




## Research Article

# Early alphabetic writing in the ancient Near East: the ‘missing link’ from Tel Lachish

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The origin of alphabetic script lies in second-millennium BC Bronze Age Levantine societies. A chronological gap, however, divides the earliest evidence from the Sinai and Egypt—dated to the nineteenth century BC—and from the thirteenth-century BC corpus in Palestine. Here, the authors report a newly discovered Late Bronze Age alphabetic inscription from Tel Lachish, Israel. Dating to the fifteenth century BC, this inscription is currently the oldest securely dated alphabetic inscription from the Southern Levant, and may therefore be regarded as the ‘missing link’. The proliferation of early alphabetic writing in the Southern Levant should be considered a product of Levantine–Egyptian interaction during the mid second millennium BC, rather than of later Egyptian domination.

Keywords: Israel, Lachish, Late Bronze Age, early alphabet, epigraphy, radiocarbon dating

## Introduction

It is often assumed that early alphabetic writing was developed by members of a Semitic-speaking, Western Asiatic population (‘Canaanites’) who were involved in Egyptian mining operations around Serabit el-Khadim in the Sinai Peninsula (Sass 1988; Goldwasser 2006; Na’aman 2020). Later, this early alphabet would spread to the Southern Levant, where it was transformed into the Phoenician alphabet, from which the Greek alphabet subsequently derived (Albright 1969; Naveh 1987; Sass 1988; Goldwasser 2006; Hamilton 2006, 2014; Morenz 2011; Daniels 2017; Burlingame 2019; Na’aman 2020). This interpretation builds upon the discovery of a number of early alphabetic inscriptions that were discovered in Sinai from the early twentieth century AD onwards (Petrie 1906; Leibovitch 1934), at and around

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the temple of Hathor at Serabit el-Khadim (Figure 1). In an influential article, Alan Gardiner demonstrated that these inscriptions were examples of early alphabetic writing derived from Egyptian hieroglyphs (Gardiner 1916; see also Gardiner 1962).

In 1998, two further early alphabetic inscriptions were discovered in the Wadi el-Hol, in the western desert of Egypt, and tentatively dated to the late Middle Kingdom (late Twelfth to early Thirteenth Dynasties; late nineteenth/early eighteenth century BC) (Darnell *et al.* 2005). These inscriptions demonstrate that early alphabetic writing was not confined to Sinai, but was also used in the Nile Valley. While most scholars agree that these inscriptions are indeed examples of early alphabetic writing (Hamilton 2014: 31–34)—perhaps using Egyptian vocabulary (Wimmer & Wimmer-Dweikat 2001)—others have suggested that they can also be understood as ‘proper’ Egyptian hieroglyphic inscriptions (Morenz 2011: 171–75). Another example of probable early alphabetic writing has been recently discovered on an ostrakon (a potsherd used as a writing surface) from a tomb in western Thebes (TT 99) and dated palaeographically to the fifteenth century BC (Haring 2015; Fischer-Elfert & Krebernik 2016; Schneider 2018).

The date for the development of early alphabetic script is still disputed (Lemaire 2017; Haring 2020). It was originally dated by Gardiner (1916: 13–14) to the Twelfth Dynasty (early second millennium BC)—a period of intensive Egyptian mining activity around Serabit el-Khadim. A date after 1500 BC (in the Eighteenth Dynasty), or even later, was soon suggested (Leibovitch 1934, 1963) and accepted by several other scholars (e.g. Albright 1948, 1969; Naveh 1987). Lemaire (2017: 106) suggests that early alphabetic writing was developed during the “period of Hyksos domination in the south of Palestine or in the Egyptian Delta around the 18<sup>th</sup>–17<sup>th</sup> century BCE”. Benjamin Sass (1988), who in the late 1980s advocated an early date, withdrew his original position in the early 2000s, arguing that “the alphabet was born in the 14<sup>th</sup> or early 13<sup>th</sup> century [. . .] surfacing in the Levant shortly thereafter” (Sass 2004–2005: 157).

Farther north, the earliest occurrence of early alphabetic writing in the Southern Levant is also disputed. Scholars long assumed that the script was introduced to the region as early as the transition from the Middle to the Late Bronze Age (*c.* 1600/1550 BC), on the basis of several inscribed objects (see below for details of the controversy) (e.g. Naveh 1987; Sass 1988). Sass later (2004–2005: 157), however, argued that “no pre-14<sup>th</sup>-century, perhaps no pre-1300 BC alphabetic inscriptions from Palestine can be pointed out with any confidence”. Na’aman (2020) also recently dated the spread of alphabetic writing to the Southern Levant to not before Late Bronze II (fourteenth century BC), and argued that its development in the Southern Levant was linked to scribal activities in the Egyptian centres of the Late Bronze Age.

If we accept an early Twelfth Dynasty date for the inscriptions in Sinai, and Twelfth to early Thirteenth Dynasty dates for those from Wadi el-Hol, then this leaves a significant temporal gap between these inscriptions and the first securely dated early alphabetic inscriptions in the Southern Levant in the fourteenth/thirteenth centuries BC. A recently discovered early alphabetic inscription from Tel Lachish now fills this gap and sheds new light on disputed examples of early alphabetic writing that have previously been dated to the late Middle Bronze Age.



Figure 1. Map of sites mentioned in the text (figure by M. Börner, Austrian Academy of Sciences).

## Archaeological context and dating

Tel Lachish, located in the Shephelah region in modern-day Israel, is one of the most prominent Bronze and Iron Age sites of the Southern Levant. Excavations at the site have unearthed substantial Late Bronze Age (c. 1600/1550–1200 BC) and Iron Age (c. 1200–586 BC) remains, yielding imports from Egypt, Cyprus and the Aegean that attest to the regional importance of the site. Late Bronze Age Lachish is also mentioned in Egyptian sources, such as Papyrus Hermitage 1116A from the time of Amenhotep II (c. 1427–1401 BC), which mentions an envoy from Lachish coming to the Egyptian court (Epstein 1963), and figures prominently in the Amarna letters, the cuneiform correspondence between the major powers of the time found at Tell el-Amarna in Egypt (Rainey 2015). An Austrian team renewed excavations at Tel Lachish in 2017 (Streit *et al.* 2018). Two excavation areas are currently under investigation (Figure 2): area P, located to the north of the Iron Age Judean Palace-Fort, and area S at the western slope of the mound. Both of these areas were originally excavated in the 1970s and 1980s by the Tel Aviv University expedition (Ussishkin 2004a), and have now been re-opened in order to deepen our understanding of the Middle and Late Bronze Age strata, with the aid of high-resolution AMS radiocarbon-dating.

The new early alphabetic inscription was found during the 2018 excavation season in area S, in locus L1114 of stratum S-3b. This area was originally excavated between 1973 and 1987 by the Tel Aviv team, who uncovered a sequence of Iron Age and Late Bronze Age occupation levels (Table 1) (Barkay & Ussishkin 2004a & b).

Stratum S-3 is dominated by a monumental structure (building 100), with 1m-wide mud-brick walls set on unusually deep stone foundations. The southern wall (L1027) runs for 16m east–west, although most of the building lies beyond the northern section of the trench. Building 100 attests several phases of re-use, the latest of which was excavated by the Tel Aviv team (Barkay & Ussishkin 2004b: fig. 8.13). The Austrian expedition labels this last use phase as stratum S-3a, as two earlier sub-phases have now been identified: strata S-3b and S-3c. During each sub-phase, small domestic units were built immediately to the south of building 100, abutting wall L1027 (Figure 3). Excavations in 2019 revealed that building 100 was not an isolated monumental structure, but rather formed an integral part of what can be understood as a fortification system, including a city wall (L1220) and tower (L1127/L1163/L1227) (Figure 3).

The early alphabetic inscription ('B10969' on Figure 4) was found during excavation of deposits immediately to the south of wall L1027, close to the corner with city wall L1220, at a level (255m asl) near to its (wall L1220) uppermost preserved stones (this was prior to recognition and exposure of the stratum S-3c 'fortification'). The inscription was undoubtedly deposited within the stratum S-3 phase, as it was sealed 0.5m below two stratum S-3a walls (L1162 and L1043) and the fragmentary stratum S-3a surface that was removed by the earlier Tel Aviv excavations (Barkay & Ussishkin 2004b: fig. 8.13).

The inscribed sherd was found at the boundary of three distinct loci (L1150, L1117 and L1114—a fill that overlies the other two), while exposing and sampling burnt lens L1150 for radiocarbon-dating. Although it is uncertain whether the sherd was deposited together *with* the organic material in lens L1150, it was certainly in direct contact with the burnt layer, and





Figure 2. Map of Lachish, with the excavation areas indicated (figure by A. Woitzuck, Austrian Academy of Sciences).

Table 1. Late Bronze Age stratigraphy of area S; the stratigraphic position of the find context (S-3b) is highlighted; LB = Late Bronze, IA = Iron Age.

Level	Description	Cultural period	Correlations to other areas
VI	Pillared building	IA IA/LB III	Acropolis temple
VII	Domestic buildings	LB IIB	Fosse temple III
S-1	Fragmentary walls and floor	LB IIA	Fosse temple II
S-2	Laminated feature across whole area	LB IIA	Fosse temple I–II
S-3a	Re-use of building 100; external units to the south	LB IB	
S-3b	Further re-use of building 100; external units to the south	LB IB	Fosse temple I
S-3c	Monumental architectural complex including building 100 and city wall	LB I	

was therefore deposited at essentially the same time. Thus, the date of deposition of the sherd can be determined using radiocarbon-dating. Two measurements on separate barley grains from L1150 were analysed at the Groningen and ETH Zürich AMS laboratories (GrM-17566 and ETH-96577). The results are plotted in Figure 5, with both falling definitively in the fifteenth century BC, and most likely before its final quarter.

Over the past three years of excavation in area S, a detailed and robust radiocarbon sequence has been developed for strata S-3 and S-2, using short-lived material from a long series of *in situ* burnt layers (Webster *et al.* 2019). Bayesian modelling shows that the earliest stratum (S-3a) exposed by the Tel Aviv excavations dates to the fifteenth century BC, approximately 100 years earlier than previously thought (late fourteenth century BC; Ussishkin

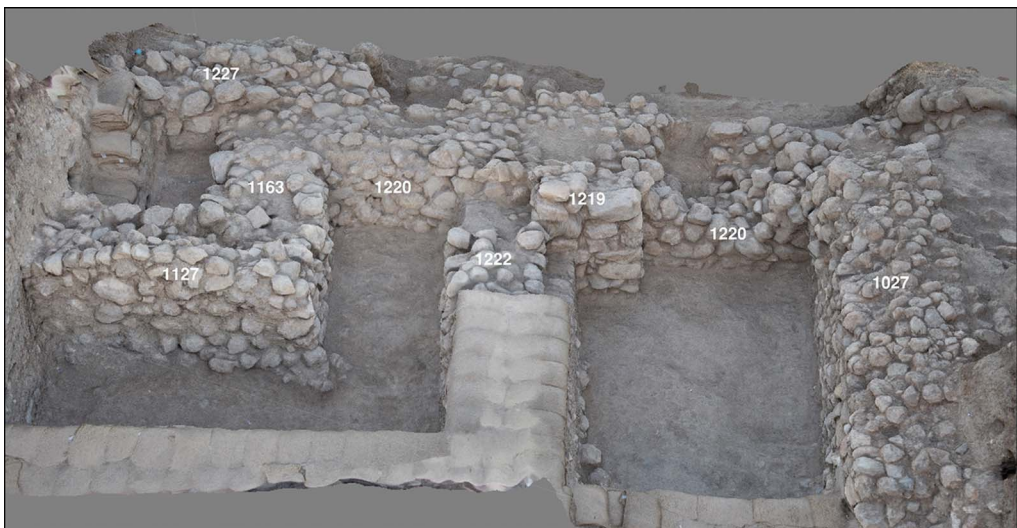


Figure 3. Area S, looking west. Early Late Bronze Age fortification, with the southern wall of building 100 (L1027) on the right side (figure by J. Dye & L. Webster, Austrian Academy of Sciences).

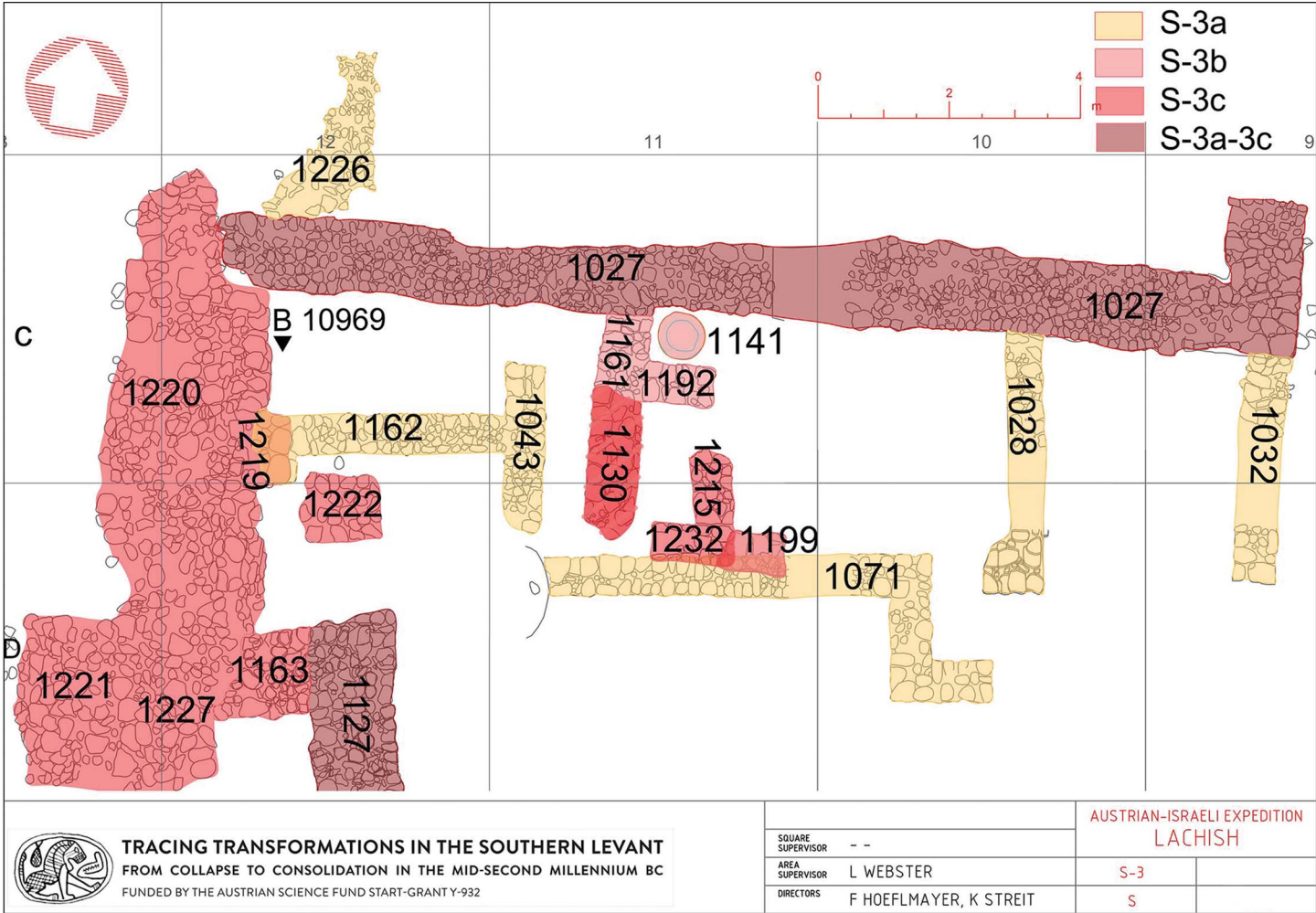


Figure 4. Plan of stratum S-3 in area S, with the findspot of the early alphabetic inscription indicated (B10696) (figure by A. Woitzuck, Austrian Academy of Sciences).



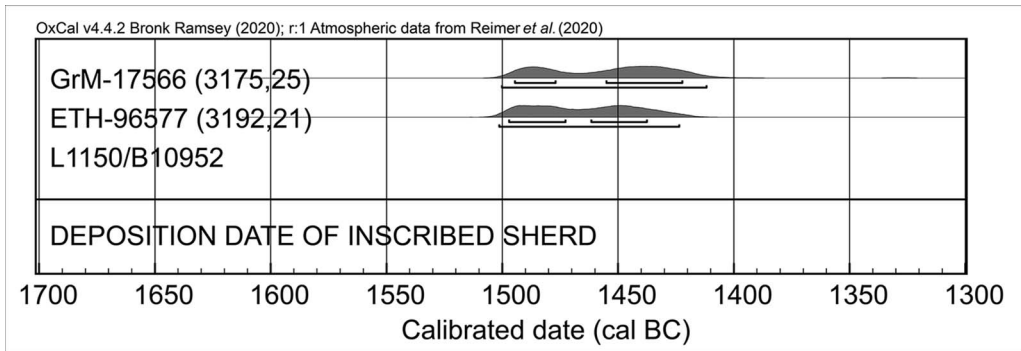


Figure 5. Radiocarbon dates associated with the early alphabetic inscription (dates calibrated using OxCal v.4.4.2 and the IntCal20 calibration curve; Bronk Ramsey 2009; Reimer et al. 2020) (figure by L. Webster, Austrian Academy of Sciences).

2004b; Yannai 2004). Figure 6 summarises the relevant outcomes of the most current Bayesian model, which includes 27 measurements and more than 15 sequential layers within the fine stratigraphy of strata S-2–3. Calculated transition boundaries are plotted, rather than individual dates, with the exception of GrM-17566 and ETH-96577, which have been

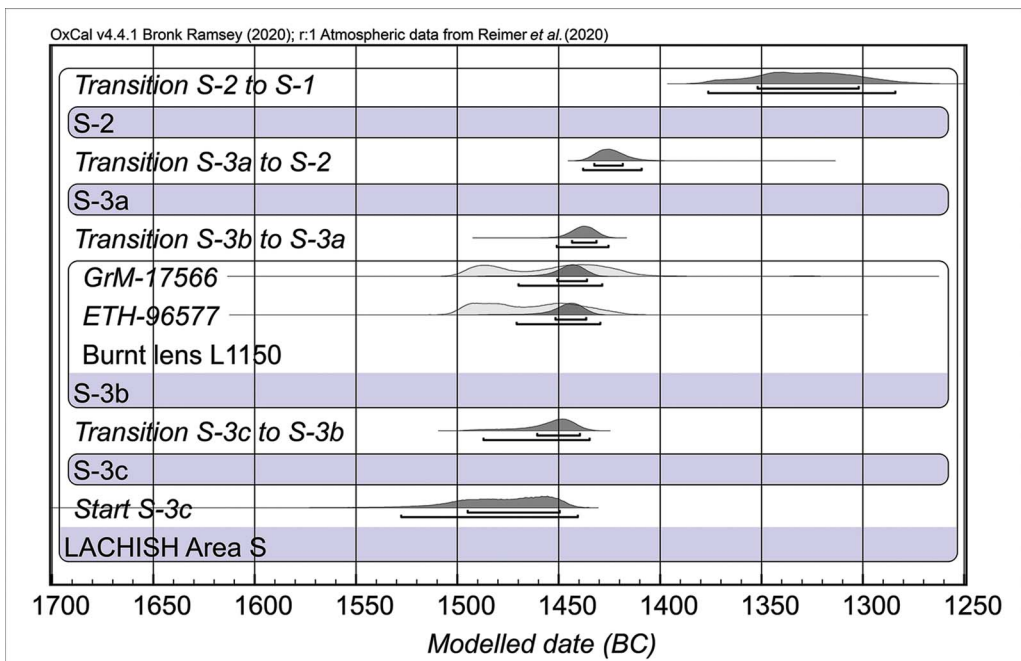


Figure 6. Radiocarbon Bayesian model for area S highlighting the constraining effect on the inscription's deposition date: light-shaded areas represent individual calibrated radiocarbon determinations; dark-shaded areas represent modelled calibrated radiocarbon determinations based on the prior information (the stratigraphic sequence) entered into the model (modelled using OxCal v.4.4.2 and the IntCal20 calibration curve; Bronk Ramsey 2009; Reimer et al. 2020) (figure by L. Webster, Austrian Academy of Sciences).



included to highlight the constraining effect on L1150 (see Figure 6). Stratum S-3b and the find context of the inscribed sherd are constrained close to the mid fifteenth century BC (1460–1430 BC, 1σ; 1485–1425 BC, 2σ), providing a remarkably precise *terminus ante quem* for the inscription. The newly identified stratum S-3c—perhaps the phase from which the inscription itself originates—dates to the first half of the fifteenth century BC, which is contemporaneous with the city wall and early life of building 100.

## Inscription and reading

The inscribed sherd is an approximately 40 × 35mm rim fragment from a Cypriote White Slip II milk bowl (Figure 7; Åström 1972: 447–57). This ware first appeared during Late Bronze IB (e.g. Gittlen 1981: 50–51), although it only became popular during Late Bronze IIA (Artzy 2019: 342). At Tel Lachish, White Slip II ware was encountered in Fosse temple I (Tufnell *et al.* 1940: 83, pl. XLIII B; Singer-Avitz 2004), and appears in substantial quantities from Strata S-3 onwards (Bunimovitz 2004).

The inner surface of the sherd's rim is inscribed in dark ink, with letters written diagonally. Two lines each containing three letters can be discerned. Two additional characters are visible on the right side of the upper line, and another is visible between the two lines. Our suggested reading for line one (the top line) is from right to left. The first letter can be identified as 'ayin (ʿ), which is based on the Egyptian hieroglyph 'eye' (Gardiner Sign List D4; Sass 1988: 126–27; Hamilton 2006: 180–88; Goldwasser 2016: 131–32). As in most early alphabetic inscriptions from the Southern Levant, the letter is shaped like a circle, resembling an iris with the pupil missing. The second letter can be identified as *bet* (ב), which is based on the Egyptian hieroglyph 'house' (Gardiner Sign List O1; Sass 1988: 111–12; Hamilton 2006: 38–52; Goldwasser 2016: 129). The letter has a rectangular shape with one corner open. The third letter can be read as *dalet* (ד), based on the Egyptian hieroglyph 'door' (Gardiner Sign List O31; Hamilton 2006: 61–75; Goldwasser 2016: 129). The



Figure 7. Early alphabetic inscription on a White Slip II rim sherd (figure by J. Dye, Austrian Academy of Sciences).

suggested reading for this line may therefore be עבד, meaning ‘slave’, and could be part of a personal name. Names with the component <sup>c</sup>bd (slave) are very common in all Semitic languages, generally with a theophoric (bearing the name of a god) element of a local divinity (e.g. Tigay 1986; Golub 2020).

The suggested reading for line two is also from right to left. The first letter can be identified as *nun* (נ), which derives from the Egyptian hieroglyphs ‘horned viper’ and/or ‘cobra’ (Gardiner Sign List I9 and I10; Sass 1988: 125–26; Hamilton 2006: 154–71; Goldwasser 2016: 131). This letter can also be identified between lines one and two, and on the right side of line one. The second letter can be identified as *pe* (פ). While it is not entirely certain from which sign this character is derived, the hieroglyph for ‘corner’ (Gardiner Sign List O38) has been suggested (Sass 1988: 128; Hamilton 2006: 188–96). Goldwasser (2016: 132) argues that this sign is uncommon in Middle Kingdom inscriptions from Sinai, instead suggesting that the sign represents a building tool (Goldwasser 2016: 132). The third letter can be identified as *tav* (ת), and it is again unclear on which sign the character is based. It could be the hieroglyph for ‘crossed planks’ (Gardiner Sign List Z11; Hamilton 2006: 246–53), but some have also suggested an independent origin (Sass 1988: 133; Goldwasser 2016: 134). The suggested reading for line two is therefore נפת, which in Hebrew means ‘honey’ or ‘nectar’. If read from left to right—תפנ—this term could be a verb from the root פני (‘to turn’), or part of an unknown name.

From a typological perspective, the letters seem to be of a somewhat later date to those from the inscriptions from Serabit el-Khadim, as suggested by the circle-shaped eye without the pupil and the relatively developed letter *pe*. Yet the letters of this inscription seem to be earlier than those from the later Late Bronze Age, like the Lachish Ewer (see below). A date at the beginning of the Late Bronze Age therefore seems reasonable, and is supported by the radiocarbon data mentioned above.

## Historical context

The newly discovered inscription from Tel Lachish is currently the earliest securely dated example of early alphabetic writing in the Southern Levant. In order to assess the importance of this find, we briefly review the other potential early alphabetic examples from the area.

A disputed contender for the earliest example is a scarab from Tell Abu Zureiq, in the Jezreel Valley. Found in a Middle Bronze Age tomb excavated by Meyerhof (1989), the scarab was dated to the Thirteenth to Fifteenth Dynasties (Giveon 1988: 22; Keel 1997: 17). Its base depicts a man and four signs, which Giveon (1988: 22) originally interpreted as Egyptian hieroglyphs. Kitchen (1989) suggested that these signs could be read as early alphabetic characters, an interpretation rejected by Keel (1997: 16–17), but recently endorsed by Morenz (2011: 164–65).

Another potential early alphabetic inscription is the much-discussed Lachish Dagger, which was discovered in 1934 by the British Expedition in tomb 1502, and dated to the late Middle Bronze Age (Tufnell 1958: 254). The bronze dagger exhibits four potential early alphabetic signs (Tufnell 1958: 128; Sass 1988: 53–54; Hamilton 2006: 390–91), and most scholars accept this interpretation (e.g. Albright 1948, 1969: 10; Naveh 1987: 26; Hamilton 2006: 303–4; Goldwasser 2006: 132, 2016: 140–42; Morenz 2011: 170–

71; Lemaire 2017: 106; Haring 2020: 59). In 1988, Sass agreed that the inscription was probably early alphabetic, pointing out that it would be the only one that could be securely dated to the Middle Bronze Age (Sass 1988: 54). He later grew more cautious, however, and suggested that the signs might not be early alphabetic after all (Sass 2004–2005: 150).

A third example that has been dated to the Middle Bronze Age is the so-called ‘Gezer Sherd’. Exhibiting three early alphabetic characters, this sherd was found in 1929 on the surface of Tel Gezer (Albright 1935). It was soon dated to the Middle Bronze Age (Albright 1935)—an attribution accepted by many scholars (e.g. Albright 1969: 10; Naveh 1987: 26; Hamilton 2006: 308–309; Morenz 2011: 166; Goldwasser 2016: 143). Sass was more cautious, however, arguing that the sherd could not be classified typologically, and that its date could range from Middle Bronze Age to the Early Iron Age (Sass 1988: 55). He later concluded that the Gezer Sherd is essentially undatable (Sass 2004–2005: 149).

Several inscriptions on an assemblage of storage jars from Tel Gezer have also been interpreted as early alphabetic writing (Seger 1983, 2013: 186–96; Goldwasser 2016: 142–43). These jars were found in storerooms next to the southern gate area (field IV) and were associated with stratum XVIII (early Late Bronze Age) and stratum XIX (late Middle Bronze Age) (Seger 2013). Most of the jars were inscribed with a single sign, with only two jars bearing two signs each. Sass (1988: 98) mentioned these Gezer jars briefly as examples of early alphabetic writing, but later re-interpreted them as bearing only potters’ marks (Sass 2004–2005: 166, footnote 97).

A fragmentary plaque from Shechem is frequently mentioned in the corpus of potential Middle Bronze Age early alphabetic inscriptions from the Southern Levant (Böhl 1938). According to the earliest publications, this object was found in a Middle Bronze Age building, just above the floor, together with typical, contemporaneous Tell el-Yahudiyah pottery (Böhl 1938: 2). Scholars have long accepted a Middle Bronze or early Late Bronze Age date for the plaque (Albright 1948, 1969: 10–11; Leibovitch 1963; Wimmer 2001; Hamilton 2006: 308), which represents the lower right portion of a stela depicting a person facing to the left and clad in a heavy garment (‘Wulstsaummantel’)—a common Middle Bronze Age garment type (Wimmer 2001). The plaque’s archaeological context, however, has been questioned due to the early excavation techniques with limited stratigraphic control, and the lack of a final excavation report (Sass 1988: 57). The early alphabetic nature of the characters has also been called into question (Sass 2004–2005: 149–50).

Yet another disputed early alphabetic inscription was found at Tel Nagila in the 1960s. Here, a body sherd of a jug, with an inscription incised before firing, was discovered in area A, a residential area provisionally dated to the end of the Middle or the early Late Bronze Age (Amiran & Eitan 1965: 121). Sass (1988: 54), however, rightly emphasised the lack of a clear stratigraphic context for that sherd. Later, quoting David Ilan, who observed that a large Late Bronze Age building disturbed the Middle Bronze Age strata in the area where the inscription was found, Sass concluded that the Tel Nagila sherd “is to be regarded as unstratified, and a LBII origin [is] not implausible” (Sass 2004–2005: 159).

The dates and interpretations of the evidence for the earliest occurrences of early alphabetic writing in the Southern Levant are therefore ambiguous, as only the Lachish Dagger (if accepted as early alphabetic) was found in a clear archaeological context datable to the Middle Bronze Age (as rightly pointed out by Sass (1988: 54)). The discovery of the new



early alphabetic inscription at Tel Lachish pushes back the earliest securely datable occurrence considerably, and we can now show that early alphabetic writing was employed in the Southern Levant by the mid fifteenth century BC (early Late Bronze Age). This evidence not only closes the gap between the development of early alphabetic inscriptions around Serabit el-Khadim and Wadi el-Hol in Upper Egypt, and its more widespread Southern Levantine use in the later Late Bronze Age, but also suggests that early alphabetic writing was already present in the Southern Levant by the (late) Middle Bronze Age.

The new early alphabetic inscription also underscores the importance of Tel Lachish as an early centre of writing (Goldwasser 2016: 151; Na'aman 2020). Indeed, Lachish has yielded more examples of Late Bronze Age early alphabetic inscriptions than any other site. In addition to the Lachish Dagger and the new inscription discussed here, the site has yielded four other examples of alphabetic writing. In tomb 527, the British Expedition of 1935 found a bowl (Lachish bowl one) bearing a painted inscription (Tufnell 1958: 129). This tomb also contained a Cypriot Base Ring II juglet and a local imitation of a Mycenaean straight-sided alabaster (Tufnell 1958: 239). Tufnell (1958: 129) considered this tomb to be contemporaneous with the late Fosse temple II or early Fosse temple III, and thus coeval (or slightly earlier) with stratum VII on the mound. In absolute terms, this dates to the fourteenth or thirteenth century BC (Ussishkin 2004b: 57). In Fosse temple III, the British Expedition found the well-known Lachish Ewer, which bears a painted early alphabetic inscription (Tufnell *et al.* 1940: 47–54; Tufnell 1958: 130). As Fosse temple III corresponds to stratum VII on the mound, the Ewer roughly dates to the thirteenth century BC (Ussishkin 2004b: 57).

A fragment of a bowl bearing a black-ink inscription comprising two straight lines of characters was found by the Tel Aviv Expedition in pit 3867, in area S (Lemaire 2004). This pit belongs to stratum VI and dates to the twelfth century BC (Ussishkin 2004b: 57). Finally, another inscription from stratum VI—a pottery sherd with several characters incised before firing—was found in the inner part of a Late Bronze Age temple in area BB during recent excavations by the Hebrew University of Jerusalem and Southern Adventist University (Sass *et al.* 2015).

## Conclusions

Ben Haring (2020: 62) has recently pointed out that many of the examples of early alphabetic writing “lack clear datings”, and thus our understanding of such writing before the well-known thirteenth century BC and later is limited. The new ostrakon from Tel Lachish fills the gap between the potential early alphabetic writing on the late Middle Bronze Age Lachish Dagger and the corpus from the later Late Bronze Age phases.

The early alphabet developed in association with Western Asiatic (Canaanite) miners in Sinai (or, at least, was taken up by them) during the Middle Kingdom in the eighteenth century BC. We suggest that early alphabetic writing spread to the Southern Levant during the late Middle Bronze Age (with the Lachish Dagger probably being the earliest attested example), and was in use by *at least* the mid fifteenth century BC at Tel Lachish. Thus, the proliferation into the Southern Levant probably happened during the (late) Middle Bronze Age and the Egyptian Second Intermediate Period, when a Dynasty of Western Asiatic origin (the Hyksos) ruled the northern parts of Egypt. The new early alphabetic

inscription from Tel Lachish provides fresh evidence to contextualise the spread of the early alphabet within the period of Hyksos domination over the Nile Delta and its still enigmatic connections with Middle Bronze Age city-states in the Southern Levant (cf. Lemaire 2017). Furthermore, the new early alphabetic inscription dates to a period that also saw the earliest attested hieratic writing at Tel Lachish (Sweeney 2004: 1610–11), and when Lachish is mentioned for the first time in Egyptian sources during the reign of Amenhotep II (c. 1427–1401 BC) (Papyrus Hermitage 1116A; Epstein 1963; Webster *et al.* 2019). We now can show that early alphabetic writing in the Southern Levant developed independently of, and well before, the Egyptian domination and floruit of hieratic writing during the Nineteenth and Twentieth Dynasties (the thirteenth and twelfth centuries BC) (*contra* Naʿaman 2020).

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