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A SCHOOLTABLET IN THE UNIVERSITY OF MICHIGAN COLLECTION

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A Schooltablet in the University of Michigan Collection¹

The wooden tablet published below was purchased in Egypt and sent to the University of Michigan in the early 20'. It dates from the fifth/sixth century A.D. On one side it contains a table of the simplest of fractions (1/2) and an equally simple multiplication table (2). On the other side an iambic trimeter often found on schooltablets is written.²

The outer side of the tablet, which originally was the back cover of a book of tablets, is used for the mathematical tables,³ which are written along the width of the tablet. This side was coated with a white layer that has partly come off. Because of that the text is sometimes barely legible. Four simple vertical lines are used to divide the five columns of text. Another such line follows the fifth column. Within the text horizontal lines are used to divide certain portions of text. This is the case between column I 2 and 3, column III 8 and 9, column III 10 and 11 and between the items in the multiplication table at the end of column III. There is also a vertical line separating the juxtaposed items there.

The inner side of the tablet is used for the maxim, which is written perpendicularly to the text on the outer side. The coating on this side of the tablet is very well preserved. In this coating a rectangle was ruled about 1 cm from the lower and right edges of the tablet and about 1.5 cm from the upper and left edges. This seems to imitate the raised frame of a waxed tablet. In addition, 20 horizontal lines were ruled in the coating. The first line starts 6 cm below the upper line of the rectangular frame. This leaves a field of 14 x 6 cm into which the maxim was written. The tail of the ρ of γράμματα is written *over* the first line.

The tablet is about 0.8 cm. thick. In the middle of the left side of the tablet (seen from the inner side) two holes have been pierced which exit on the inner side of the tablet through the left rim of the frame. Thus, there are no holes on the outer side. The wholes, which formed the channel for the binding, are at a distance of 4.5 cm. from each other.

The tablet is broken in two pieces along the grain of the wood.

¹ Inv. no. 29974. The present tablet has been described as no. 1 in the catalogue of the Ancient Writing exhibition, held at the Kelsey Museum of Archaeology in the fall of 1991. I would like to thank Marti Lu Allen for drawing my attention to the tablet.

² For recently published specimens of schooltablets see R. Pintaudi and P.J. Sijpesteijn, *Tavolette lignee e cerate da varie collezioni* (Firenze 1989). A comprehensive list is provided by W.M. Brashear and F.A.J. Hoogendijk, *Enchoria* 17 (1990) 21-54. There are a number of unpublished tablets in the University of Michigan collection.

³ A list of mathematical tables is provided by D.H. Fowler, *ZPE* 75 (1988) 273-280. No. 52 in his list is now *P. L.Bat.* XXV 15, IV A ii-iii. To the list can be added the mathematical tables published in *Tavolette lignee* (n. 2), the tablet from Trier published by J. Shelton, *ZPE* 77 (1989) 209-210, the wax tablet in the British Library (Add. 34186) published by Wm. Brashear, *ZPE* 86 (1991) 231f., and P. Mich. inv. 6944, a multiplication table of unequal factors from the second century B.C., published by G. Schwendner, *Literary and Non-Literary Papyri from the University of Michigan Collection* (diss. Ann Arbor 1988), 29-30. The text runs:

1	ἕτερομήκης		
	β γ, ζ	β δ, η	ε [β, ι
	γ β, ζ	δ β, η	β [ζ, ιβ
4		β ε, ι	ζ [β, ιβ

Outer Text

Inv. no. 29974
pl. VIII

32 x 17 cm.

V/VI A.D.

	I	II	III	IV	V	
1	τὸ ½ ἐν ψήφων τῆς μιᾶς τὸ ½, ½	τῶν μ, κ τῶν ν, κε	τῶν γ, αφ τῶν δ, β	β ε, ι ε β, ι	β η, ις η β, ις	1
	τῶν β, α	τῶν ξ, λ	τῶν ε, βφ	β ζ, ιβ	β θ, ιη	
4	τῶν γ, α ½	τῶν ο, λε	τῶν ζ, γ	ζ β, ιβ	θ β, ιη	4
	τῶν δ, β	τῶν π, μ	τῶν ζ, γφ	β ζ, ιδ	β ι, κ	
	τῶν ε, β ½	τῶν ρ, με	τῶν η, δ	ζ β, ιδ	ι β, κ	
	τῶν ζ, γ ½	τῶν ρ, ν	τῶν θ, δφ			
8	τῶν η, δ ½	τῶν ς, ρ	τῶν ϑ, ε	πολυπλασιασμός		8
	τῶν θ, δ ½	τῶν τ, ρν	ἅπαξ α, α			
	τῶν ι, ε	τῶν υ, c	β α, β	β δ, η		
12	τῶν κ, ι	τῶν φ, cv	β β, δ	[δ] β, η		12
	τῶν λ, ιε	τῶν χ, τ	β γ, ζ			
		τῶν ψ, τν				
		τῶν ω, υ				
		τῶν ϖ, υν				
		τῶν α, φ				
		τῶν β, α				

I 1: the sign for 1/2 is marked as a fraction by ½ as in the other lines.

ἐν ψήφων: editors tend to take this phrase as error for ἐν φήφοις, but it occurs too frequently for this explanation; previous explanations of the genitive have not been satisfactory (see W. Brashear, *Enchoria* 12 [1984] 3 with references; for further discussion see J. Shelton, *ZPE* 77 [1989] 210, and P.J. Sijpesteijn, *Mnemosyne* IV 43 [1990] 157). The phrase clearly belongs to the common "ellipses" of the noun, particularly frequent in tabular lists, and often involving the omission of λόγῳ (Mayser, *Gramm.* II 1,21-27 and 2,405 n. 1; cf. A. Henrichs and L. Koenen, *ZPE* 44 [1981] 271 n. 380): "one half in the table of numbers".

I 2 μιᾶς: the feminine goes with ψήφου understood. The second sign for 1/2 is followed by a heavy dot.

I 13: after this line there is room for one other line. Although there seem to be traces there, we do not need another line because the table proceeds in the next column with τῶν μ.

II 16: the numeral 1,000 is marked by ϖ as are the other thousands in the table including the symbol for 10,000 in column III 8. The last lines of column II are crammed in a limited amount of space.

III 8: the scribe perhaps thought of τῶν (μυρίων) instead of the expected τῆς (μυριάδος). The scribe may have written a small α within the loop of the symbol for 10,000 or just a heavy dot. The surface of the tablet is damaged at this point.

III 9 πολυπλασιασμός: "multiplication". With this heading starts the second part of the text. The same heading occurs in the contemporary PSI VIII 958.

III 11 ἄπαξ α: α is palaeographically difficult, but the traces following ἄπαξ will have to be read in the same way as *PSI VIII 958, 3*. In accordance with ἄπαξ, the first number in the following entries is to be read as (δίς), (τρίς) etc.

III 12: in the second part of this line the scribe repeats the calculation 2 x 4 the other way around, just as he goes on to do in columns IV and V.

Inner Text

Inv. no. 29974
pl. IX

17 x 32 cm

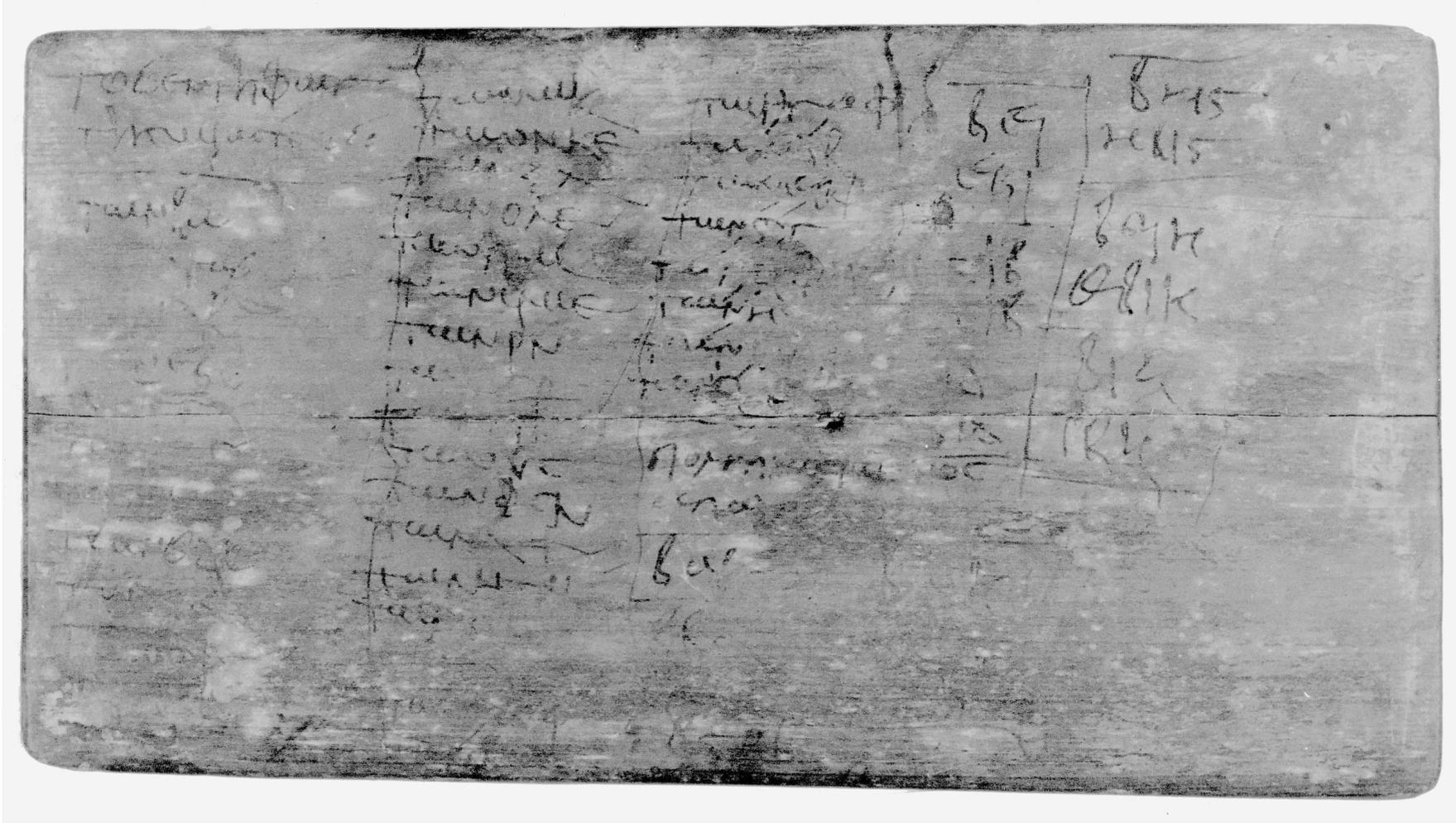
V/VI A.D.

1 ἄρχῆ μεγίστη
τοῦ φρονεῖν τὰ
γράμματα

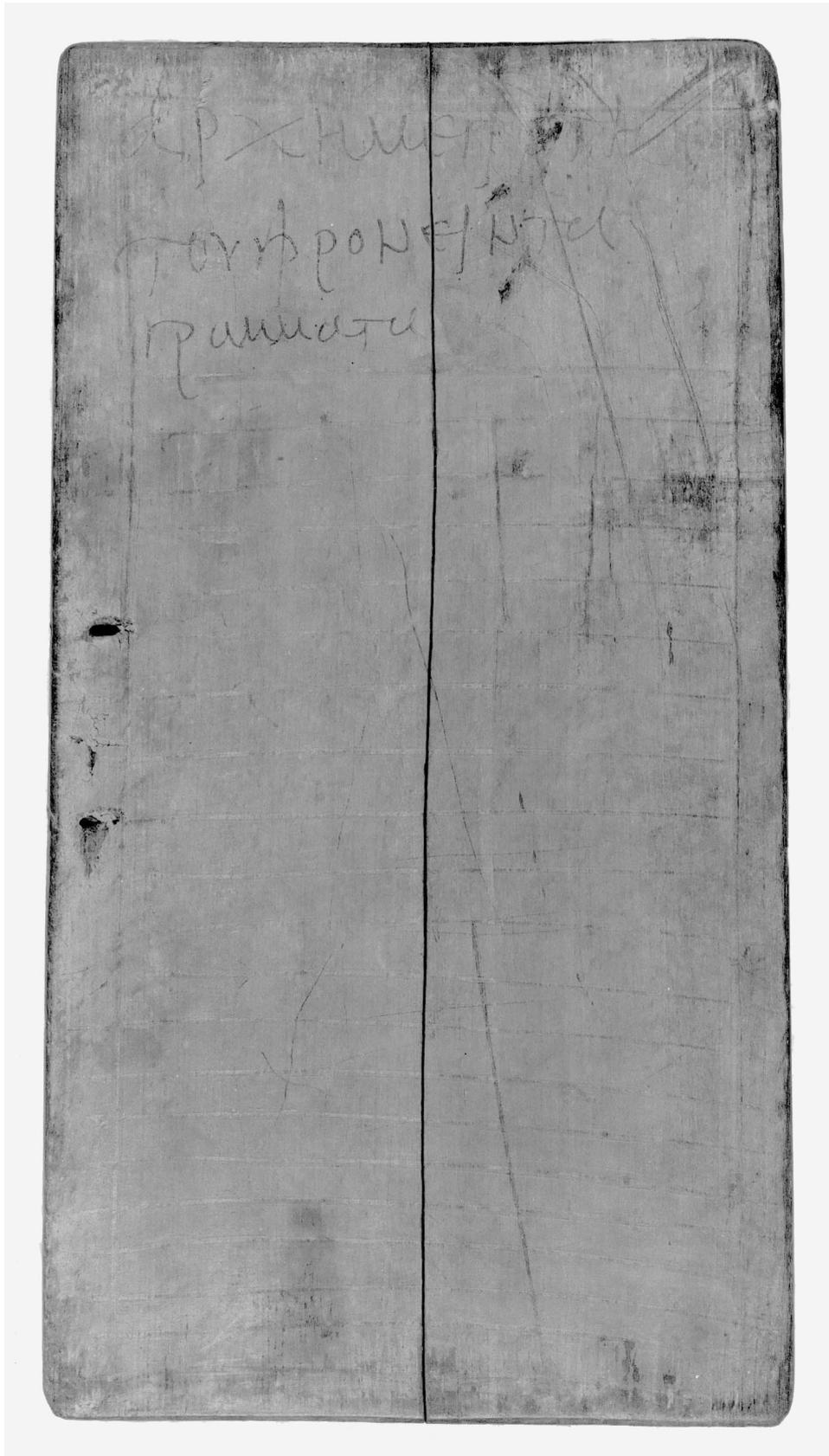
"Literacy is the most important source of knowledge." On this iambic trimeter often found as an appropriate maxim on schooltablets see W. Brashear, *Enchoria* 14 (1986) 11-12 and H. Widmann, *Archiv für die Geschichte des Buchwesens* 8 (1967), col. 638.

Ann Arbor

Peter van Minnen



P.Mich. Inv.Nr. 29974, outer text: schooltablet in the University of Michigan Collection, mathematical table



P.Mich. Inv.Nr. 29974, inner text: schooltablet in the University of Michigan Collection, an iambic trimeter