Pylos: Palmprints and Palmleaves

by

Karl-Erik Sjöquist and Paul Åström

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Professor Emmett L. Bennett and Dr Thomas G. Palaima have done much impressive work in identifying scribal hands over 3000 years old among the Linear-B tablets from the Palace of Nestor at Pylos in Messenia in Greece by a thorough study of the handwriting. The present study attempts to show that an investigation of the papillary lines ("fingerprints") impressed on the tablets can throw more light on the individuals who handled the tablets. Dactyloscopy cannot replace graphology, since every tablet does not have identifiable fingerprints, but it was assumed that, when they are present, they may confirm or reject attributions to hands.

Contrary to this hypothesis, a thorough study of the papillary lines, mainly on the backs of the palm-shaped tablets, showed that they represented palmprints from the individuals who flattened the wet clay, thus shaping the tablet.

Palmprints of the same person are found on tablets attributed to different scribes. The new identifications give us new information about the work of the scribes and their helpers in the Palace at Pylos. The presence or non-presence of papillary lines on all the tablets from Pylos is recorded; the tablets which have traces of palmprints of nine individuals are shown; and finally the findplaces of the tablets with identified palmprints are presented.

Paul Åström, Professor of Ancient Culture and Civilization at the University of Gothenburg, here continues his fascinating search for ancient fingerprints on pottery, tablets and terracotta sculpture.

Karl-Erik Sjöquist, Chief Superintendent and Head of the Fingerprint Department in the Registry of the National Police Board in Stockholm, is the first to have identified ancient individuals from palmprints impressed over 3000 years ago.

The dactyloscopist became so familiar with the people who formed the tablets that he gave three of them individual Greek names – the energetic Energetíkós, the cautious Dokimastikós and the small Mikrók.

In an appendix, Dr. T.G. Palaima comments on the results from a palaeographer's point of view.
Further References

Appendix

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At the Fourth International Archaeological Symposium of the Swedish Institute in Athens in June, 1984, Prof. Åström presented the results of the Eriksson-Sjöquist-Åström dactyloscopic and, as the reader learns, poroscopic and edgescopic research with the Linear B tablets from Pylos. When asked to comment on his summary account in the light of my research with the palaeographical identification of scribes and with the overall scribal system at Pylos, I remarked that this research may well have given the term “scribal hand” a new meaning. Prof. Åström kindly requested, and has patiently waited for, a fuller commentary. I now think that my extemporaneous comment hit upon the central question raised by this new research: how do these palprint identifications affect our view of the ways Mycenaean scribes (“scribal hands”) handled and used, individually and together, the clay documents (leaf- and page-shaped tablets, labels [series Wa], and sealings [Wr]) which recorded matters of current interest to the workers, administrators, and residents of a major Mycenaean palatial center?

First, let us make clear the limitations of this research. Of the 1112 tablets from Pylos, 102 produced papillary-line prints suitable for the meticulous and laudably cautious, investigating methods of Karl-Erik Sjöquist. In terms of final identification, 49 tablets are assigned to 10 different prints:

<table>
<thead>
<tr>
<th>Print</th>
<th>Pattern Type</th>
<th>Total No. of Tablets</th>
<th>No. of Tablets by Series-Scribal Hand</th>
<th>Find-spot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energetikós</td>
<td>4</td>
<td>35</td>
<td>Ab (H21) 7</td>
<td>AC*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ea (H43) 14</td>
<td>AC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eb (H41) 13</td>
<td>AC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eo (H41) 1</td>
<td>AC</td>
</tr>
<tr>
<td>Mikrós</td>
<td>1</td>
<td>3</td>
<td>Ea (H43) 3</td>
<td>AC</td>
</tr>
<tr>
<td>Anonymos I</td>
<td>3</td>
<td>2</td>
<td>Ea (H43) 1</td>
<td>AC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eb (H41) 1</td>
<td>AC</td>
</tr>
<tr>
<td>Dokimastikós</td>
<td>5</td>
<td>3</td>
<td>QA (H15) 3</td>
<td>Rm. 99</td>
</tr>
<tr>
<td>Anonymos II</td>
<td>1 or 2</td>
<td>1</td>
<td>Fr (H2) 1</td>
<td>Rm. 38</td>
</tr>
</tbody>
</table>
No prints have been identified on page-shaped tablets, other than the isolated An1281 from Room 99. Nor have any been identified on labels or sealings. Consequently we receive no additional information concerning one of the chief features of scribal activity at Pylos: scribal interaction.

The system of record-keeping in the Palace of Nestor was characterized by the controlling influence of a main archives (and archivist: Hand 1) upon scribal work in various areas inside and outside the palace proper.¹ Records of single transactions or items of interest to the palatial administration were made in workshops and storerooms (series Fr, Sa, Sh, Ta, Tn) or at least outside the main Archives Complex (series Aa, Ab, Ad, Cc, Ea, Eb, Ma, Na). They were then, if sufficiently important, brought to the central archives for short-term storage and eventual processing that included compilation and summarizing on longer page-shaped tablets (An, Cn, En, Jn, Ep) as well as correction and revision (Hand 1 adds or changes information on tablets by Hand 41 [Ed 411], Hand 43 [An 261] and Hand 21 [Cn 595, 599, 655]) and labeling for transport or filing (Wa 114 [Hand 1] labels the Aa tablets of Hand 4; Wa 784 [Hand 41] labels the Ea tablets of Hand 43).² The documents of higher archival status tend to be the

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² I should note here that handling and reworking of texts seem to have gone on fairly regularly. The central archives were active, not static. Hand 1 must have corrected and cut tablets while they were still of nearly the same physical consistency as when first written by other scribes. The Sh tablets may have been curved by being placed and transported in a wicker basket while still moist. They also retain the finger impressions of the scribe at a standard spread on the upper and lower sides.
work of the chief scribes of the three palaeographical classes (Hands 1, 2, 21 and 41), who, as we can see from their extant tablets, were entrusted with a wider range of record-keeping responsibilities and may have trained and supervised subordinate scribes.

The palmprint research sheds no light on these indications of complex relationships among scribes. Because of the limited nature of the evidence (49 assigned tablets), it does not even bear upon the cases where the physical characteristics of the tablets themselves provide firm proof of scribal interaction. Neither Ed411 nor Ad684 produced identifiable impressions sufficient for Sjöquist's analysis. Yet these are two tablets which there is sound reason to believe were manufactured for one scribe's set of tablets (Ed411 [Hand 41], Ad684 [Aa set of Hand 4]) and eventually used by another scribe (Ed411 [Hand 1], Ad684 [Hand 23]). Palaeographical researchers would have welcomed the discovery of one, two or three sets of distinctive prints on either or both of these tablets as well as on the tablets with clear traces of correction and revision.

So much for limitations. What are the positive results of this research in regard to our central question? Seven of the identifiable prints match up one-to-one with different scribes, sets or classes from various locations in the Palace of Nestor: Dokimastikós and Anonymos II–VII. This conforms to our normal way of viewing the work of scribes in the palace. Assigned to keep, or responsible for keeping, records of activities in palatial workshops (e.g. Rm. 99) and store-rooms (e.g. Rm 23), a scribe adeptly fashioned clay tablets specifically suited to his current record-keeping task. Within the corpus of a given scribe's work, sets of tablets, and sometimes even groups of tablets within sets, show a marked variety in size, shape, and method of construction, usually directly related to the requirements of space and format dictated by a given assignment. Very rarely do we come across examples of large amounts of wasted space on tablets or – except when a scribe is beginning a long series and trying to establish the formulae, format, and necessary size and shape of the tablets – instances of, crowded writing. The former occurrences are generally associated with lesser known and perhaps less well-trained scribes (e.g. G4n720, Tn316). One tablet, Xn1357, even preserves traces of the most skilled scribe so far identified (Hand 1) adjusting the size of the still moist tablet by squeezing the lower edge in order to accommodate an extra, no doubt at first unforeseen, line of information.

If we were to concentrate solely on these seven identified prints, there would be no reason to question the hypothesis that scribes were

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3 See the discussions of Hand 1 (especially S74), Hand 2 (especially S1202), Hand 21 (especially S4) and Hand 41 (especially S149) in T.G. Palaima, The Scribes of Pylos (submitted for publication).
manufacturing their own tablets in conformity with the requirements of specific assignments. Anonymos II imprinted tablet Fr1205 from Room 38, assigned to Hand 2. Hand 2 worked in an upstairs storeroom above Room 38 along with Hands 4, 41 and S1203 Cii, all recording different types of oil. The sets of tablets assigned to each scribe differ in their physical characteristics. For example, Fr1205 and 1206 (Hand 2) are long, narrow, leaf-shaped tablets with straight right sides: 26–33 mm (H) × 217 mm (L) × 16 mm (TH). The four tablets of Hand 4 are thicker leaf-shaped tablets that decrease in height and thickness left to right: 30–18 mm (H) × 170 mm (L) × 18–3 mm (TH). Since the varieties of tablet sizes and shapes so well accommodate the varieties of texts being written by the different scribes, the most economical hypothesis is to suppose that the scribes themselves had direct control over the fashioning of the tablets, i.e., scribes made their own tablets.

This hypothesis, of course, is eventually related to the question of the status of scribes, to which I shall return. For now, though, the only viable alternative explanations are to presume: (1) a single tablet-maker (Anonymos II) worked above Room 38 and manufactured tablets fairly precisely to order for the four scribes, who came at one time or another to make records in this storeroom, which is located near the private apartments of the palace and isolated from the regular flow of goods and tablets downstairs; (2) each scribe brought with him, as Åström and Sjöquist suggest, a junior associate who would learn the scribal ropes by making tablets for senior scribes. The first alternative seems doubtful in view of the isolation of the room above Room 38 and of comparable rooms (e.g. Room 32). In these locations records were few, but of many scribal hands, suggesting scribal visits, less than periodic, as necessity arose. What would our tablet-maker be doing with the rest of his time? The second alternative, in this particular instance, is uneconomical because we must assume several pieces of information which we do not know: (a) that the print of Anonymos II is not the print of scribal Hand 2; (b) that the prints on the other tablets here (all unknown) are not those of identifiable Hands 4 and 41 and Stylus 1203 Cii. Also we should note that other oil tablets of Hand 2 found elsewhere in the palace offer further proof of the apparent ability of the scribe to construct tablets suited to specific texts, most clearly Fr1184 from the Archives Complex, which accommodates its singular text on a small, rectangular shape with slightly rounded corners: 43 mm (H) × 70 mm (L) × 11 mm (TH).

4 C.W. Shelmerdine, The Perfume Industry at Mycenaean Pylos (Paul Åströms Förlag, forthcoming) thoroughly discusses scribes involved with the perfumed-oil industry at Pylos.

5 H = height; L = length; TH = thickness.
We also have palmprint evidence from Rooms 99 and 23 that argues forcefully against the first counter-hypothesis. Both are active areas in the mainstream of scribal and general palatial activity. Shelmerdine has characterized Room 23 as the “centre for scribal monitoring” of oil. Room 99 is a large, important workroom within a free-standing building, which Tegyey thinks may have had some measure of autonomy within the overall scribal bureaucracy of the palace. Both locations then might be thought important and active enough to justify a single full-time local tablet-maker. However, the palmprints in these areas are multiple and again correspond directly to different scribes, different physical types of tablets, and different subjects:

Room 99: Anonymos VI (Cii, Va1323), Anonymos IV (Hand 12, An1281), Dokimastikós (Hand 15, Qa1292, 1295, 1311);
Room 23: Anonymos V (S1217 Cii, Fr1217), Anonymos III (—, Fr1219).

Let us now turn to the analysis of tablets with the remaining three identified prints. Here the evidence and its interpretation become more complex. First, are we to assume with Åström and Sjöquist that the papillary-line prints identified on the Pylos tablets all come from the “flattening process,” a stage in the manufacture of tablets, especially leaf-shaped tablets? Autopsy of the tablets in 1979–80 indicated that leaf-shaped tablets were formed in the following stages:

1) hunks of moist clay were pressed into flat sheets;
2) the sheets were then folded up lengthwise;
3) the left and right sides were either blunted on a flat surface, folded together with the fingers, or (right side) drawn to a narrow rounded point undoubtedly with curled fingers and palm, as potters make attachable handles;
4) the recto surfaces were smoothed, probably face-downward on a level surface;
5) the seams on the versos from rolling up the sheets were smoothed, more or less carefully to taste.

The tablets were then ready for use, sometimes immediately in a very moist (Qa tablets of Hand 15), almost gooey state (Sh tablets), but usually after a time when the clay had reached a consistency better suited to inscription (Aa, Ab, Ad, Ea, Eb, etc.). Papillary-line prints could result from the flattening process or the rolling and finishing process. Yet the tablets were still moist enough when written for many to have ends or pieces cut off afterwards (series Aa, An, Cn, Ed, En, Ep, Es of Hand 1; series Jn of Hand 2; etc.), in some cases after later

entries were made into the tablets by a second scribe (Cn595, 599 by Hand 21 and Hand 1). On Gn720 clay is literally torn from the bottom edge. The Sh tablets seem to have been curved when placed in a transport basket. It is, therefore, a possibility that some prints could and should have been made in the course of handling the already constructed tablets, certainly in writing, perhaps also in shipping, storing and processing. If scribes had assistant “tablet-makers,” we should expect to find different prints on the same tablets. No cases have been found, but we are dealing with only 49 tablets.

If we nevertheless take as a working hypothesis the supposition that the prints do belong exclusively to the manufacturers, how are we to interpret the information relating to Energetikós, Mikrós, and Anonymos I? Their prints are found on tablets of the following series and hands:

Energetikóς: Ab (Hand 21), Ea (Hand 43), Eb and Eo (Hand 41);
Mikrós: Ea (Hand 43);
Anonymos I: Ea (Hand 43) and Eb (Hand 41).

Since the prints are of different pattern types, the identifications are even more certain. Sjöquist has used very carefully defined categories of identification: (1) = certain identification; (2) = strong argument in favor of identification; (3) = reasons for thinking identification. There are four direct certain (1) links between series Eb and Ea: Ea811—Eb842; Ea803—Eb842; Ea811—Eb1188; Ea825—Eb940; three direct certain links between series Ab and Eb: Ab586—Eb897; Ab586—Eb366. There are no direct certain links between series Ab and Ea, but there are two transitive certain (1) links between them: Ea811—Eb842—Ab448; Ea803—Eb842—Ab558. Thus no one can challenge the certainty of this evidence. Its interpretation, however, is very difficult.

The tablets imprinted by Energetikós all have the same form and general dimensions. They taper left to right to a rounded point; the upper and lower sides are flattened with a slight beveling to the edges; the left sides are blunted or drawn together with the fingers. This is even true of Eo268, which belongs to a distinctive subset (Eo268, 269, 278, 371 [+ 1160]) among the Eo tablets. The tablets of this subset undoubtedly were made together with the Eb tablets. Yet there are two important distinguishing characteristics: (1) the Ab and Eb tablets and Eo268 are constructed of fine clay with no inclusions, while the Ea tablets are made of coarse, gritty clay with very visible white inclusions; (2) the Eb tablets and Eo268 share with the Ad (Hand 23) and Sa (Hand 26) tablets a method of manufacture in which the tablets were rolled up and pressed around string or straw running longitudinally through the core. We must conclude: (a) that the Ea tablets were made from a different batch of clay and at a different time than the
other tablets; \(b\) that Eo268 and the Eb tablets were made separately by a different technique of manufacture from the Ab tablets, with which they share similar clay.

Still assuming that the prints belong entirely to tablet-makers, we have to imagine that at one time Energetikós made the Ea tablets for Hand 43 and was assisted by Mikrós and Anonymos I, who both could produce tablets indistinguishable from his. At another time – we don’t know the sequence, whether before or after – Energetikós used a second batch of much finer, purer clay to make Ab tablets for Hand 21, in the same style as the Ea tablets and, so far as we know, unassisted. At yet another time, he used the second or a similar batch of clay to manufacture the Eb and special Eo tablets, using a different technique, again assisted by Anonymos I, who also adopts this different technique. Whatever way we interpret this remarkable evidence, we cannot imagine an exclusive relationship between a single assistant tablet-maker and a single senior scribe. We should note, however, that Hand 21 and Hand 41 are the main scribes of their respective palaeographical classes and would have had sufficient status, if any scribe did, to command an assistant.

It is tempting, in the light of the one-to-one correspondence between the other seven prints and scribes, to consider the ratio of three identified scribes to three identified prints here as more than coincidental. However, no clear means of dividing the manufacture of the tablets among the three scribes is apparent or convincing. If we assume that the fewer prints (Mikrós and Anonymos I) were not made in the manufacture, but in the writing and handling of the tablets, we could suppose: (1) Energetikós was a tablet-maker in a certain area who made tablets on some occasion for Hands 21, 41 and 43; (2) Mikrós is Hand 43 handling his own Ea tablets; (3) Anonymos I is Hand 41 handling not only his own Eb tablets, but also a single Ea tablet of Hand 43; for Hand 41 does in fact label (Wa784) the Ea tablets of his palaeographical subordinate. \(^8\) Yet other hypotheses are possible and equally (im)probable. Let us concentrate in conclusion on the two points of greatest significance in the Sjöquist–Åström study.

I asserted at the outset that this research did not relate to the known instances of scribal interaction at Pylos. Yet in the puzzle provided by Energetikós, Mikrós and Anonymos I, we see two major scribes (Hands 21 and 41) and another scribe of the third palaeographical class (Hand 43) somehow associated. Hand 41 and Hand 43 already were known to share the recording of similar subject-matter: land tenure (series Eb, Ea, Eo). Hand 41 was known to have labeled Hand 43’s Ea set. Now the two scribes are drawn more closely together through the

\(^8\) Label Wa 784 is even made of the pure, smooth clay of the Eb set.
evidence of the palmprints. Moreover, the Ab tablets of Hand 21 are now seen to have more than mere physical similarities to the Eb and Ea tablets. They may have been fashioned by the same hand (Energetikós). Since the clay of the Eb and Ab tablets is also similar, it may be that the scribes were working in the same location, perhaps out in front of the palace’s façade near the Archives Complex, at the same time. We may speculate whether the focus of the Ab and Eb tablets upon matters relating to the Hither Province has anything to do with their apparent association.

Finally I would also like to come back to the question of scribal status. This point underlies any interpretation of the palmprint evidence. It is a commonplace that the word for scribe appears nowhere on the Linear B tablets and that scribes appear in such numbers (25–33 at Pylos, 60–100 at Knossos) so as to make it probable to view unnamed (personally and professionally) record-keepers as literate functionaries, who knew how to write but did not specialize in writing as a profession and simply used it in the course of their daily work. On the other hand, the obvious multiple responsibilities of scribes at Pylos, like Hand 2, Hand 21, Hand 41 and especially the archivist, Hand 1, require a degree of record-keeping sophistication that comes closest to modern notions of professional skills. Also, information on the tablets is highly selective. For example, the term for potter occurs only four times at Pylos and not at all in the 3373 tablets and inscribed fragments from Knossos. This accidental selectivity of information in the tablets may account for the absence of references to scribes. We have, I think, two possible points of view. Either writing was a practical skill, like typing, stenography, or computer literacy in modern times, used by any of the numerous officials or workers whose professional names are listed on the tablets, or there were specialists in writing whose occupational designation, like that of potters at Knossos, is accidentally absent from, or undetected in, the texts so far discovered.

How does this relate to the palmprints? The view that the prints belong to the record-keepers, who are then constructing their own texts, I think fits well with the interpretation of writing as a practical skill, the knowledge of which in and of itself imparts special status to the practitioner. Whether literate functionaries or on-call specialists, it is difficult for me to imagine thirty-three record-keepers at Pylos each moving to an assignment with a subordinate in tow, especially because some of the scribes themselves are so unaccomplished. Yet I think it is likely that not all prints belong to the writers, handlers or processors of


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the tablets. The evidence of Dokimastikós, Mikrós and Anonymos I supports the view that masters in the entirely practical Mycenaean scribal art would train subordinates in the skill of writing, if we assume with Sjöquist and Åström that the tablet-makers are the trainees. I find no serious impediments to accepting this assumption in some cases. After all, new writers would have to be instructed in all aspects of record-keeping and apparently did receive palaeographical training from more experienced writers in the separate classes of writing styles at Pylos. Let us hope that these two careful scholars somehow find the perseverance and the opportunity to examine the Knossos tablets, which are far more generous in numbers of scribes and, we also hope, palmprints.\textsuperscript{11}

\textsuperscript{11} The one certain link in the Mycenaean material (Oe123 [Hand 55] and Oe129 [Hand 56]) is interesting because both tablets come from the same location (House of Oil Merchant, Room 2) and Oe129 is a palimpsest. Oe110 (Hand 51), which may also have the same print, also comes from this location. Because Oe129 is palimpsestic, it could have been borrowed by Hand 56 from Hand 55. But, if Oe110 was also made by the same tablet-maker, we would have here sufficient evidence to suggest that the three scribes (Hands 51, 55, 56) were working in the same location, although not necessarily simultaneously, and had access to the same tablet-maker, who may in fact have been one of them.