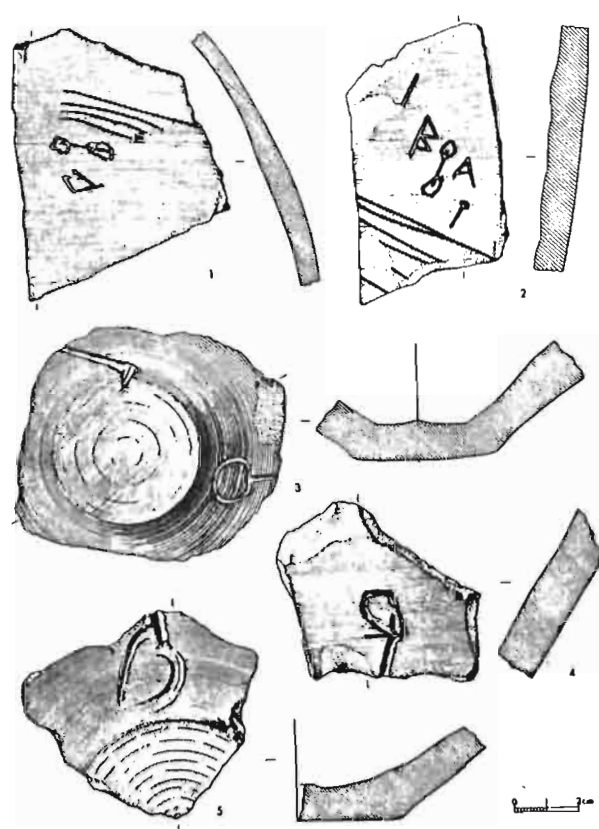
251



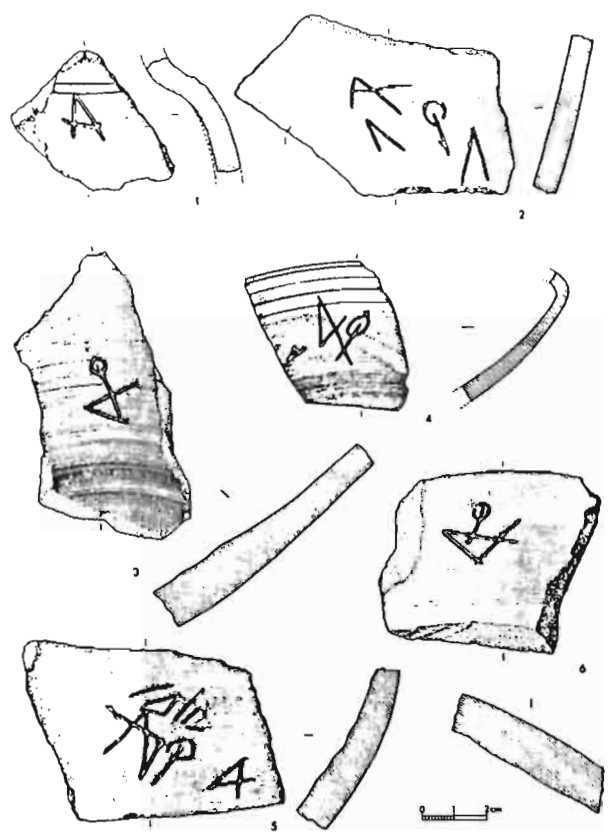
250



252



253



254

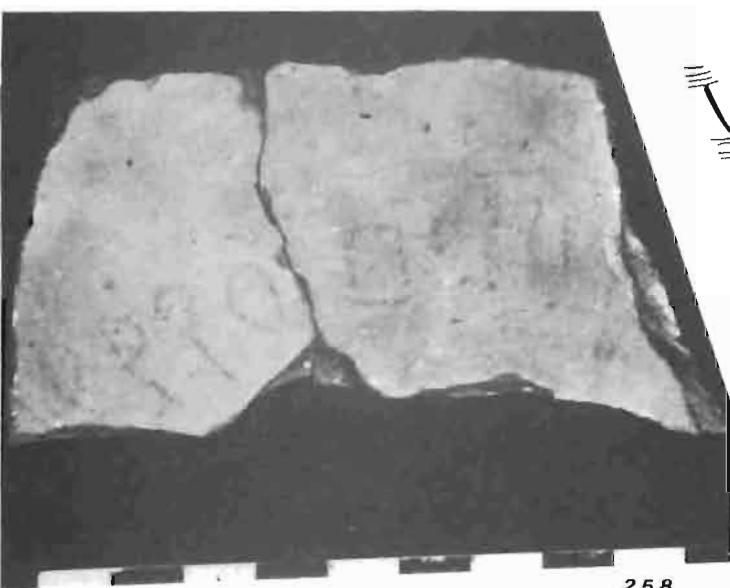
- 255. Kamid el-Loz sherds (Mansfeld 1970, fig. 3)
- 256. Kamid el-Loz sherds (Mansfeld 1970, fig. 4)
- 257. Lachish 'bowl No. 2' (*Lachish* II, 55)
- 258. Lachish 'bowl No. 2'
- 259. Lachish sherds No. 6 (by courtesy of the Trustees of the British Museum)
- 260. Lachish 'censer' and lid (*Lachish* II, pls. 44:1 and 72:633)
- 261. Lachish 'censer' and lid (*Lachish* II, pl. 45:4)



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255



258

Handwritten transcription of cuneiform text, likely from fragment 257, showing several lines of script.

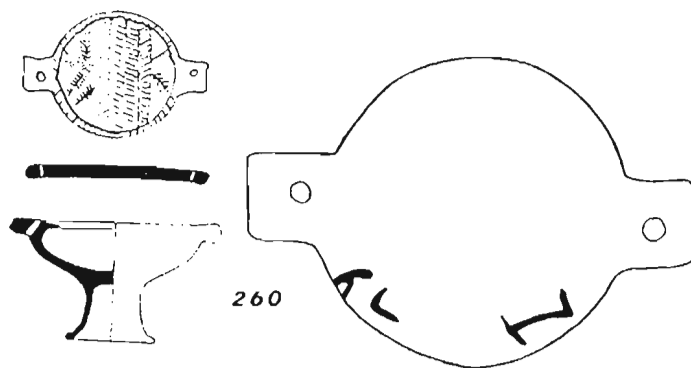
257



259



261

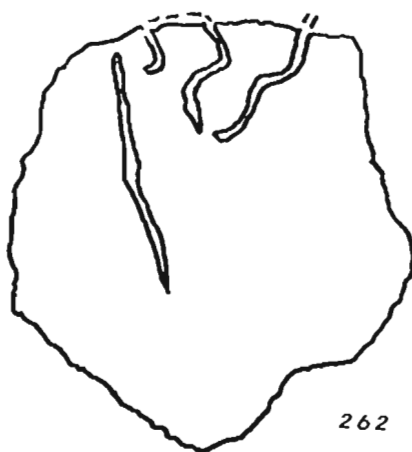


260

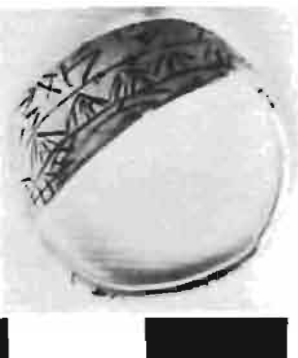
262. Kh. Tannin sherd (B. Sass)
263. Kh. Tannin sherd (Courtesy A. Zertal, Institute of Archaeology, Haifa University)
264. Megiddo ring (*Megiddo Tombs*, 174)
265. Megiddo ring
266. Megiddo ring
267. Tell el-Ajjul, finds from Tomb 1109:
 1. *Ancient Gaza* II, pl. XXX:37A5; scale of cup 1:6, of inscription, 1:1
 2. *CPP*, type 10K2 (from *Gezer* III, pl. 71:26), scale 1:6
 3. *CPP*, type 91F2' (from *Gezer* III, pl. 74:11), scale 1:6
 4. *Ancient Gaza* II, pl. VII:61; steatite, scale 1:1
 5. *Ancient Gaza* II, pl. XXV:95; material(?), scale 3:4
 6. Petrie's inventory in IDAM; paste, scale 1:1
268. Ajjul cup (by courtesy of the Institute of Archaeology, University of London)



263



262



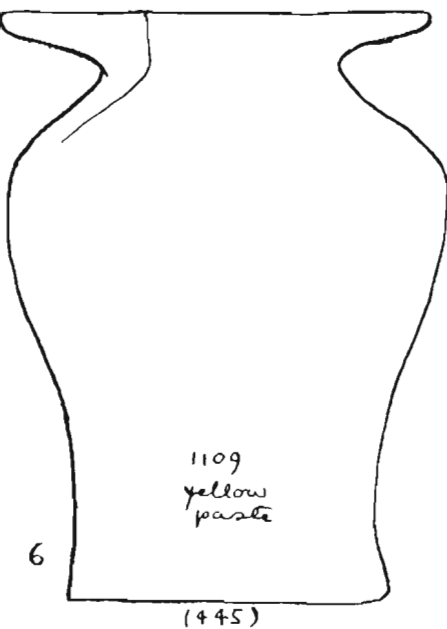
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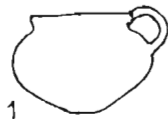


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6

(445)

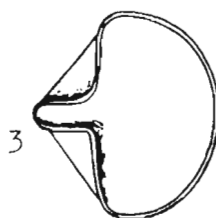


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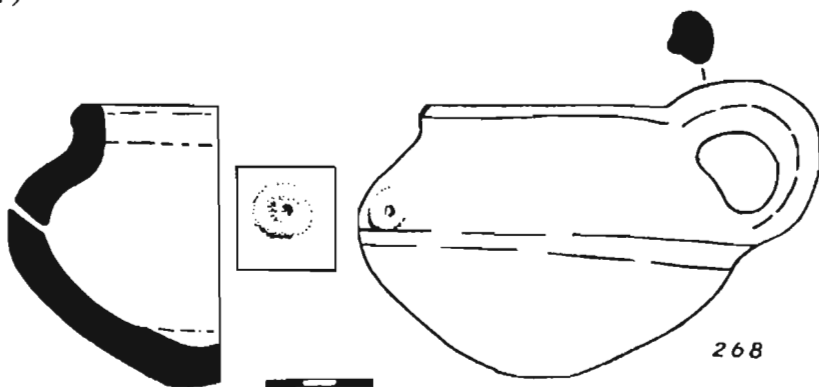
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5



268



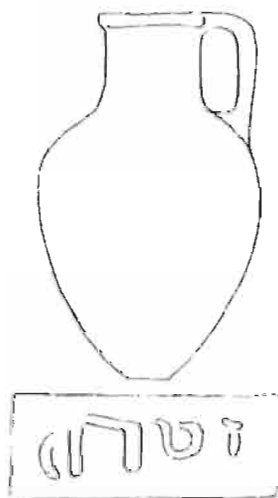
- 269. Ajjul cup (by courtesy of the Institute of Archaeology, University of London)
- 270. Ajjul cup (by courtesy of the Institute of Archaeology, University of London)
- 271. Ajjul jug (*Ancient Gaza* V, pl. XXVI:38H2')
- 272. Ajjul handle
- 273. Akko handle (Dothan 1976, fig. 14)
- 274. Tell Beit Mirsim sherd (*TBM* I, 74)
- 275. Tell Beit Mirsim sherd (*TBM* III, pl. 60:1)



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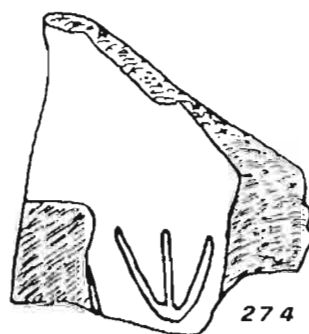
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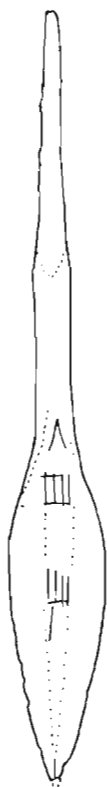


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- 276. Stone from the Arava (Naveh 1975, fig. 2)
- 277. Stone from the Arava
- 278. Milik arrowhead No. 1 (Milik 1961, fig. 1:1)
- 279. Milik arrowhead No. 1 (Milik 1961, pl. I:1)
- 280. Byblos 'enigmatic' inscription (Dunand 1945, fig. 47)
- 281. Byblos 'enigmatic' inscription (Dunand 1945, pl. XIV:B)
- 282. Kahun heddle-jack (the object – Petrie 1890, pl. XXVII:85; the signs –
Petrie 1921, 1)



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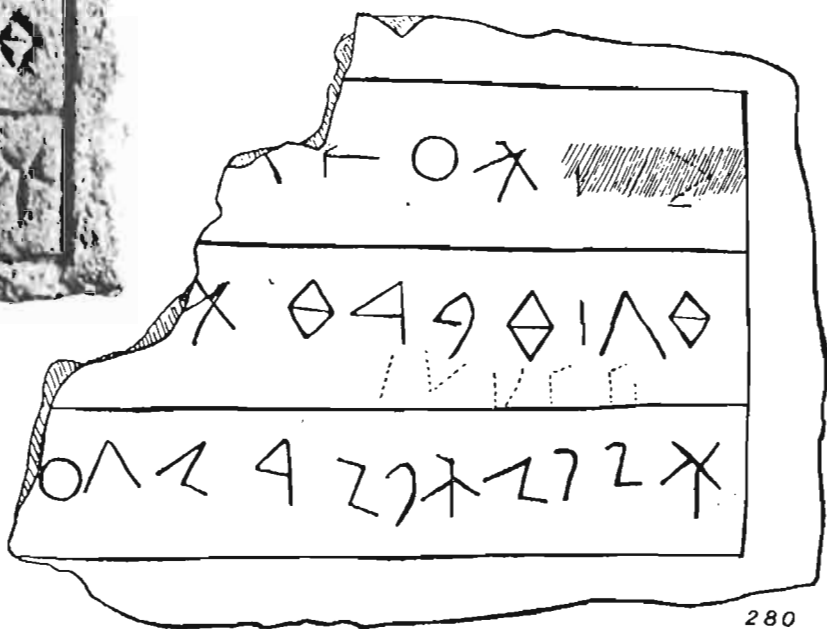
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283. Kahun seal (base of the seal and the signs – Petrie 1921, 1; side view –
Petrie 1926, pl. XXVI:72B)
284. Kahun seal (Petrie 1926, pl. VI)
285. Kahun ostrakon (Petrie 1921, 1)
286. Valley of the Queens ostrakon (Leibovitch 1940, pl. XVI)
287. Steatite vessel from Cyprus (Masson and Sznycer 1972, pl. XXII:2)
288. Steatite vessel from Cyprus (Masson and Sznycer 1972, pl. XXI:2)
289. Sinai 527 (*Sinai* I, 1952, pl. XCIV)
290. Sinai 527 (B. Sass)



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impression

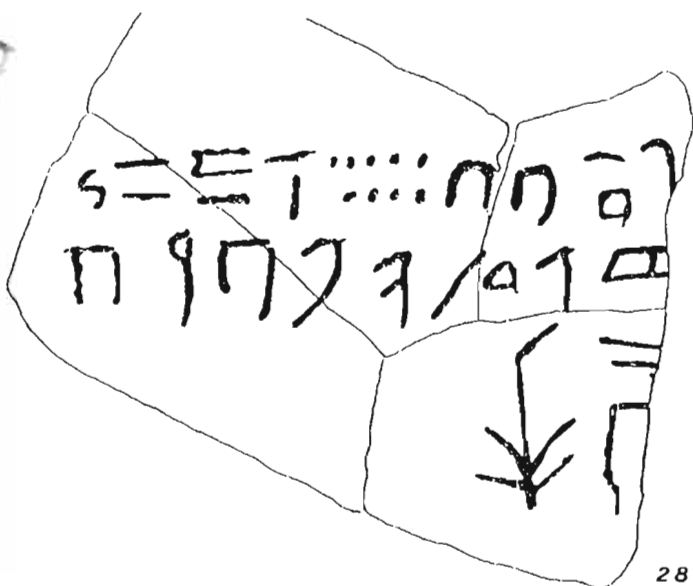
SVVVC

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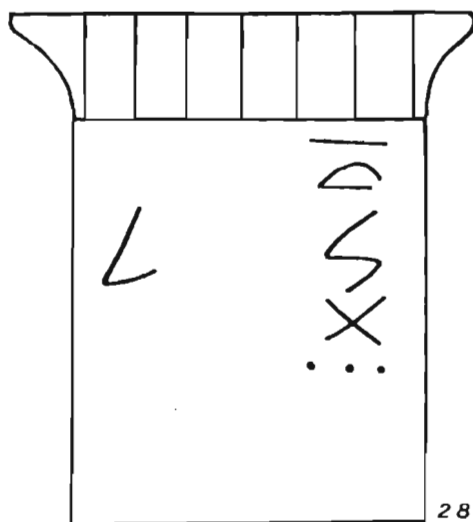
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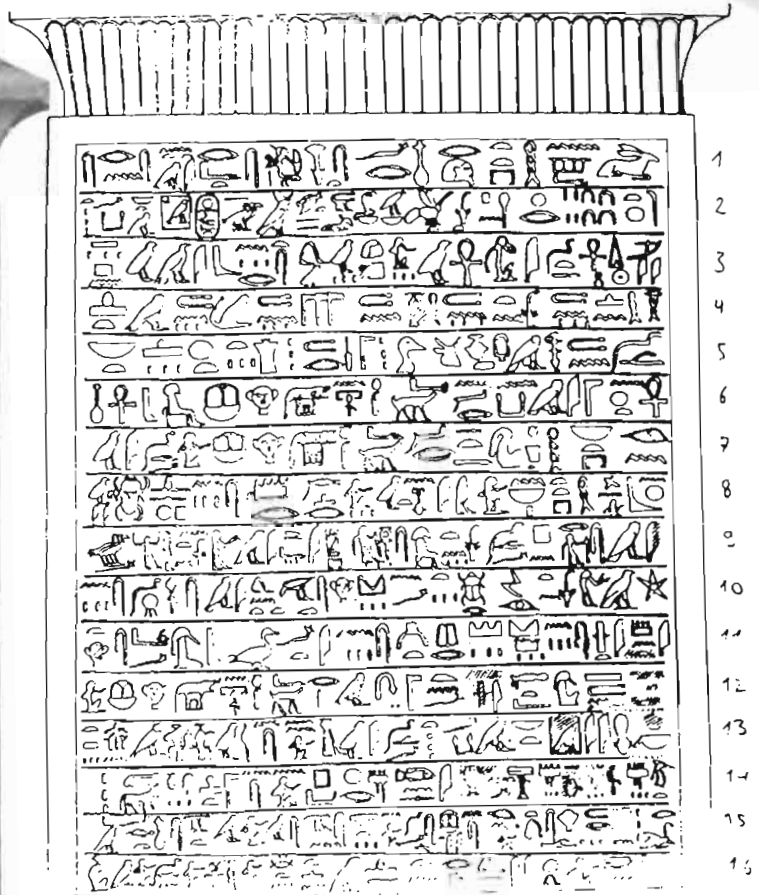
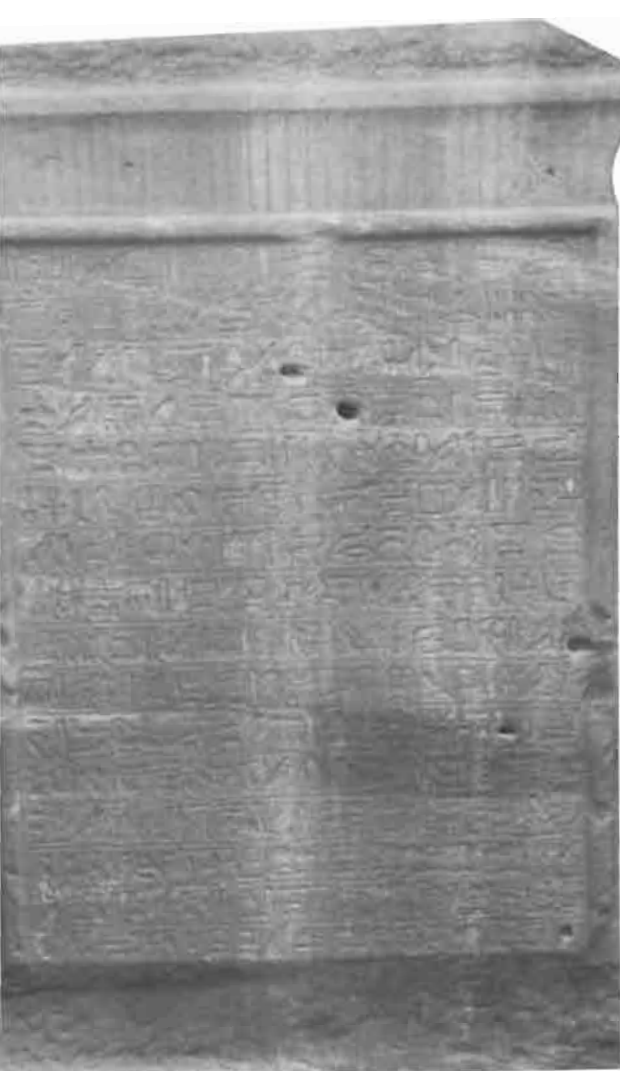


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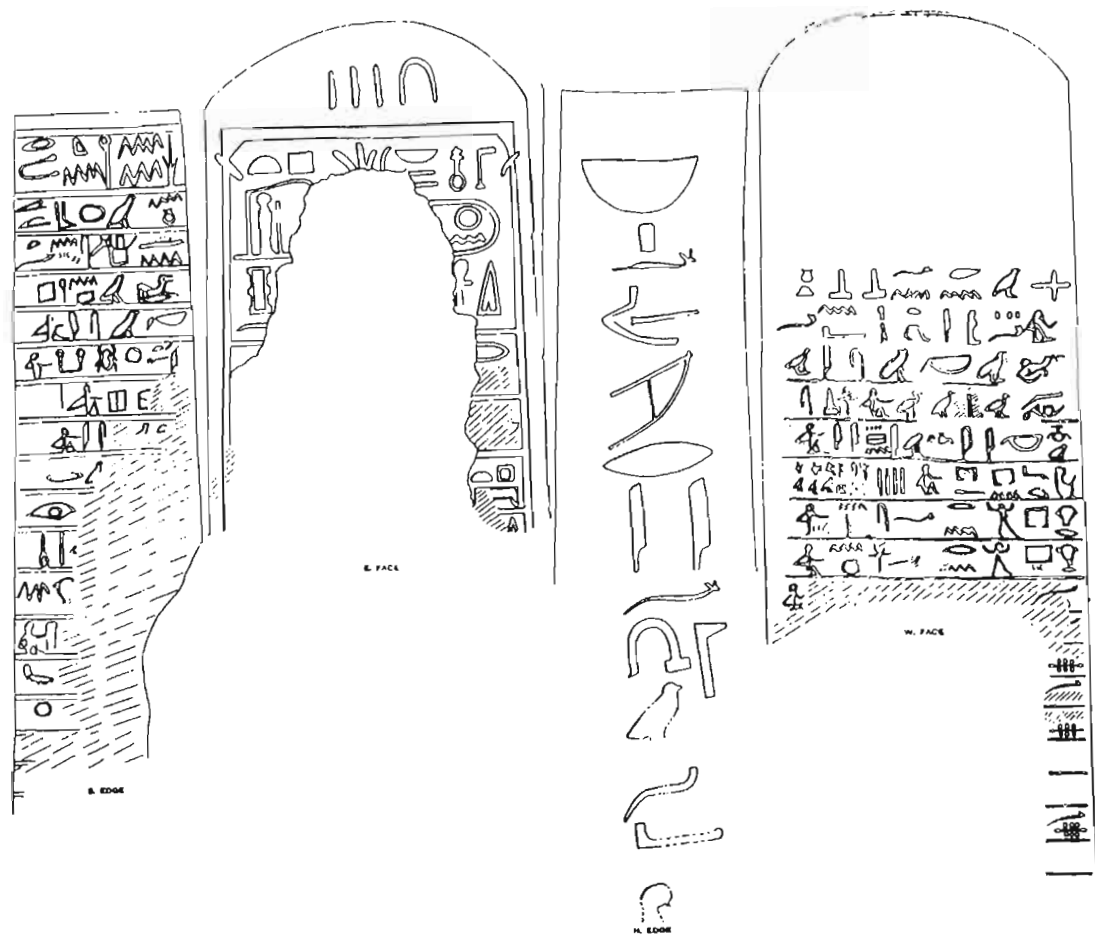
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291. Sinai 53 (*Sinai* I, 1952, pl. XVII)
292. Sinai 53 (by courtesy of the Institute of Archaeology, Tel Aviv
University)
293. Sinai 92 (*Sinai* I, 1952, pl. XXVI)



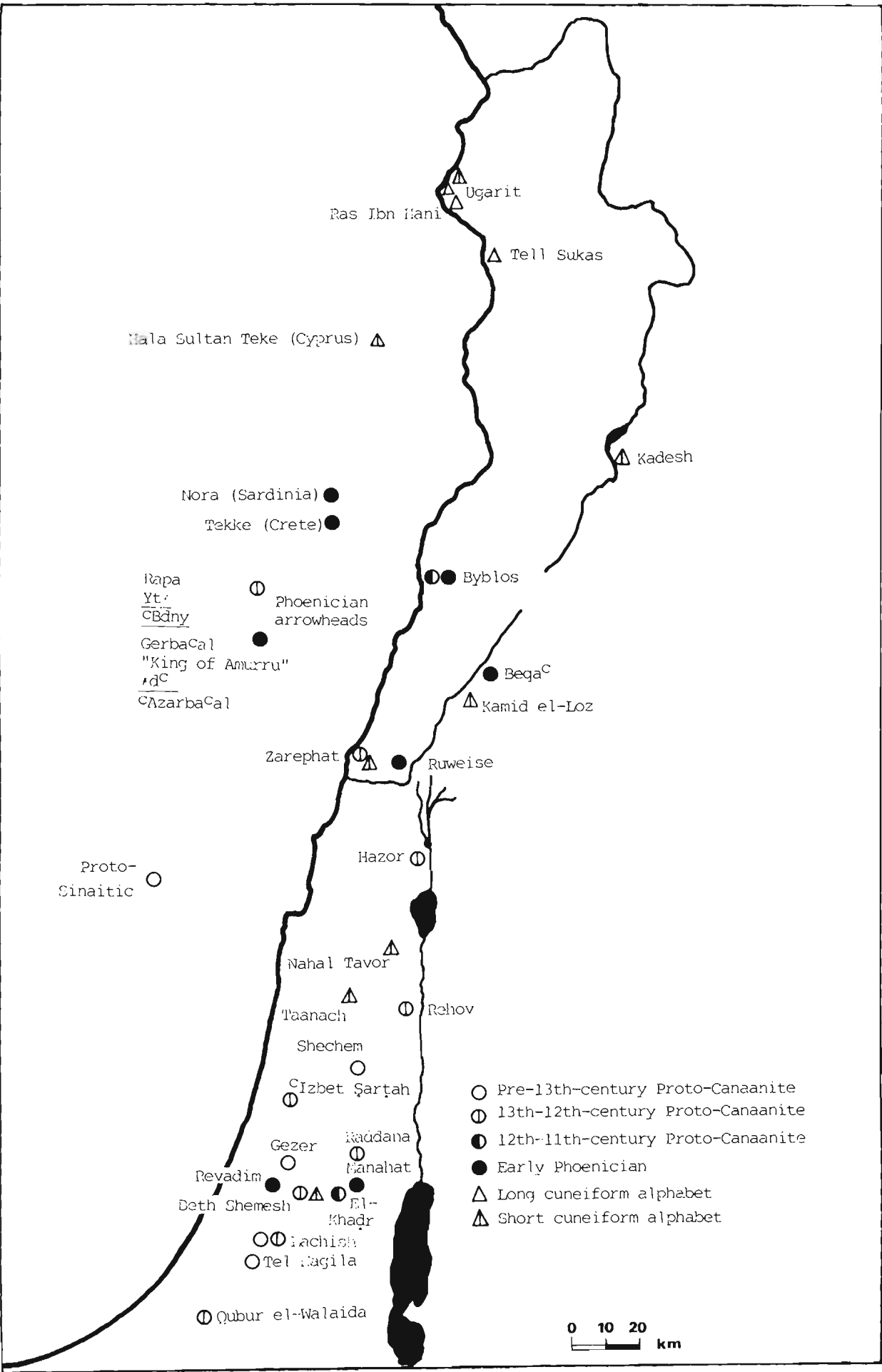
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294. The Eastern Mediterranean: distribution of Proto-Canaanite, early Phoenician and alphabetic cuneiform inscriptions



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