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Textiles, Basketry, Cordage and Whorls from Mo'a (Moje Awad)

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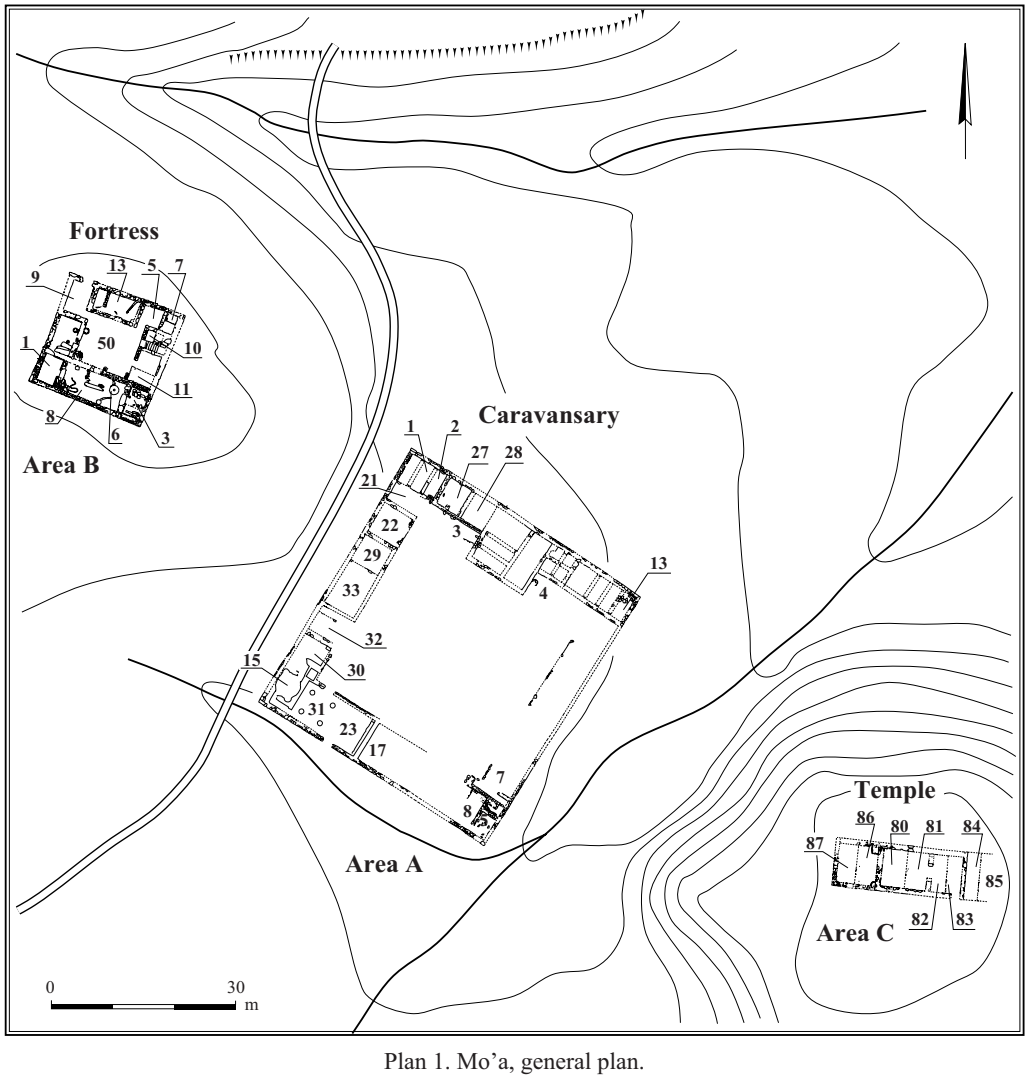
Introduction

The artifacts presented below were discovered in the course of excavations conducted in 1981–1985 and 1995 at Mo'a (Plan 1) in the 'Arava Valley (map ref. NIG 6624/4947, OIG 1624/9947; Permit No. A-1016), on behalf of the Israel Antiquities Authority, under the direction of Rudolph Cohen (1982:242–243; 1991:45–49). The site appears to have been



Plan 1. Mo'a, general plan.

a way station on the Spice Route connecting Petra and Gaza (Baginski and Shamir 1995: Fig. 1). Three areas were excavated:

Area A: A caravansary (40 × 40 m; Locus 1), consisting of rooms around a courtyard (see Plan 1). There are five (or nine) rooms along the southern wall and eight rooms along the northern side. The first stage of the building dates to the end of the first century CE (Nabatean) and the second stage dates to the second century CE (Roman).

Area B: A fortress (17 × 17 m), comprising eleven rooms around a courtyard (see Plan 1; Loci 1–13, 50), was occupied during the first century BCE through the third century CE (Cohen 1982; 1991:45–49). The middens to the east of the building (L222) are dated by ^{14}C to 83–204 CE (Israel Carmi and Dror Segal, pers. comm.).

Area C: A building, identified as a temple (Loci 80–90, see Plan 1), was found destroyed in its southern part. Along 20 m of its northern side are four rooms; the width of each is 16 m. The building, which dates to the first century CE, was destroyed by a great fire. Preserved by the arid climate, the 594 perishables from Mo'a include textiles (333), basketry (92), cordage (166) and whorls (3). Of these 529 have been catalogued, the others were not catalogued due to poor preservation. The perishable materials are listed according to provenance in Table 1.

TEXTILES

Three hundred and ten textile fragments were analyzed and described (see inventory, Appendix 1). An additional 23 fragments, too small or fragile to be cleaned or handled, were studied only in a preliminary fashion (Table 2).

The textiles are made in plain weave and its variations—balanced, warp-faced, weft-faced and extended tabby were the commonest, but twill also exists. Dyed fabrics are also present. Some pieces were decorated with colored bands or tapestry.

The textiles are presented by type of fiber: wool, goat hair and linen. They were found in dirty, crumpled condition. All the pieces are incomplete. The largest fragment is of wool (No. 152; 4.1 × 64.0 cm). Textiles of special interest appear in the catalogue below. Artifacts illustrated by photos are marked with an asterisk.

Wool

Two hundred and twenty-nine items (and 19 uncatalogued fragments, see Table 2) are made of wool alone.

Spinning and Weaving.— The majority of textiles are S-spun (Table 3). Usually the threads were of uniform thickness, indicating a high standard of workmanship.

Most of the textiles are variations of tabby (Table 4). A few have a crépe-like appearance (Nos. 130*, 145*). A few have open weave (e.g., No. 86*). Twill appears in nine textiles in different variations (Appendix 1); one of them has a nap (No. 98).

The density of the warps ranges from 3 to 29 threads per cm and that of the wefts from 4 to 54 threads per cm.

Weaving mistakes (faults) can be discerned in 26 of the pieces (see Appendix 1). Weaving faults are usually not mentioned in reports, but they do occasionally occur, e.g., at 'En Raḥel (Shamir 1999) and Wadi ed-Dâliyeh fabrics. The small number of faults indicates that the weavers were skilled and experienced.

Crowfoot (1974:61) has suggested that errors may have been due to the inexperience of the weavers during the transition from the warp-weighted to the upright loom. Errors could indicate faulty separation between warps and wefts or incorrect tying of the cross-beams (Wild 1970:64).

Color and Decoration.— One hundred and forty-one textiles are natural cream, beige or light brown color. Some are dyed: 21 fragments are green (Color Plate: Nos. 27*, 119*), 10 are brown (Color Plate: No. 159*), 18 are in shades of red (Color Plate: No. 134*) and one is blue. Others have different colors in the warps and

Table 1. Provenance of Artifacts (Including Uncatalogued)

Area	Locus	Wool	Linen	Hair	Other Textiles	Cords	Baskets	Whorls	Total
A	1					7			7
B	2		19				7		26
B	3	8		4		32	66	2	112
B	5	1				2	2		5
B	6		2			8			10
B	10					1			1
B	11					3	2		5
B	12						1		1
B	16					1		1	2
B	53	31	14	1	2	29	3		80
B	54						1		1
A	57	3	1						4
A	59						1		1
C	80	7				8			15
C	81	5		1			1		7
C	82	14				2			16
C	83	5							5
C	84					1			1
C	85	1							1
C	86	1	1				1		3
C	87	2			1	2			5
C	88	17		2	1		3		23
C	89	20	3						23
C	90	47	13	1		6			67
B	222	79	2	3	1	62	3		150
NL		7	11	2		2	1		23
Total		*248*	*66*	*14*	*5*	*166*	*92*	*3*	*594*

Table 2. Mo'a Uncatalogued Textiles

Locus	Basket	Material	Color	Comments
53	694	W	UC	c. 5 different fragments
53	694	L	UC	
81	909	W	UBE	
90	910	W	G	
222	3311	W	UC	c. 8 different fragments
222	3311	W	LBL	Selvedge
NL	-	W	UC	3 different fragments; one with selvedge
NL	-	L	UC	3 different fragments

Table 3. Spin Direction

Spin Direction	No.	Fig.
S	191	
Z	8	
S/Z	17	
Z/S	3	
Z/I	1	
Z2S/Z	3	
Z2S/S	1	
S2Z/S	2	No. 93*
Z2S	2	No. 86*
S,Z/Z2S	1	

Table 4. Weaving Technique

Weaving Technique	No.	Fig.
Tabby	94	Nos. 140*, 145*, 167*
Weft faced	82	Nos. 32*, 100*, 101*, 215*
Balanced tabby	23	Nos. 86*, 130*
Extended tabby	18	No .84*
Twill	9	Nos. 20*, 124*
Unknown because of poor preservation	3	

Table 5. Mo'a Bands

No.	Loc.	Basket	Color			Connec-tion	Band Width (cm)	Threads Per cm	Spinning Direction	Comments
			WA	WE	Bands					
20	3	148/ 1	UBE	UBE	R, BL, B	NOC	<2.7	24	Z2S	
37	53	694/ 2	UW	UW	PU	GRO	0.9,0.9	32	S	Interval of 0.3 cm between them
42*	53	694/32	B-R	B-R	G	NOC	2.6	56	S	
57	53	694/47b	UC	UC	R	NOC	<0.6	36	I	
62	53	694/53	UC	UC	Wine	NOC	1	32	Z	
82	80	809/ 2	UC	UC	LB	NOC			S	6 bands of 0.2 cm each, interval of 0.2–0.3 cm among them
92	81	909/ 4	UBE	UBE	R	NOC	4	40	Z	
108*	83	833/ 1	UC, LB, RB	UC, B	Wine	NOC	1.4	40	I	
108*	83	833/ 1b	UC, LB, RB	UC, B	LR	NOC	1.8	36	Z	
116	87	854/ 3	UBE	UBE	G	GRO[i]	2.4	42	I	[i]Sometimes
120	88	879/ 3	UC	UC	FR	GRO	<3.2	38	I	
134*	88	886/ 1	R	R	G	NOC	<0.4	35	S	
136	88	888/ 2								
138	89	880/ 1	UBE	UBE	B	GRO[i]	<3	16	S	[i]Sometimes
142*	89	914/ 6	UC	UC	D, Wine	NOC	2	26	S	
143	89	914/ 7	UBE	UBE	R	GRO[i]	1.4	28	Z	[i]After every 3 threads 2 are connected
146	89	914/10	UBE	UBE	LR	NOC	5	36	I	

Table 5. Mo'a Bands (cont.)

No.	Loc.	Basket	Color			Connec-tion	Band Width (cm)	Threads Per cm	Spinning Direction	Comments
			WA	WE	Bands					
169	90	910/14	UBE	UBE	RB	GRO[i]	2.7	22	S	[i]Not consistent
179*	90	910/22a	R	R	DB	NOC	0.5	22	S	2 bands
202	90	910/22o	DG	DG	FR	NOC	3.8	30	Z	
210	90	910/23	B	B	DBL, DB	NOC	-	-	S	Pattern not consistent
216	90	919/ 4	G	G	O-R	NOC	2	26	S	
222	222	3311/ 2	UC	UC	R, Wine	NOC	0.4		S	6 threads
224*	222	3311/ 4	UBE	UBE	Mauve	NOC	0.4, 0.4, 8.5	44	Z	Weft is more crowded half cm before band
246	222	3311/27a	UC	UC	Wine	GRO	2.5	26	Z	Grouped sometimes 0.5 cm before the band
247	222	3311/27b	UC	UC	Wine	GRO	4.4	44	Z	
251	222	3311/30	UC	UC	LR	NOC	6.3	34	Z	
253	222	3311/32	UC	UC	Wine	GRO	0.5	68	Z	
258	222	3311/37	UC	UC	Wine	NOC	0.3		S	2 thick threads
261	222	3311/40	UC	UC	LB	NOC	<4.3	20	S	
266	222	3311/45	UC	UC	Wine	NOC	0.2		S	One thread
280	222	3311/59	UC	UC	Wine	NOC	0.4	2		More crowded
281*	222	3311/120	UC	UC	D, Wine	NOC	<2.7	26	S	5 cm before the band weft is crowded
282	222	3311/130	UC	UC	R	NOC		2	S	4 threads with small space among them
286	222	3311/133	UC	UC	R-B	NOC			S	One thread
305	NL	51	UC	UC	Wine		<3.5			

wefts, such as undyed cream/blue; undyed cream/brown; light brown/undyed cream; brown/green; green/light red; undyed cream, light brown/brown, red brown, light brown, red brown; undyed cream/undyed cream, brown (Color Plate: No. 108*); light green, undyed beige/undyed beige.

Thirty-five textiles are decorated with bands (e.g., Nos. 42*, 142*; Color Plate: Nos. 134*, 224*). One has a selfband of twining (No. 168*), one has an unrecognizable pattern (Color Plate: No. 27*) and another (Color Plate: No. 281*) is decorated with an H-shaped tapestry design. The bands vary in width between 0.2 and 8.5 cm (Table 5). The number of wefts in the band is usually higher than in the fabric, so that the wefts cover the differently colored warps completely. This was achieved by several methods: (1) by crowding together the wefts in the band (in some cases the wefts become slightly denser one centimeter before the band); (2) by using wefts thinner than those in the fabric, so that more threads could be compressed into each centimeter or less; (3) by grouping two warps together into one pick (Table 5). In most examples of the third method, the two warp threads, which had been grouped in the band, were separated after two weft rows and the weaving continued as usual. This phenomenon was also observed in textiles from Masada (Sheffer and Granger-Taylor 1994:188–189, 230), as well as from Crimea

(Granger-Taylor, Jenkins and Wild 1989:150, Fig. 4C; Granger-Taylor 1993:22).

Edges.— A few types of edges were preserved; such as closing border and closing cord (No. 43*). There are fifteen selvedges: 9 grouped selvedges (No. 85*), 2 plain selvedges, 2 selvedges with grouped outer warp threads and extra circuits of the main weft selvedges (Sheffer and Granger-Taylor 1994:169, Fig. 17, Type D), and 2 selvedges of an unknown type. In No. 213 both selvedges have been preserved, giving the full width of the textile, 0.5 cm. In No. 144 it produces a full width of 8 cm. Eight fragments have hems.

Sewing.— Sixty-two fragments reveal remains of sewing threads (Table 6). Usually the material of the sewing threads matches that of the textile. In five cases the sewing thread is made of linen and in one case it is of goat hair. The spin direction of the sewing threads is usually S2Z, but Z2S, SS, S, Z are also present (see Table 6).

In some fabrics the stitches are neat and uniform in size. In others, they are coarse and irregular, sometimes running in different directions, uneven in size, with irregular intervals between the stitches, attesting to an unskilled or careless hand.

Sewing was used for three purposes:
(1) Seaming: only one such piece was found (No. 279). It consisted of two pieces, which were joined with a run and fell seam.
(2) Hemming: the edges of fabrics were cut along the warps, folded two or three times and usually sewn with uniform diagonal stitches. One fragment has a rolled hem (No. 233).
(3) Mending: four fabrics bear patches (e.g., Nos. 44*–45*), which cover tears or worn areas where only the warps remained.

Goat Hair

Thirteen items are made of goat hair, mostly naturally pigmented brown, and a few have some undyed cream fibers. Five are S2Z in both directions, 6 are Z2S/Z (e.g., No. 129*), and 2 are Z2S in both directions, usually tightly spun. Three are balanced tabby, 2 extended tabby, 2 tabby and 6 weft-faced.

Three selvedges were preserved: two are grouped selvedges and one is a selvedge with grouped outer warp threads and extra circuits of the main weft (Sheffer and Granger-Taylor 1994:169; Fig. 17, Type D). Two textiles bear remains of sewing.

Mixed Wool and Goat Hair

The warp of No. 67 is made of goat hair and the weft from goat hair and wool threads. The warp of No. 115* is mixed goat hair and wool. The weft is made of strips of woolen fabric in secondary use (see catalogue, below). In No. 125* wool and goat hair fibers are mixed together in both directions.

Linen

Sixty-two items (and four uncatalogued fragments) are of linen.

Spinning and Weaving.— They are made of S-spun threads, loose or medium spun, woven in various tabby techniques: 23 are balanced (e.g., No. 1*), 20 are tabby, 12 are extended tabby (e.g., No. 3*), 5 are warp-faced and 2 are weft-faced. The density of the warps is 6–25 per cm and of the wefts is 4–56 per cm.

Colors and Dyes.— All are undyed cream or beige. Five fragments bear 1–7 selfbands of 3–11 threads each (Table 7; e.g., Nos. 10–11*, 17*).

Edges.— Three have a closing border: one is made of plaiting (No. 113*), one is a double-plaited closing border with fringes (No. 297*) and one is braided (No. 299*; see catalogue, below). One has a plain selvedge, 3 have a crowded selvedge (e.g., No. 164*), and one of them (No. 144*) has both selvedges with an 8 cm preserved width.

Table 6. Mo'a Sewing Threads

No.	Loc.	Basket	Spin Direction	Stitches	Sewn Length (cm)	Sewing Threads Material	Color	Function	Comments
A. Wool Textiles									
22	3	248/ 3	SS			W			
43*	53	694/33	S						
44–45*	53	694/34	S2Z		13.5	W	UY	Patch	
44–45*	53	694/34	SS	?	5	L	UC	?	Traces
44–45*	53	694/34	S2Z	Counter H	3.5	L	UC	Stitch	
44–45*	53	694/34	Z2S			W			
46	53	694/35							Traces
56–57	53	694/47	S2Z	O	11	W	UC	Stitch	
56–57	53	694/47	SS	R	9, 10	W	UC	?	
56	53	694/47a			10.5	W	UC	Stitch	
60	53	694/51	S2Z	O?	11.5	W	UC	Patch	
61	53	694/52	S2Z	Diagonal	6	W	UC	Hem, folded Edge	
83	80	809/ 3	S2Z	O	1.5	W	UC	Folded and sewn	
84*	80	809/ 4	S2Z	O	3.5	W	UC	Folded and sewn	
90	81	909/ 2	S2Z	Diagonal	2.5	W	UC	Folded and sewn	Traces
92	81	909/ 4	S2Z	R	1.5	W	UC	?	Traces
102	82	890/ 7	Z	?	5	H	Pig. B	?	Traces
103	82	890/ 8	S2Z			L			
104	82	890/ 9							
108*	83	833/ 1a	S2Z	Diagonal	5	W	UC	Darning	
108*	83	833/ 1b	S2Z	R	7.5	W	R	Stitch 2 textiles	
109	83	833/ 2	S2Z	H		W	UBE	Folded edge	
110	83	833/ 4	S2Z	R	6	W	UC	Folded and sewn, hem	
116	87	854/ 3	S2Z	H	3.6	W	UC		Along the warp
118	88	879/ 1	S2Z	H	11	W	UBE		Textile folded to 3 and sewn along the warp threads
131	88	882/ 4	SS	H	13	W	UC		Textile folded to 3 and sewn along the warp threads
131	88	882/ 4	S2Z	O?	11.5	W	UC	Hem	Folded
134*	88	886/ 1	S	O, diagonal	1.5	W	UC	?	
140–1*	89	914/ 2	S2Z	O	3.4	W	UBE	Stitch	
143	89	914/ 7							
146	89	914/10	S	?		W	UC	Traces	
147	89	914/11	SS	?		W	UC	Traces	

Table 6. Mo'a Sewing Threads (cont.)

No.	Loc.	Basket	Spin Direction	Stitches	Sewn Length (cm)	Sewing Threads Material	Color	Function	Comments
159	89	915/ 4	S2Z	R	3	W	R	Stitch	
162	90	910/ 7	S2Z		2	W	DBL		Traces
163	90	910/ 8							Traces
169	90	910/14	SS	Diagonal	5	W	UC	Stitch	
174–6	90	910/19	S2Z			W	UC	Stitch	
	90	910/22							
210	90	910/23	S2Z	R	5, 5	W	BLA, UC	Decoration	
214	90	919/ 2	S2Z	O	3.8	W	G	Patch	
214	90	919/ 2	S	R	5	L	UBE	Stitch	
214	90	919/ 2	S2Z	O	4	W	G	Stitch	
216	90	919/ 4	S2Z	O		W	UC	Folded	Traces
219	90	919/ 7	S2Z	?	1	W	UC		Traces
229	222	3311/ 9	S2Z	H	15	L	UC	Sewn edge	
233	222	3311/13	Z2S	RH		W	UBE	Folded edge	
246, 248	222	3311/27	S2Z	?	2	W	UC	Stitch	
247	222	3311/27	S2Z	Diagonal	3	W	UC	Patch[i]	[i]With a band
257	222	3311/36	S2Z	O	10	W	UC	Stitch	
268	222	3311/47	S2Z	H?		W	UC		
267	222	3311/46	S2Z	H	6	W	UC	Folded	
269	222	3311/48	S2Z	R		W	UC	Folded	Traces
279	222	3311/58	Z2S	R+F	2	W	UC	Stitch	
282	222	3311/130	SS	R	10	W	UC	Folded edge	
284–5	222	3311/132							
290–1	222	3311/137	S2Z		2	W	UC	Stitch	Traces
292–3	222	3311/138	SS	O	2.5	W	UC	Stitch	
294	222	3311/139	SS	R	2.5	W	UC	Darning	Around 7 rows, like Masada
308	NL	54							
309–10	NL	55							
B. Linen Textiles									
8, 9	2	246/12	SS	O	2	L	UC	Stitch	
10–11*	2	246/15							Traces
14, 15	2	246/18							
16	2	246/19	?			L			Traces
17*	2	246/20	4S	R	14	L	UBE	Stitch	
18, 19	2	246/21	SS		2	L	UC	Stitch	

Table 6. Mo'a Sewing Threads (cont.)

No.	Loc.	Basket	Spin Direction	Stitches	Sewn Length (cm)	Sewing Threads Material	Color	Function	Comments
33	6	102/ 9	S2Z	R+F	33	L	UBE	Stitch	2 textiles
52	53	694/41	S2Z	RH	19	L	UC	Sewn edge	
63, 64	53	694/54	S2Z	O	4.5	H	Pig. B	Stitch	
73	53	694/63	S	RH	11.5	L	UC		
76	53	694/66	S2Z	R+F	3	W	UC		
C. Goat-Hair Textiles									
129*	88	882/ 1							Traces
302	NL	6							Traces

Table 7. Mo'a Selfbands in Linen Textiles

No.	Loc.	Basket	Description
6	2	246/ 6	2 bands, each 11 threads, 3×2 threads between them
10*	2	246/15a	7 bands, each 3–10 threads
14	2	246/18a	A band of 11 threads
16	2	246/19	A band of 4 threads
17*	2	246/20	A band of 6 threads

Sewing.— Ten fragments reveal remains of sewing threads (see Table 6). Usually the material of the sewing threads matches that of the textile. In one case the sewing thread is made of wool and in one case, of goat hair. The spin direction of the sewing threads is S, SS and S2Z (Table 6).

Table 8. Mo'a Basketry (Not Catalogued)

Locus	Basket
3	213
3	248
3	319
11	356
53	694
90	910

BASKETRY

Of the 88 items of basketry found at Mo'a, 50 were catalogued (Appendix 2) and 38, from six loci (Table 8), could not be catalogued due to poor preservation. Most of the fragments were made by plaiting and were used as baskets. In addition there are two braids, a sandal and a net. Non of the items is fully preserved.

Working Procedures and Cataloguing.— Attributes recorded include height and width. Braid-width, determined by the number of date palm frond weavers in the braid, the width of the fronds, and the density of the work, was measured from side edge to side edge, giving the width of the unattached braid (Bernick 1994:299). The number of elements of the braid, the width of the frond and the connecting cord diameter were also measured (Adovasio 1977; Bernick 1994:299; Wendrich 1991).

1/1 and 2/2 Twill Braid Plaiting

Material and Technique.— The date palm baskets are made of 2/2 twill braiding (Nos. 325*, 338*, 339*, 351*). Only one basket (No.

350*) is made of 1/1 twill braiding (for more details see Baginski and Shamir 1995:31–32).

Size and Texture.— The size of the complete artifacts could not be determined. The maximum preserved height of the segments is 78 cm and their maximum width 114 cm. The plaits were made of braids. Eleven baskets were made of braids 3.8–6.7 cm wide composed of 14 weavers, and 29 have braids, 2–5 cm wide, composed of 9 weavers. Two baskets have braids of both 9 and 14 weavers. The connecting cords, plied Z2S, are 0.3–0.6 cm in diameter. The connecting cord passes between the braids and connects them. If this cord is withdrawn, the basket unwinds into a long braid.

Most of the baskets are very fine and delicate. The palm fronds are 0.4–0.7 cm. There are 10–18 weavers per 10 cm. Obviously, the frond becomes narrower the more times it is folded. Producing a basket of narrow fronds requires more time and skill. The width of the fronds in each basket is more or less uniform.

Wear and Tear.— Most of the fragments look worn, with scuffed and sometimes broken palm fronds. In some cases, the fact that one side is more worn helped to differentiate between the inner and outer surface.

Function.— The plaited fragments found were probably parts of baskets. They could be used for carrying loads of grains, vegetables, earth and sand in bulk (Avizur 1976:157; Bernick 1994:305; Wendrich and Veldmeijer 1995:74–77; Baginski and Shamir 1995:32).

Braids

Two fragments of braids are continuous element self-selvedge (Bernick 1994:298): No. 357* (length 16 cm, width 3.2 cm) is composed of 5 weavers with 6 weavers per 10 cm; No. 358* (length 10.5 cm, width 5 cm) is composed of 5 weavers with 5 weavers per 10 cm. Many were discovered at Cave 38 (Baginski and Shamir, forthcoming).

Sandal

One sandal base (No. 359*) was made of a plait of palm leaves, thickness of 0.7 cm, coiled anti-clockwise into an elliptic shape. It was stitched with a sewing cord: Z2S palm fibers, 0.3 cm in diameter. The preserved length and width are 16 cm and 7.7 cm respectively. It may be the base of a sandal.

Net

There are 2 pieces (7.0 × 7.5 and 1.7 × 8.0 cm) of very delicate net (No. 360*) made of linen threads S2Z. Mesh knots make squares c. 1.2 × 1.2 cm. The edges of the net preserved are 8 cm long and 0.2 cm in diameter, and are made of three S-spun linen threads twisted together to Z. Such nets were usually made with a netting needle (Wendrich 1991:64) and are suitable for fishing. Similar nets were discovered at Berenike (Wendrich and Veldmeijer 1995:77–78) and the Coral Island (Baginski and Shamir 1998:78).

CORDAGE

One hundred and sixty-six threads, strings and ropes (Appendix 3) were discovered at Mo'a. Most of them (132) are made of date palm fibers, 16 of goat hair fibers, 8 of wool, 6 of mixed goat hair and wool fibers and 4 from unidentified bast fibers. Two cords (L222, B3311) were not catalogued because of poor preservation.

Goat Hair

The color of the goat hair cordage is the same naturally-pigmented brown as the goat hair textiles. The length is 3–32 cm, diameter 0.1–0.8 and there are 8–60 twists per 10 cm. In most of the cordage the fibers were Z-spun and then plied several times.

There are many variations of twists: Z2S (8), Z2S3Z (2), Z3S (2), Z3S (2), S2Z3S (1) and one braiding (No. 425*) made of 8 threads of Z2S. Four of them have knots and one (No. 454*) is made of two undyed colors—brown and cream twisted together.

Wool

There are 8 wool threads, length: 3.5–46.0 cm, diameter: 0.1–0.4 cm with 15–80 twists per 10 cm. Four have overhand knots. Variations of twists are S2Z (2), Z2S2Z (3), Z2S (1), Z3S (1) and S11Z2S (1).

Mixed Goat Hair and Wool Fibers

More goat hair fibers than wool were used in the six cords. The color of the wool is undyed cream. Five are Z2S and one is Z2S2Z.

Date Palm

One hundred and thirty-two date palm cords were discovered. The length of the palm cords varies from 3.7 to 75.0 cm. Only four (Nos. 381, 386, 440* and 516*) are intact and are 11, 17.5, 16, 28 cm long respectively. The cords are 0.1–2.1 cm in diameter with 4–30 twists per 10 cm. In most of the cordage (79) the fibers were Z-spun and then plied several times. There are many variations of twists: S (1), S2Z (4), S2Z3Z (1), S3Z (4), Z (1), Z2S (66) (No. 385*), Z2S2Z (2), Z2S3Z (11) (No. 440*), Z2S4Z (2), Z3S (35) (No. 401*), Z3S2Z (1), Z4S (1). Four are not twisted: 2 plaits (Nos. 418 and 524) are made of leaflets knotted together. Two more plaits were not catalogued due to poor preservation. Two delicate loops are made of date palm leaflets (Nos. 521*, 523*).

There are 40 cordage fragments with knots, most of them overhand knots but a few with a square knot. Cord No. 445* is knotted with a loop whose inner diameter is 6.5 cm. No. 461* is knotted to a rod which is 39 cm long.

Rope-Making Technique

A few cords found at Mo'a provide information concerning their manufacture (see Baginski and Shamir 1995). No. 399 is a Z2S-plied cord, which was made by Z-spinning the fibers, folding the cord in two, and plying it. No. 399 is Z-spun, which was folded to two and twisted to create Z2S. At one edge it is intact. No. 440* is an intact plied Z2S3Z, and was produced by folding a Z2S cord three times over and Z plying it. One end was looped and the other end was strengthened by a palm leaf in order to prevent raveling. No. 441* has one end intact forming a loop. It could be part of a basket that was not preserved. No. 516* is intact. Loops were formed at both ends.

In No. 441* a loop was formed at one end and the other end was tied in an overhand knot to prevent unraveling (Fowler 1990:142).

SPINDLE WHORLS

Three whorls were discovered at Mo'a (Table 9). All of them are well made, polished dome-shaped wood. Nos. 3/290* and 3/270* are decorated with two incised concentric circles near the base and two incised concentric circles around the perforation. No. 16/425/1 has two incised concentric circles around the perforation. The cylindrical perforation is drilled from one side. Its shape is ideally suited

Table 9. Whorls

Whorl No.	Diam. (cm)	Height (cm)	Hole diam. (cm)
3/290* (81–1746)	3.9	1.4	0.6
3/270* (91–1750)	3.6	1.3	0.5
16/425/1 (2002–9137)	-	1.2	-

No. 3/270. Whorl.

No. 3/290. Whorl.

for placing the whorl on the spindle (Nodet 1980:316). The perforation is centered, ensuring an even distribution of the mass around the axis and providing optimal efficiency (cf. Nodet 1980:316; Smith and Hirth 1988:350).

The weight of the whorls is very light, c. 5 g. Whorls made of light material such as wood, are used to spin wool (short fibers), while heavier whorls, such as stone, are used for linen (long fibers) (Forbes 1956:152; Ryder 1983:747). Ryder maintains that a heavy whorl causes tight spinning, which is suitable for the warp.

SUMMARY

In general the material found at Mo'a resembles findings belonging to the Early Roman period that have been discovered throughout the Mediterranean region (Sheffer and Granger-Taylor 1994:235). The textiles and basketry from Mo'a provide some indication of the prosperity of the inhabitants along the Spice Route. Patched textiles are few, as at other sites along the route, such as 'En Raḥel and Sha'ar Ramon. In contrast, at Wadi Murabba'at (Crowfoot and Crowfoot 1961:52), where the textiles were of excellent quality, they were heavily patched and repatched, and in the Cave of Letters most of the tunics were also mended (Yadin 1963:218–225). The other materials at Mo'a, such as glass, ceramics and wood artifacts (R. Cohen, pers. comm.) also indicate a high standard of living.

The spinning and weaving workmanship at Mo'a is of high quality. There are indications that at least some of the spinning and most likely some of the weaving occurred on site. Only 17 woolen textiles have a combination of S-spun warp and Z-spun weft within the same fabric and may belong to a western Asian or Mesopotamian tradition (Sheffer and Granger-Taylor 1994:236).

Textiles from Mo'a demonstrate a greater variety of techniques (such as twills) and dyes than those from 'En Raḥel. This may be due to Mo'a's location on the main road from Petra to Gaza, which was probably more frequently used by caravans (Baginski and Shamir 1995: Fig. 1). In addition, the findings at Mo'a belong to a later date than those from 'En Raḥel. The large number of baskets recovered reflects the need for sturdy baskets for transporting goods. The considerable number of cords is also compatible with the site's function as a way station on the caravan route.

Several textiles are imported and this proves that there were commercial connections with other communities (cities, countries) or Roman troops who passed through the site.

TEXTILES OF SPECIAL INTEREST

The textiles in the following list are arranged according to their catalogue number. They were selected because of their special interest. Several textile items consist of a number of fragments which may have been stitched together or have similar technical features. Each fragment is designated by a letter. When the fragments have identical features, and it can be assumed that they originated from the same piece of material, then only the largest piece is described in detail, and only the measurements of the others are given. When they are made of different fabrics sewn together, each fragment is described separately.

No. 17*
(a) 28 × 27 cm; (b) 4 × 19 cm. Extended tabby.
Warp: linen, undyed beige, S, medium, 8 × 2/cm.
Weft: linen, undyed beige, S, medium, 10 × 2/cm.
Comments: (b) is sewn on (a). Sewing thread: linen, undyed beige, 4S, medium, running stitch, 14/cm.
Decoration: self-band made of 6 threads.
Edge: double plaited closing border with short fringes (c. 1 cm).
Reference: No. 297* but without fringes; Masada No. 38(A), 102(A) (Sheffer and Granger-Taylor 1994:176–177).

No. 20*
3.7 × 3.5 cm and many more smaller fragments. Twill 2/4.

Warp: wool, undyed beige, S, Z, medium, 5 × 2/cm.
Weft: wool, undyed beige, Z2S, medium, 20/cm.
Decoration: band, wool, red, blue, brown, Z2S, 24/cm. More than 2.7 cm in width.

No. 42*
(a) 3.5 × 6.0 cm; (b) 5.5 × 4.3 cm. Weft-faced.
Warp: wool, reddish-brown, S, tight, 8/cm.
Weft: wool, reddish-brown, S, loose, 48/cm.
Decoration: band, wool, green, S, loose, 56/cm, 2.6 cm in width.

No. 43*
3 × 14 cm. Balanced tabby.
Warp: wool, undyed beige, S, medium, 13/cm.
Weft: wool, undyed beige, S, loose, 13/cm.
Comment: border, 2-twisted closing cord with c. 3 twists per cm. Closing cord of this type was very common in the Roman period (Sheffer and Granger-Taylor 1994:181).

Nos. 44*–45*
No. 44: (a) 5.5 × 7.0 cm; (b) 5.5 × 4.0 cm. Weft-faced.
Warp: wool, undyed yellow, S, medium, 12/cm.
Weft: wool, undyed yellow, S, loose, 36/cm.
No. 45: 6 × 4 cm. Weft-faced.
Warp: wool, undyed yellow, S, medium, 12/cm.
Weft: wool, undyed yellow, S, loose, 48/cm.
Comments: Nos. 44a and 44b are two fragments from the same material sewn together and patched with the finely-woven No. 45. The fabric below No. 45 was cut. Four different sewing threads were used: (1) Wool, undyed yellow, S2Z, used to hem the patch; (2) same as the previous used for the second line of stitching in the seam; (3) counter-hem seam, one line of linen S2Z, undyed cream and the second line of wool, Z2S, undyed yellow used to stitch together fragments Nos. 44a and 44b; (4) There are remains of sewing thread linen, SS, undyed cream.

No. 85*
15.0 × 5.5 cm. Weft-faced tabby.
Warp: wool, undyed cream, S, medium, 11/cm.
Weft: wool, undyed cream, S, loose, 22/cm.
*Comment*s: selvedge 2(4-4) grouped and Type D (Sheffer and Granger-Taylor 1994:169, Fig. 17).

No. 108* (Color Plate)
(a) 38 × 8 cm; (b) 18.0 × 9.5 cm. Extended tabby.
Warp: wool, undyed cream, light brown, reddish-brown, tight, 12/cm.
Weft: wool, undyed cream and brown in one pick, S, loose, 13 × 2/cm.
Decoration: band on (a) and (b), wool, wine, 1.4 cm width, I, 40/cm.
Another band on (b), wool, light red, 1.8 cm width, Z, 36/cm.
Comments: (a) darning with diagonal stitches, wool, undyed cream, Z2S; (b) two textiles from the same material stitched together.
Sewing thread: wool, red, S2Z, running stitch. Inconsistent organization of threads in the weft according to colors.
Cut fragments.

No. 113*
2 × 26 cm. Balanced tabby.
Warp: linen, undyed cream, S, medium, 21/cm.
Weft: linen, undyed cream, S, medium, 22/cm.
Comments: Double-plaited closing border with fringes 10.5 cm long. Fringes twisted to S, distance of 3 cm between the fringes, each fringe consists of c. 60 threads. Very fine threads. Stained with black spots. Cut piece. Probably used as a towel (Sheffer and Granger-Taylor 1994:174).
Reference: Masada (Sheffer and Granger-Taylor 1994:174).

No. 115*
4.2 × 5.6 cm. Tabby.
Warp: pigmented brown goat hair and undyed cream wool fibers mixed together. Z2S, tight, 3/cm.
Weft: wool strips in secondary use, 0.5 cm width each strip.

The strips:
Warp: undyed cream, S, tight, 16/cm.
Weft: undyed cream and light brown, S, loose, 19/cm.
One of the strips has grouped selvedge.

No. 119* (Color Plate)
4.0 × 3.3 cm. Balanced twill 2:2.
Warp: wool, green, Z, medium, 6/cm.
Weft: same as warp.
Reference: No. 102. The twill textiles apparently originated from Europe (Sheffer and Granger-Taylor 1994:237).

No. 124*
13 × 5 cm. Diamond broken twill 2:2.
Warp: wool, orange-red, S, medium, 22/cm.
Weft: wool, orange-red, Z, tight, 29/cm.
Comments: stained and cut.
Reference: Masada No. 11 (T) (Sheffer and Granger-Taylor 1994:210).

No. 129*
27.0 × 10.3 cm. Weft-faced.
Warp: goat hair, pigmented brown and undyed cream, Z2S, tight, 3.5/cm.
Weft: goat hair, pigmented brown, Z, loose, 16/cm.
Comments: grouped selvedge 2(3-2). Sewing threads: irregular, edge repaired by overcast seam, goat hair, Z2S.

No. 130*
8.5 × 8.5 cm. Balanced tabby, crépe appearance.
Warp: wool, undyed beige, S, over-twisted, 13/cm.
Weft: wool, undyed beige, S, loose, 13/cm.
Comments: sometimes 3 warps in one pick, sometimes the same in the weft.
Reference: Masada No. 112 (C) (Sheffer and Granger-Taylor 1994:185).

Nos. 140–141*
No. 140: 7 × 6 cm. Tabby.
Warp: wool, undyed light brown, S, medium, 16/cm.
Weft: wool, undyed light brown, S, loose, 25/cm.
No. 141: 6 × 1 cm. Balanced tabby.
Warp: wool, reddish-orange, S, tight, 18/cm.
Weft: wool, reddish-orange, S, loose, 18/cm.
Comments: two textiles stitched together. No. 140 is folded and sewn. No. 141 is lining of No. 140.
Sewing thread: wool, undyed beige, S2Z, overcast, 3.4 cm.

No. 144*
25 × 8 cm. Extended tabby.
Warp: linen, undyed beige, S, S2Z (2.5 cm) medium, 16/cm.
Weft: linen, undyed beige, SS, medium, 5 × 2/cm.
Comments: both crowded selvedges preserved. Width of textile changes between 7.5 and 8.0 cm. May have been used as a strip.

No. 145*
4.5 × 7.0 cm. Tabby, crépe appearance.
Warp: wool, undyed beige, S, over-twisted, 24/cm.
Weft: wool, undyed beige, Z, over-twisted, 32/cm.
Comments: cut.
Reference: Masada No. 112 (C) (Sheffer and Granger-Taylor 1994:185).

No. 159* (Color Plate)
11.5 × 7.0 cm, 6.0 × 8.5 cm. Tabby.
Warp: wool, undyed cream, light brown, S, medium, 14/cm.
Weft: wool, brown, reddish-brown, S, loose, 22/cm.
Comments: two textiles from the same material stitched together.
Sewing thread: wool, red, S2Z, running stitch. Cut piece.
Inconsistent organization of threads according to colors.

No. 167*
4 × 6 cm. Tabby.
Warp: wool, undyed cream, S, over-twisted, 21/cm.
Weft: wool, undyed cream, S, over-twisted, 16/cm.

Comments: the threads are very delicate with light density of threads. Loose weaving. Stained.

No. 168*
4 × 8 cm. Weft-faced.
Warp: wool, undyed beige, S, tight, 13/cm.
Weft: wool, undyed beige, S, loose, 20/cm.
Decoration: one double row of twining.
Reference: Masada, No. 10 (N) (Sheffer and Granger-Taylor 1994:201).

Nos. 179*–209 (Color Plate)
c. 50 × 50 cm all over, made of 31 cut pieces of wool (23) and linen (8) stitched together (for details see Appendix 1).
Comments: many fragments are colored with various shades of red (6) or green (8). Three wools are decorated with bands. Some pieces have selvedges. The sewing is generally untidy. Perhaps was used as a blanket.

No. 224* (Color Plate)
18.0 × 7.5 cm, 8.0 × 2.7 cm (two separate fragments of the same material).Tabby.
Warp: wool, undyed beige, S, over-twisted, 14/cm.
Weft: wool, undyed beige, S, loose, 12/cm.
Decoration: three mauve bands: two are very narrow 0.4 cm (distance between them 0.4 cm). After 4.3 cm a band of 8.5 cm, Z-spun, 44/cm.
Comment: cut.

No. 281* (Color Plate)
31 × 18 cm. Tabby.
Warp: wool, undyed cream, S, tight, 9/cm.
Weft: wool, undyed cream, S, medium, 14/cm.
Decoration: one dark wine band, more than 2.7 cm width. Weft threads are crowded five cm before the band. Another fragment, c. 4 × 6 cm, bears dark wine H-pattern decoration.

No. 299*
0.7 × 8.0 cm. Tabby.
Warp: linen, undyed cream, S, medium, 16/cm.
Weft: linen, undyed cream, S, loose, 10/cm.
Comment: edge: braided closing border similar to finds at 'En Boqeq, Palmyra and Nubia (Sheffer and Tidhar 1991:11–12, Figs. 12, 13).

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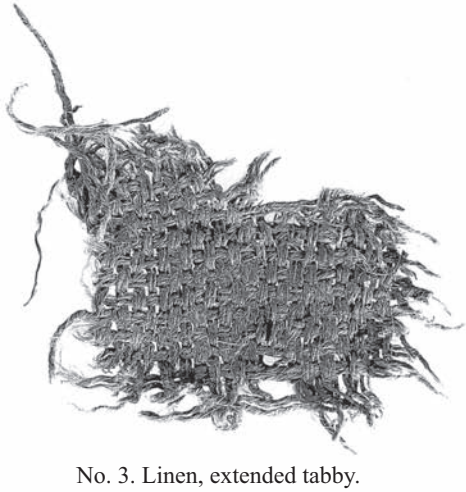
ABBREVIATIONS USED IN TABLES

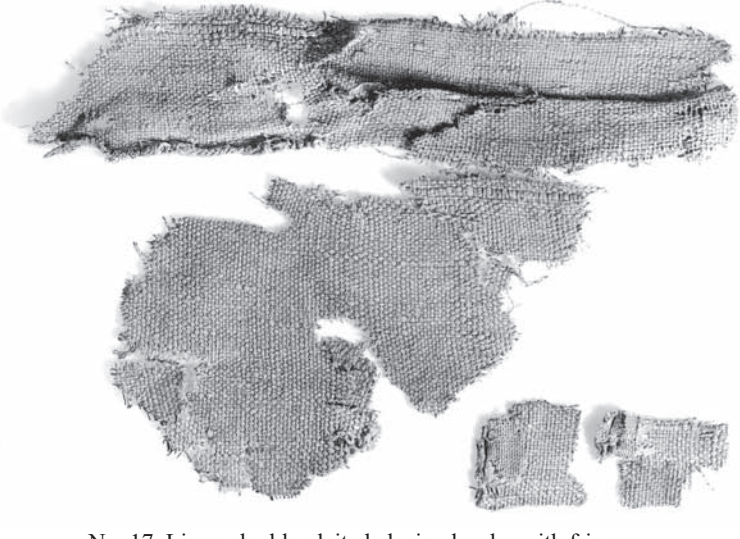
WA = Warp; WE = Weft.
Color: B = Brown; BE = Beige; BL = Blue; BLA = Black; C = Cream; D = Dark; F = Faded; G = Green; L = Light; O = Orange; Pig. = Pigmented; PU = Purple; R = Red; U = Undyed+Unpigmented; W = White; Y = Yellow.
Condition (C): G = Good; M = Medium; P = Poor.
Connection: NOC = No Change; GRO = Grouped.
Decoration (Dec): B = Band; H = H pattern; PAT = Pattern; SB = Selfband.
Density of Weaving (D): D = Dense; M = Medium; L = Loose.
Dirct. I & II = Direction of warp and weft is unknown.
Edge: CC = Closing Cord; CB = Closing Border; H = Hem; PS = Plain Selvedge; RH = Rolled Hem; S = Selvedge; SB = Starting Border.
Handle Length (cm): I = intact handle.
Material (M): B = Bast; H = Goat hair; L = Linen; P = Date Palm; W = Wool; W+H = Wool and Goat hair fibers mixed together; W, H = Wool and Goat hair threads plied together.
Spinning Tightness: L = Loose; M = Medium; T = Tight.
Stitches: H = Hemming; O = Overcast; R = Running; R + F = Run and Fell.
Weaving Technique (WT): BAL = Balanced tabby; CREPE = Crépe-like appearance; D.T = Diamond Twill; EX.T = Extended Tabby; T = Tabby; T2/2 = Twill 2/2; WE.F = Weft-Faced Tabby.
F = Faults; S = Sewing.

No. 1. Cut linen fragment.

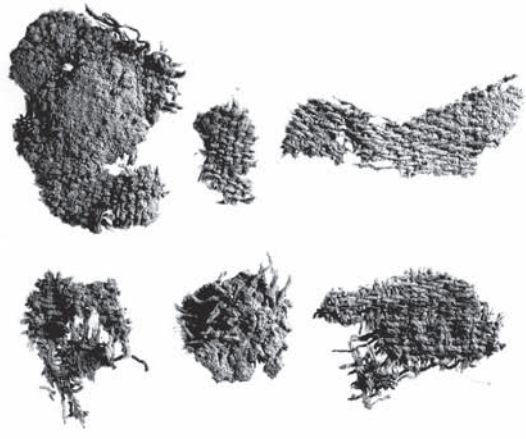


No. 3. Linen, extended tabby.

Nos. 10–11. Linen decorated with self bands.

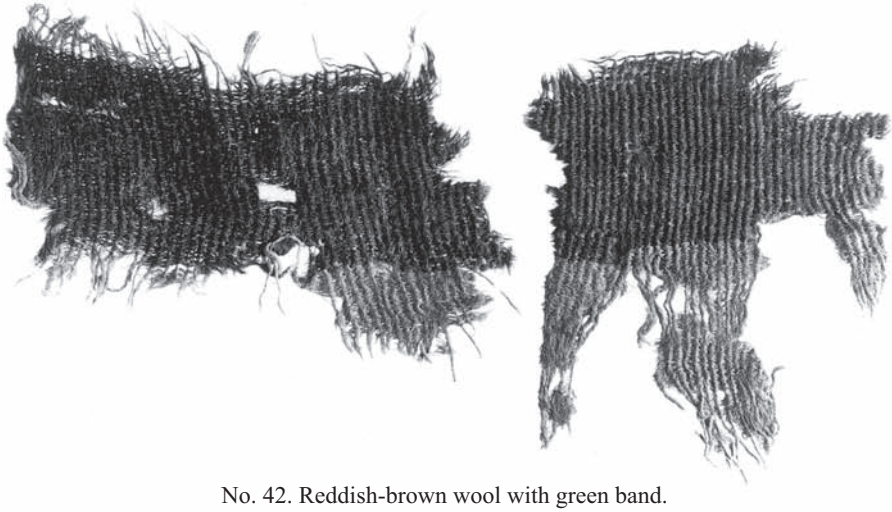


No. 17. Linen, double plaited closing border with fringes.

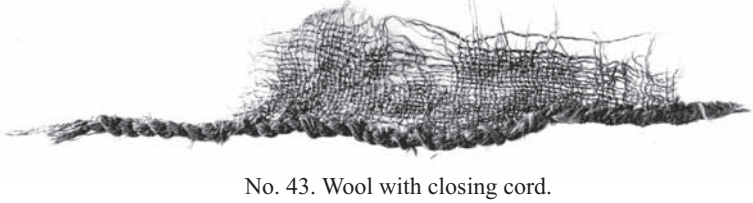


No. 20. Wool, S- and Z-spun warp, Z2S weft, twill 2/4, decorated with bands.

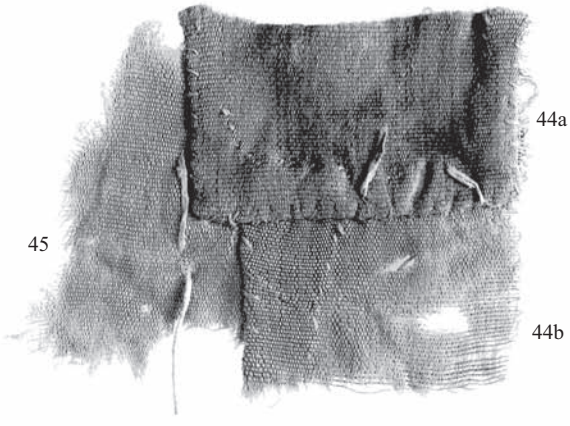
No. 32. Wool, weft-faced tabby.



No. 42. Reddish-brown wool with green band.



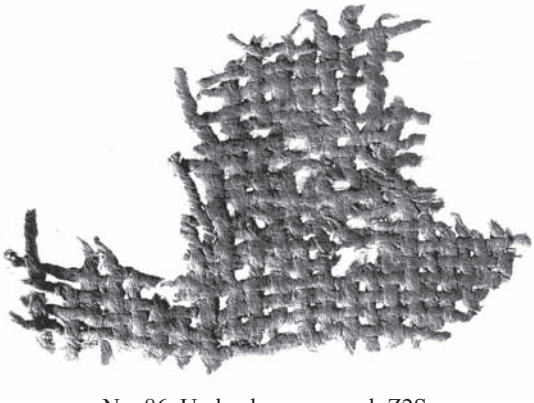
No. 43. Wool with closing cord.



Nos. 44–45. Three wool fragments stitched together.

No. 85. Wool with grouped selvedge 2(4-4).

No. 84.Wool, S/Z extended tabby, folded in two and stitched.



No. 86. Undyed cream wool, Z2S.

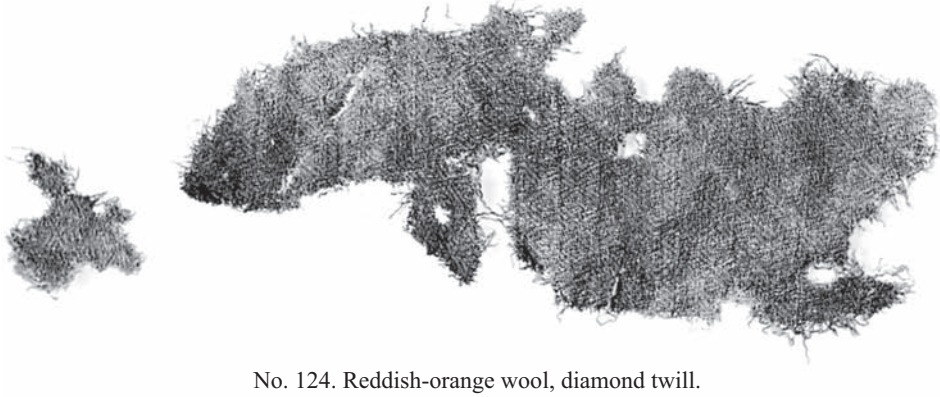
No. 93. Green wool, S2Z/S.

No. 100. Light green wool, very bright, S-Spun.

No. 101. Dark green wool.

No. 113. Linen, plaited closing border with fringes, 10.5 cm long.

No. 115. Warp made of goat hair and wool fibers mixed together, weft of wool strips.



No. 124. Reddish-orange wool, diamond twill.

No. 125. Wool and goat hair fibers mixed together, grouped selvedge 3(3-2-2).

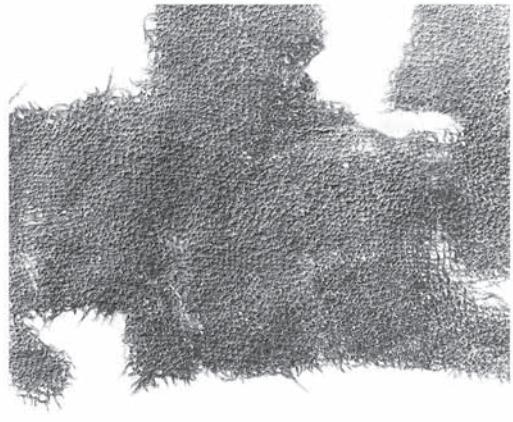
No. 129. Goat hair, Z2S/Z, grouped selvedge 2(3-2).

No. 130. Wool, S-spun, crépe-like appearance.

No. 140. Two wool fragments stitched together.

No. 142. Undyed cream wool with red band.

No. 144. Linen, crowded selvedge, intact width of c. 8 cm.

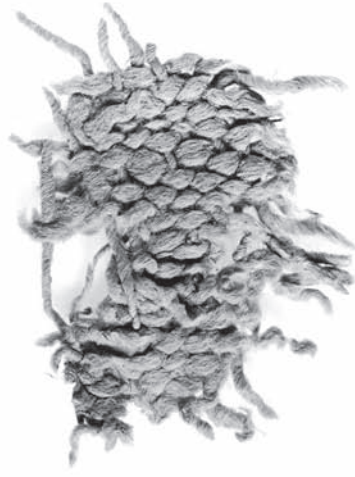


No. 145. Wool, S/Z crépe-like appearance.

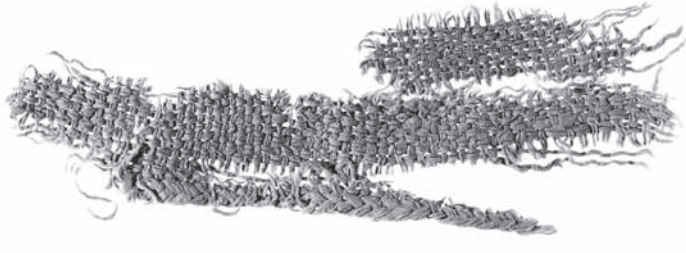
No. 164. Linen, crowded selvedge.

No. 167. Wool, over-twisted threads, loose-weaving gauze.

No. 168. Wool decorated with a double row of twining.



No. 215.Wool, Z/S weft-faced tabby.



No. 297. Linen, extended tabby, double plaited closing border.

No. 299. Linen, braided closing border.

No. 325. A basket 2/2 twill braid plaiting.

No. 338. A base of a basket.

No. 339. Preserved rim of 2/2 twill braid plaiting.

No. 350. 1/1 twill braid plaiting.

No. 351. A basket 2/2 twill braid plaiting.

No. 357. A braid.

No. 358. A braid.

No. 359. Base of a sandal.

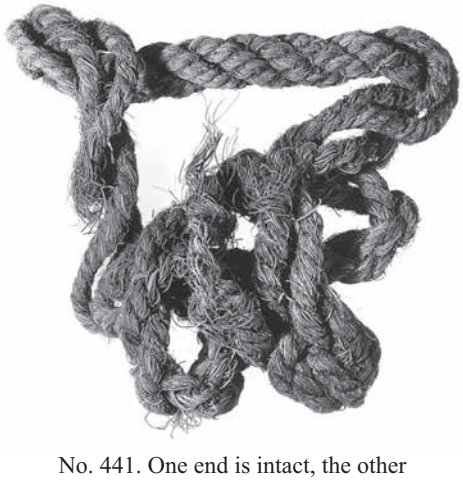
No. 360. A net.

No. 385. A date palm string ties three cords.

No. 401. Date palm cord plied Z3S.

No. 425. Goat hair braiding.

No. 440. Intact date palm cord.



No. 441. One end is intact, the other strengthened with a knot.

No. 445. Date palm cord plied Z2S3Z create a loop, inner diameter 6.5 cm.

No. 454. Goat hair, 4 Z-spun threads twisted together to S.

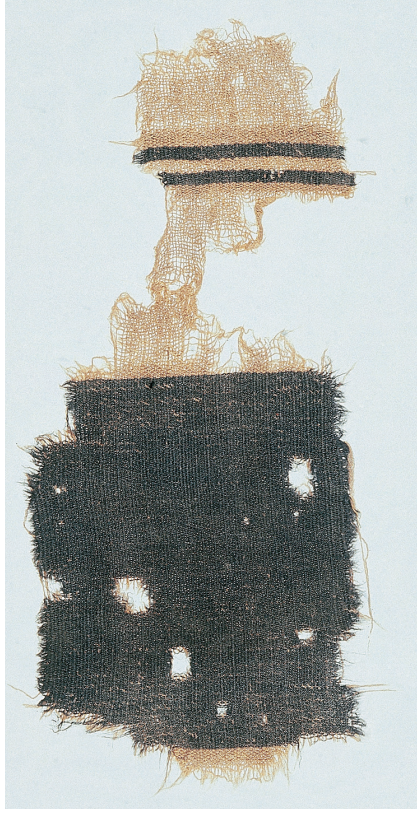
No. 461. A cord tied to a rod.

No. 516. Intact date palm cord.

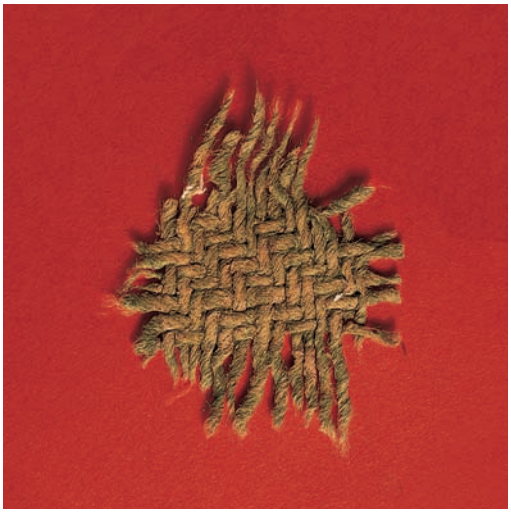
No. 521. A delicate loop made of date palm leaflets, inner diameter 3 cm.

No. 523. A delicate loop made of date palm leaflets, inner diameter 2 cm.

No. 27. Mo'a, wool, shades of green.



No. 108. Mo'a, wool, shades of brown with purple band.



No. 119. Mo'a, wool, balanced twill 2/2, Z-spun.

No. 134. Mo'a, wool, red with green band.

Color Plate

No. 159. Mo'a, wool, shades of green.

No. 179–209. Mo'a, cut pieces of wool and linen stitched together.

No. 224. Mo'a, wool, three mauve bands.

No. 281. Mo'a, wool, dark wine band and H pattern.

Color Plate

Appendix 1. Mo'a Textiles

No.	Loc.	Basket	M	C	Size (cm)		Spinning Direction		Spinning Tightness		Threads per cm		WT	D	Color		Edge	Dec.	S	Other Frag.	F	Comments
					WA	WE	WA	WE	WA	WE	WA	WE			WA	WE						
1*	2	246/1	L	G	25	13	S	S	L	L	11	11	BAL	T	UBE	UBE	-	-	-		-	Cut
2	2	246/2	L	G	16	12.5	S	S	M	M	11	7	T	T	UC	UC	-	-	-		-	
3*	2	246/3	L	G	4	4	S	S	L	L	6×2	5×2	EX.T	T	UBE	UBE	-	-	-		-	Used as a basket
4	2	246/4	L	M	22	9	S	S	M	M	12	12	BAL	T	UBE	UBE	-	-	-		-	
5	2	246/5	L	M	2.5	10	S	S	M	M	9	8	T	M	UBE	UBE	-	-	-		-	Thicker threads
6	2	246/6a	L	M	3	3	S	S	M	M	12	14	BAL	T	UC	UC	-	SB	+		-	
7	2	246/6b	L	M	7	4.5	S	S	M	M	20	18	BAL	T	UC	UC	-	-	+		-	
8	2	246/12a	L	G	4.5	7	S	S	L	L	8×2	8×2	EX.T	T	UC	UC	-	-	+	-	-	
9	2	246/12b	L	M	2.2	1.3	S	S	M	M	13	10	T	M	UC	UC	-	-	+	1.5×1.2	-	A patch on No. 8
10*	2	246/15a	L	M	14.5	16	S	S	L	L	8×2	7×2	EX.T	M	UBE	UBE	SB	SB	+		-	
11*	2	246/15b	L	M	1	1	S	S	L	L	10	10	BAL	M	UC	UC	-	-	+		-	
12	2	246/16	L	M	17	18	S	S	L	L	15	12	T	T	UBE	UBE	-	-	-		-	Cut
13	2	246/17	L	G	12	12	S	S	L	L	17	12	T	T	UBE	UBE	-	-	-		-	Cut
14	2	246/18a	L	M	8.5	11	S	S	L	L	6×2	8×2	BAL	M	UBE	UBE	-	SB	+		-	
15	2	246/18b	L	M	12	4.5	S	S	L	L	13	12	BAL	M	UBE	UBE	-	-	+		-	Direct. I&II; patch on /18a
16	2	246/19	L	M	31	6.5	S	S	L	L	20	20	BAL	T	UBE	UBE	-	SB	+		-	Cut
17*	2	246/20	L	M	28	27	S	S	M	M	8×2	10×2	EX.T	T	UBE	UBE	CB[i]	SB	+	4×19	-	[i]Double plaited with fringes
18	2	246/21a	L	G	4	4	S	S	M	M	7×2	8×2	EX.T	T	UC	UC	-	-	+		-	Dirct. I&II./21b is folded in 2 and sewn to /21a

Appendix 1. Mo'a Textiles (cont.)

No.	Loc.	Basket	M	C	Size (cm)		Spinning Direction		Spinning Tightness		Threads per cm		WT	D	Color		Edge	Dec.	S	Other Frag.	F	Comments
					WA	WE	WA	WE	WA	WE	WA	WE			WA	WE						
19	2	246/21b	L	G	1.5	2.5	S	S	M	M	13	9	T	M	UC	UC	-	-	-		-	Direct. I&II
20*	3	148/1	W	P	3.7	3.5	S,Z	Z2S	M	M	5×2	20	T2/4	T	UBE	UBE	-	B	-	Many small pieces	-	
21	3	216/1	W	G	3.5	2.8	S	S	L	L	14	14	BAL	M	UC	UC	-	-	-	4×1.5	-	
22	3	248/1	H	M	17	6	Z2S	Z	T	M	2	18	WE.F	T	Pig.DB	UY	S[i]	-	-		-	[i]2 groups of 4(Z2S)Z
23	3	248/2	H	M	6	6	Z2S	Z	T	L	3	18	WE.F	T	Pig.B	Pig.B	-	-	-		-	
24	3	248/3	W	M	11	6	S	S	M	M	6×2	8×2	EX.T	T	UBE	UBE	-	-	+		-	Cut. Layer of 1 cm mud stuck to it
25	3	306/2	W	M	9	22	S	S	T	M	13	17	T	T	UBE	UBE	-	-	-		-	
26	3	306/3	H	G	10	14	Z2S	Z2S	M	T	3.5	14	WE.F	T	Pig.DB	Pig.DB	-	-	-		-	
27*	3	306/4	W	M	5	2	S	S	T	L	13	18	T	T	LG,DG	DG	-	PATT	-		-	
28	3	317/1	H	M	6	2	Z2S	Z2S	T	T	5	6	BAL	T	Pig.DB	Pig.DB	-	-	-		-	
29	3	317/5	W	M	7	3	S	S	T	L	14	12	BAL	M	UBE	UBE	-	-	-		-	
30	3	317/6	W	M	10	18	S	S	T	L	10	22	WE.F	T	UBE	UBE	-	-	-		-	
31	3	319/9	W	M	5.5	9	S	S	T	L	10	25	WE.F	T	UBE	UBE	-	-	-	Many small pieces	-	
32*	5	271/4	W	M	3.1	1.8	S	S	T	L	9	34	WE.F	T	UBE	UBE	-	-	-	3 more pieces	-	Cut
33	6	102/9	L	M	35	15	S	S	L	L	13	9	T	M	UBE	UBE	-	-	+		-	Remains of another textile from the same material stitched togther
34	6	102/10	L	M	9	10	S	S	M	M	14	10	T	M	UBE	UBE	-	-	-	Many	-	
35	53	692/3	H	G	5	3.5	Z2S	Z	T	L	3.5	16	WE.F	T	Pig.B,UC	Pig.B	-	-	-		-	
36	53	694/1	W	G	5.5	4.6	SS	S	M	L	7×2	28	EX.T	T	UC	UC	-	-	-		-	

Appendix 1. Mo'a Textiles (cont.)

No.	Loc.	Basket	M	C	Size (cm)		Spinning Direction		Spinning Tightness		Threads per cm		WT	D	Color		Edge	Dec.	S	Other Frag.	F	Comments
					WA	WE	WA	WE	WA	WE	WA	WE			WA	WE						
37	53	694/2	W	P	3.7	3	SS	S	L	L	11×2	13	EX.T	T	UW	UW	-	B	-		-	
38	53	694/3	L	M	11	3	S	S	M	L	8	14	T	M	UGREY	UGREY	-	-	-		-	
39	53	694/ 4	W	G	2.7	2.7	S	S	M	L	13	32	WE.F	T	UC	UC	-	-	-		-	Very fine threads, cut along the warp
40	53	694/ 5	W	G	4	2	S	S	M	L	10	16	WE.F	T	ULB	ULB	-	-	-	3.6×2	-	Thick threads, cut along the warp
41	53	694/ 6	W	G	8.3	3.1	S	S	M	L	10	16	WE.F	T	UC	UC	-	-	-		-	Cut along the warp
42*	53	694/32	W	M	3.5	6	S	S	T	L	8	48	WE.F	T	R-B	R-B	-	B	-	5.5×4.3	-	
43*	53	694/33	W	M	3	14	S	S	M	L	13	13	BAL	M	UBE	UBE	CC	-	-		-	
44*	53	694/34a	W	M	5.5	7	S	S	M	L	12	36	WE.F	T	UY	UY	-	-	+	(b) 5.5×4	-	
45*	53	694/34c	W	M	6	4	S	S	M	L	12	48	WE.F	T	UY	UY	-	-	+		-	Cut; patch
46	53	694/35	W	M	3.5	3	Z	Z	M	M	9	9	T2/2	T	UC	UC	-	-	+		-	Direct. I & II, burnt at the edge
47	53	694/36	W	P	2.5	2.5	S	S	T	L	12	28	WE.F	T	R	R	-	-	-		-	
48	53	694/37	L	M	10	4.5	S	S	M	M	20	8	WA.F	T	UC	UC	-	-	-		-	
49	53	694/38	W	M	3.2	2	S	S	T	L	15	40	WE.F	T	G	G	-	-	-		+	
50	53	694/39	W	M	2.3	2.5	S	S	T	L	11	34	WE.F	T	LR	LR	-	-	+		-	
51	53	694/40	W	M	9.2	4.8	S	S	T	M	11	22	WE.F	T	UC	UC	S[i]	-	-		-	[i]3(3-3-3)
52	53	694/41	L	G	18	7.5	S	S	L	L	18	13	T	T	UC	UC	H	-	+	3×5	-	
53	53	694/44	L	M	8	3.5	S	S	M	M	14	14	BAL	T	UC	UC	-	-	-		-	Direct. I&II
54	53	694/45	L	M	4.5	6	S	S	M	M	15	15	BAL	M	UC	UC	-	-	-		-	
55	53	694/46	W	M	20	12	S	S	T	L	14	26	WE.F	T	UBE	UBE	-	-	-		+	
56	53	694/47a	W	M	11	13	S	S	T	L	14	26	WE.F	T	UC	UC	-	-	+		-	

Appendix 1. Mo'a Textiles (cont.)

No.	Loc.	Basket	M	C	Size (cm)		Spinning Direction		Spinning Tightness		Threads per cm		WT	D	Color		Edge	Dec.	S	Other Frag.	F	Comments
					WA	WE	WA	WE	WA	WE	WA	WE			WA	WE						
57	53	694/47b	W	M	9	3.5	S	S	M	L	10	28	WE.F	T	UC	UC	-	B	+		-	
58	53	694/48	W	M	11	3	S	S	T	L	6×2	20	EX.T	T	UC	UC	S[i]	-	+		-	[i]2(4-4)
59	53	694/49	W	M	13.5	9	S	S	T	L	14	48	WE.F	T	LB	LB	-	-	-		-	
60	53	694/51	W	M	17	15	S	S	T	L	15	26	T	T	UBE	UBE	-	-	+	Many more	-	Patch from the same material
61	53	694/52	W	M	6	6.5	S	S	M	L	10	24	T	T	UC	UC	-	-	-		-	
62	53	694/53	W	M	12	1.3	S	S	M	L	12	20	T	T	UC	UC	-	B	+		-	Cut
63	53	694/54a	B	M	10.5	12.5	Z2S	Z2S	M	M	2	2	BAL	T	UBE	UBE	PS	-	+		-	
64	53	694/54b	L	M	13	2.5	S	S	M	M	10	10	BAL	T	UC	UC	-	-	+		-	
65	53	694/55	L	M	8.5	3.4	S	S	M	M	12	9	T	M	UC	UC	-	-	-		-	
66	53	694/56	L	M	5	3	S	S	M	L	25	13	T	T	UC	UC	-	-	-		-	
67	53	694/57	H, W	P	3	3	Z2S	Z2S×2	T	T	8	2.5	EX.T	T	Pig. B	Pig. B, UC	-	-	-		-	
68	53	694/58	W	P	7.5	5	S	S	T	M	7	10	T	T	UC	UC	-	-	-		-	
69	53	694/59	L?	P	4	5.4	Z	Z	T	M	12	4	WA.F	T	UC	UC	-	-	-		-	
70	53	694/60	W	M	10.5	2.5	S	S	T	L	11	22	WE.F	T	UC	UC	-	-	-		-	
71	53	694/61	L	M	4	4	S	S	M	M	18	11	T	T	UC	UC	-	-	-		-	
72	53	694/62	W	M	5	4.5	S	S	T	L	10	26	WE.F	T	UC	UC	-	-	-		+	
73	53	694/63	L	P	11.5	2	S	S	M	M	12	12	BAL	T	UC	UC	RH	-	+		-	
74	53	694/64	W	M	7.5	5.5	S	S	T	L	10	12	T	T	UC	UC	-	-	-	3.5×4	-	
75	53	694/65	L	P	4	3	S	S	M	M	9	13	T	T	UC	UC	-	-	-		-	
76	53	694/66	L	M	8	4	S	S	M	M	14	14	BAL	T	UC	UC	RH	-	+		-	
77	57	785/1	L	M	6	6	S	S	L	L	14	8	T	T	UBE	UBE	-	SB	-	-	-	
78	57	785/2	W	G	1.8	2.1	S	S	T	L	14	24	WE.F	T	UC	UC	-	-	-	-	-	
79	57	785/3	W	M	8	2.5	Z2S	Z2S	T	T	5	5	BAL	T	UC	UC	-	-	-	5×2	-	Thick threads; direct. I&II

Appendix 1. Mo'a Textiles (cont.)

No.	Loc.	Basket	M	C	Size (cm)		Spinning Direction		Spinning Tightness		Threads per cm		WT	D	Color		Edge	Dec.	S	Other Frag.	F	Comments
					WA	WE	WA	WE	WA	WE	WA	WE			WA	WE						
80	57	785/4	W	M	4.7	1.8	Z	Z	T	L	7	8	BAL	T	UC	UC	-	-	-	3 more pieces.	-	Thick threads
81	80	809/1	W	P	2.6	3.3	Z	Z	T	M	7	9	T2/2	M	LB	LB	-	-	-	3×3, 2.4×1.4	-	2(4-4)
82	80	809/2	W	P	4.4	1.8	S	S	M	L	?	?	?	?	UC	UC	S[i]	B	+	-	-	[i]Only selvedge has left, 4(4-3-3-3)
83	80	809/3	W	M	1.2	3.2	S	Z	M	L	13	24	WE.F	T	UC	UC	-	-	+	1.4×1.8	-	
84*	80	809/4	W	M	5.2	2	SS	ZZ	M	L	7×2	12×2	EX.T	T	DG	G	-	-	+		-	Folded in two and stitched
85*	80	809/5	W	M	15	5.5	S	S	M	L	11	22	WE.F	M	UC	UC	S[i]	-	-		-	[i]2(4-4);. grouped and type D.
86*	80	809/6	W	M	7	4.5	Z2S	Z2S	M	M	4	4	BAL	L	UC	UC	-	-	-		-	Direct. I & II
87	80	809/8	W	M	11.5	2	S	S	T	L	13	20	T	T	UC	UC	-	-	-		-	
88	81	903/1	W	M	3	3.6	S	S	T	L	10	22	WE.F	T	UBE	UBE	S[i]	-	-	2.2×2	-	[i]3(4-4-4)
89	81	909/1	H	M	10.5	6	S2Z	S2Z	T	T	4	4	T	M	Pig. DB	Pig. DB	-	-	-		-	Direct. I&II
90	81	909/2	W	M	7	8	S	S	T	L	16	24	T	T	UC	UC	-	-	+		-	
91	81	909/3	W	M	15	2.5	S	S	T	L	12	28	WE.F	T	UC	UC	-	-	-	Many small pieces	-	
92	81	909/4	W	M	5.7	3.7	S	Z	T	L	17	28	WE.F	T	UBE	UBE	-	B	+	5.5×2	-	
93*	82	808/2	W	G	4.5	2.2	S2Z	S	T	L	7	30	WE.F	T	LG	G	-	-	-		-	Cut
94	82	808/3	W	M	2.8	8	S	S	M	L	14	12	BAL	T	ULY	ULY	-	-	-		-	
95	82	808/4	W	P	2	2.1	S	S	M	L	12	20	WE.F	T	UC	UC	-	-	-	2 more pieces	-	
96	82	890/1	W	M	4.7	2.3	SS	S	T	L	11×2	36	EX.T	T	UC	UC	-	-	-	4.5×1.4	-	Maybe napped

Appendix 1. Mo'a Textiles (cont.)

No.	Loc.	Basket	M	C	Size (cm)		Spinning Direction		Spinning Tightness		Threads per cm		WT	D	Color		Edge	Dec.	S	Other Frag.	F	Comments
					WA	WE	WA	WE	WA	WE	WA	WE			WA	WE						
97	82	890/2	W	P	1.2	9.2	S	S	T	L	17	28	T3/2	T	UC	UC	-	-	-		-	Move on 3 threads and under 2, moves 2
98	82	890/3	W	M	6.5	2.1	Z	S	T	L	9	?	T1/2	T	UC	UC	-	-	-		-	Nap
99	82	890/4	W	M	6	2.3	S	S	M	L	10	15	WE.F	T	UC	UC	-	-	-		-	
100*	82	890/5	W	M	13	1.7	S	S	M	L	11	22	WE.F	T	LG[i]	LG[i]	-	-	-	3×5.5	-	[i]Very bright; cut
101*	82	890/6	W	M	4.5	5	S	S	T	M	8	16	WE.F	T	DG	DG	-	-	-		-	
102	82	890/7	W	M	10	4	Z	Z	T	M	4	4	T2/2	T	O-R	O-R	-	-	+	9×4	-	Remains of hair thread passing
103	82	890/8	W	M	21	4	Z	Z	T	L	15	24×2	EX.T	T	B	B	-	-	+	3.5×14, 2.5×9.5	-	3 pieces stitched
104	82	890/	W	M	4	13	S	S	M	L	13	26	WE.F	T	UC	UC	-	-	+		-	The edge is folded 3 times
105	82	890/10	W	M	14	4.5	S	S	T	M	9	14	T	T	UC	UC	S[i]	-	-		+	[i]3(3-3-3)
106	82	890/11	W	M	2.7	1.8	S	S	M	L	12	20	WE.F	T	G	G	-	-	-		-	
107	83	821/1	W	P	9	2	S	Z	M	M	10	10	BAL	T	UC	UC	-	-	-	7×2	-	
108*	83	833/1	W	M	38	8	S	S	T	L	12	13×2	EX.T	M	LB,RB, UC	UC,B	-	B	+	18×9.5	-	Cut
109	83	833/2	W	M	3.5	4	S	Z	T	L	11	20	WE.F	T	UBE	UBE	-	-	+	Many more pieces	+	
110	83	833/4	W	M	22	6	S	S	T	L	12	20	T	T	UBE	UBE	-	-	+		-	
111	83	833/5	W	M	6	2	S	S	T	L	10	16	WE.F	T	UBE	UBE	-	-	-	2×5	-	Cut
112	85	887/1	W	G	6	9	S	S	M	L	8	14	T	T	UC	UC	-	-	-		-	
113*	86	833/1	L	M	2	26	S	S	M	M	21	22	BAL	M	UC	UC	CB[i]	-	-		-	[i]Plait and fringes; cut

Appendix 1. Mo'a Textiles (cont.)

No.	Loc.	Basket	M	C	Size (cm)		Spinning Direction		Spinning Tightness		Threads per cm		WT	D	Color		Edge	Dec.	S	Other Frag.	F	Comments
					WA	WE	WA	WE	WA	WE	WA	WE			WA	WE						
114	86	833/2	W	M	7.5	4	S	S	T	L	13	22	T	T	UC	UC	-	-	+	Many small pieces	-	
115*	87	854/2	H+W/W	M	4.2	5.6	Z2S	[i]	T	-	3	2[i]	T	T	Pig. DB, UC	UC, LB	-	-	-		-	[i]Weft is made of strips of wool fabric, 0.5 cm width
116	87	854/3	W	M	5.7	5	S	Z	M	L	15	20	T	T	UBE	UBE	H	B	+	Many more pieces	-	
117	87	854/5	W	P	8	2	S	S	T	L	16	20	T	M	DG	DG	RH	-	+		-	Overhand knot at the edge
118	88	879/1	W	P	19	14	S	S	M	L	11	14	T	M	UC	UC	H	-	+		-	Folded 3 times and stitched
119*	88	879/2	W	G	4	3.3	Z	Z	M	M	6	6	T2/2	T	LG	LG	-	-	-	3.8×2.8	-	Thick threads
120	88	879/3	W	M	3.5	9	S	S	T	L	11	26	WE.F	T	UC	UC	S[i]	B	-	3 more pieces	-	[i]Plain selvedge
121	88	879/5	W	M	10	5	S	S	M	L	9	20	WE.F	T	DG	DG	-	-	-	7×2	-	
122	88	879/6	W	M	1.5	1.5	S	S	M	L	12	18×2	EX.T	T	B	B	-	-	-		-	
123	88	879/7	W	M	13	4.5	S	S	M	L	12	18×2	EX.T	T	UBE	UBE	-	-	-	5×2.5	-	Cut rect
124*	88	881/2	W	M	13	5	S	Z	M	T	22	29	DT	T	O-R	O-R	-	-	-		-	
125*	88	881/3	W+H	M	6.5	3	Z2S	Z	T	M	?	11	WE.F	T	UC,Pig. B	UC, Pig. B	S[i]	-	-		-	[i]3(3-2-2) grouped, wool and hair spun together
126	88	881/4	W	G	3	2	S	S	M	L	12	26	WE.F	T	UC	UC	-	-	-		-	Cut frag., fine threads

Appendix 1. Mo'a Textiles (cont.)

No.	Loc.	Basket	M	C	Size (cm)		Spinning Direction		Spinning Tightness		Threads per cm		WT	D	Color		Edge	Dec.	S	Other Frag.	F	Comments
					WA	WE	WA	WE	WA	WE	WA	WE			WA	WE						
127	88	881/5	W	M	8	4	S	S	M	L	10	26	WE.F	T	UBE	UBE	-	-	-	2×6	+	
128	88	881/6	W	G	11	5.5	S	Z	OT	L	17	24	T	T	UC	UC	-	-	-		-	Cut, like 88/882/3
129*	88	882/1	H	G	27	10.3	Z2S	Z	T	L	3.5	16	WE.F	T	Pig. B, UC	Pig. B	S[i]	-	+		-	[i]Grouped
130*	88	882/3	W	M	8.5	8.5	S	S	OT	L	13	13	CREPE	M	UBE	UBE	-	-	-		+	
131	88	882/4	W	M	13	1	S	S	T	L	9×2	20	EX.T	T	UC	UC	H	-	+		-	
132	88	882/6	W	M	12.5	2.5	S	S	T	L	6×2	13×2	EX.T	T	UBC	UBE	-	-	-		+	
133	88	882/7	H	M	5.4	4	Z2S	Z	T	L	3.5	16	WE.F	T	Pig. DB, UC	Pig. DB	-	-	-		-	
134*	88	886/1	W	M	4.7	4.5	S	S	T	L	17	38	WE.F	T	R	R	-	B	+		-	
135	88	888/1	W	M	4.7	17	Z	Z	T	L	11	18	WE.F	T	B	B	-	-	-		-	
136	88	888/2	W	P	5.8	2.3	S	S	M	L	15	36	WE.F	T	R	R	-	B	+	7 more pieces	-	
137	88	897/5	W	M	3.8	2	Z2S	Z	T	L	15	40	T1/2	T	B	B	-	-	-		-	
138	89	880/1	W	M	4	4.5	S	S	M	L	9	9	T	T	UC	UC	-	B	-		-	Weft threads are thicker and not homo-geneous
139	89	914/1	W	G	3.1	1.9	S	S	T	L	10	54	WE.F	T	MAUVE	MAUVE	-	-	-		-	
140*	89	914/2a	W	M	7	6	S	S	M	L	16	25	T	T	ULB	ULB	-	-	+		-	Stitched to /2b
141	89	914/2b	W	M	6	1	S	S	T	L	18	18	BAL	T	R-O	R-O	-	-	+		-	
142*	89	914/6	W	M	22	3	S	S	M	L	12	14	BAL	T	UBE	UBE	-	B	-		+	Cut
143	89	914/7	W	M	16	6	S	S	T	L	13	16	T	M	UBE	UBE	-	B	+		+	Cut
144*	89	914/8	L	M	25	8	S[i]	SS	M	M	16	5×2	EX.T	T	UBE	UBE	S[ii]	-	-	10×5, 9.5×8	-	[i]and S2Z [ii]Crowded, the width is complete

Appendix 1. Mo'a Textiles (cont.)

No.	Loc.	Basket	M	C	Size (cm)		Spinning Direction		Spinning Tightness		Threads per cm		WT	D	Color		Edge	Dec.	S	Other Frag.	F	Comments
					WA	WE	WA	WE	WA	WE	WA	WE			WA	WE						
145*	89	914/9	W	M	4.5	7	S	Z	OT	OT	24	32	CREPE	T	UBE	UBE	-	-	-		-	Cut
146	89	914/10	W	M	6.5	7.7	S	S	M	L	11	34	WE.F	T	UBE	UBE	-	B	+		-	Cut
147	89	914/11	W	M	6.2	5	S	Z	T	L	11	28	WE.F	T	UBE	UBE	-	-	+	5×3	-	
148	89	914/12	W	M	18	4	S	S	T	L	11	11	BAL	M	UY	UY	-	-	-		-	Cut
149	89	914/13	W	M	45	2.5	S	Z	T	L	14	20	T	T	LO?	LO?	-	-	-		-	Cut
150	89	914/14	W	M	7	6.5	S	S	T	L	9	22	WE.F	T	UC	UC	-	-	-		+	
151	89	914/15	L	M	8	4	S	S	T	L	13	13	BAL	T	UC	UC	-	-	-		+	Cut
152	89	914/16	W	M	4.1	64	Z2S	SS	M	M	6	14×2	EX.T	M	UBE	UBE	-	-	-		-	
153	89	914/17	L	M	6.5	4.5	S	S	M	M	7×2	5×2	EX.T	M	UBE	UBE	S[i]	-	-	3.7×1.7	-	[i]Plain. Thicker weft threads
154	89	914/18	W	M	6.5	8	S	S	T	L	17	28	T	T	UC	UC	-	-	-			
155	89	914/20	W	G	3.5	6	S	S	T	L	16	13	T	T	UBE	UBE	-	-	-	many more	-	
156	89	915/1	W	M	14	3.5	S	S	M	L	11	24	WE.F	T	UC	UC	S[i]	-	-	-	-	[i]4(2-3-4-3)
157	89	915/2	W	P	1.5	6	S	S	T	M	12	20	WE.F	T	R	R	-	-	-	4×1.6	-	
158	89	915/3	W	M	4	2	S	S	M	M	6	6	BAL	M	UBE	UBE	-	-	-	4×3, 3×2	-	Direct. I & II
159*	89	915/4	W	M	11.5	7	S	S	M	L	14	22	T	T	UC, LB	B, RB	-	Pattern	+	6×8.5	-	Two pieces stitched together; Cut
160	89	915/5	W	M	9	5	S	S	T	M	8	16	WE.F	T	UC	UC	-	-	+		-	
161	90	910/6	W	G	26	11.5	S	S	M	L	8	8	T	T	UBE	UBE	-	-	-		-	Weft threads are twice as thick as the warp threads
162	90	910/7	W	M	2	10	S	S	M	L	12	18	WE.F	T	LG	LG	-	-	+		-	
163	90	910/8	W	M	11	3.5	S	S	T	L	17	34	WE.F	T	LR	LR	-	-	+		-	Cut

Appendix 1. Mo'a Textiles (cont.)

No.	Loc.	Basket	M	C	Size (cm)		Spinning Direction		Spinning Tightness		Threads per cm		WT	D	Color		Edge	Dec.	S	Other Frag.	F	Comments
					WA	WE	WA	WE	WA	WE	WA	WE			WA	WE						
164*	90	910/9	L	M	16	10.5	S	S	M	L	18	6	WA.F	T	UC	UC	S[i]	-	-	5×2	-	[i]Crowded
165	90	910/10	L	M	9	8.5	S	S	L	L	6×2	5×2	EX.T	T	UBE	UBE	-	-			-	Used as a basket
166	90	910/11	L	M	9.5	8	S	S	L	L	11	9	BAL	M	UC	UC	S[i]	-	-		-	[i]Crowded
167*	90	910/12	W	M	4	6	S	S	OT	OT	21	16	T	L	UC	UC	-	-	-		-	Direct. I & II, stained
168*	90	910/13	W	M	4	8	S	S	T	L	13	20	WE.F	T	UBE	UBE	-	SB[i]	-		-	[i]Twining
169	90	910/14	W	M	4	17	S	S	T	L	7	11	T	T	UBE	UBE	-	B	+	4×10.5, 3×5.5	-	
170	90	910/15	W	P	4	2.5	S	S	M	L	12	22	WE.F	T	G	G	-	-	-	3 more pieces	-	
171	90	910/16	W	M	9	3	Z2S	ZZ	T	L	7	8×2	EX.T	T	ULB	ULB	-	-	-		-	
172	90	910/17	W	M	6	5	Z2S	ZZ	T	L	9	22×2	EX.T	T	UC	UC	-	-	-		-	
173	90	910/18	W	M	3	11	Z	Z	T	L	10	44	WE.F	T	UC	UC	-	-	-		-	
174	90	910/19a	W	M	7	8	S	S	T	L	10	26	WE.F	T	UC	UC	-	-	+		-	90/910/19 is 3 pieces stitched together
175	90	910/19b	W	P	3.5	4	S	Z	OT	L	16	24	T	T	UC	UC	-	-	+		+	
176	90	910/19c	W	M	7	7	S	S	T	L	14	20	T	M	B	G	-	-	+		-	
177	90	910/20	L	M	2	3.5	S	S	L	L	14	7×2	EX.T	M	UBE	UBE	-	-	-		-	
178	90	910/21	L	M	2	3.5	S	S	L	L	14	7	WA.F	M	UC	UC	-	-	-		-	
179*	90	910/22a	W	M	9.5	36	S	S	M	L	13	18	T	M	R	R	-	B	+		-	
180	90	910/22aa	L	M	20	3.5	S	S	M	L	12	13	BAL	T	UW	UW	-	-	+		-	
181	90	910/22b	W	M	4	6	S	Z	T	L	15	22	CREPE	M	R	R	-	-	+		-	
182	90	910/22bb	L	M	14	3.5	S	S	M	L	14	56	WE.F	T	UW	UW	-	-	+		-	
183	90	910/22c	W	M	3.5	8	S	S	T	L	9	14	T	M	DR	DR	-	-	+		-	
184	90	910/22cc	L	M	9	6	S	S	L	L	13	13	BAL	T	UW	UW	-	-	+		-	

Appendix 1. Mo'a Textiles (cont.)

No.	Loc.	Basket	M	C	Size (cm)		Spinning Direction		Spinning Tightness		Threads per cm		WT	D	Color		Edge	Dec.	S	Other Frag.	F	Comments
					WA	WE	WA	WE	WA	WE	WA	WE			WA	WE						
185	90	910/22d	W	M	15	15	S	S	T	L		18		T	G	G	-	B	+	7×11	-	
186	90	910/22dd	L	M	12	27	S	S	L	L	7	14	WE.F	T	UW	UW	SB	-	+		-	
187	90	910/22e	W	M	30	6	S	S	T	L	10	22	WE.F	T	DR	DR	RH	-	+	7×7	-	
188	90	910/22ee	L	M	17	6	S	S	L	L	13	13	BAL	M	UW	UW	-	-	+		-	
189	90	910/22f	W	M	19	7	Z	I	T	L	3	6	WE.F	T	UC	UC	-	+	-		-	
190	90	910/22ff	L	M	25	8.5	S	S	M	L	7	12	T	M	UW	UW	-	-	+		-	
191	90	910/22g	W	M	9	18	S	S	M	M	7	16	WE.F	T	UBE	UBE	S[i]	-	+		-	[i]3(4-4-4)
192	90	910/22gg	L	M	11	17	S	S	L	L	7×2	14	T	T	UW	UW	-	-	+		-	Direct. I&II
193	90	910/22h	W	M	22	4	S	S	T	L	12	28	WE.F	T	UBE	UBE	-	-	+		-	
194	90	910/22hh	W	M	3	8	S	S	T	L	9	22	WE.F	T	RB	RB	-	-	-		-	
195	90	910/22i	W	M	12.5	30	S	S	M	L	13	16	T	M	UBE	UBE	-	-	+		-	
196	90	910/22ii	L	M	7	2	SS	SS	M	M	11×2	9×2	EX.T	T	UC	UC	-	-	-		-	
197	90	910/22j	W	M	28	0.5	S	S	M	L	-	-	T	M	R	R	S	-	+		-	
198	90	910/22jj	W	M	5	8	S	S	T	L	11	24	WE.F	T	UC	UC	-	-	-		-	
199	90	910/22k	W	M	8	3.5	S	S	M	L	12	11	BAL	M	DG	DG	-	-	+		-	
200	90	910/22m	W	M	7	7	S	S	M	L	12	20	T	M	DG	DG	-	-	+		-	
201	90	910/22n	W	P	2.5	1	S	S	T	L	-	-	-	-	LG	LG	-	-	+		-	
202	90	910/22o	W	M	7.5	2	S	Z	M	L	11	24	WE.F	M	DG	DG	-	B	+		-	
203	90	910/22p	W	M	5	10	S	S	M	L	15	24	T	T	UBE	UBE	-	-	+		-	
204	90	910/22q	W	M	3	6.5	S	S	T	L	11	20	WE.F	M	ULB	ULB	-	-	+		-	
205	90	910/22r	W	M	1.5	13	S	S	M	L	15	18	T	M	UBE	UBE	-	-	+	2×6	-	
206	90	910/22s	W	M	15	3	S	S	T	L	10	20	WE.F	T	UBE	UBE	-	-	+		-	
207	90	910/22t	W	M	6	6	SS	SS	T	L	7×2	14×2	EX.T	T	UBE	UBE	-	-	+		-	
208	90	910/22u	W	M	2.5	6	S	S	T	L	11	28	WE.F	T	G	LR	-	-	+		-	
209	90	910/22v	W	M	3	11	S	S	T	M	13	16	T	T	DG	DG	-	-	+	4.5×5	-	
210	90	910/23	W	M	2.6	5.2	S	S	T	T	10	14	T	M	B	B	-	B	+		-	

Appendix 1. Mo'a Textiles (cont.)

No.	Loc.	Basket	M	C	Size (cm)		Spinning Direction		Spinning Tightness		Threads per cm		WT	D	Color		Edge	Dec.	S	Other Frag.	F	Comments
					WA	WE	WA	WE	WA	WE	WA	WE			WA	WE						
211	90	910/24	W	M	15	7	S	S	T	L	12	25	WE.F	T	UC	UC	-	-	+		-	
212	90	914/18	W	M	6.5	7	S	S	T	L	18	24	T	T	UBE	UBE	RH	-	+		-	
213	90	914/19	W	M	11.5	0.5	S	S	T	L	3×3[i]	30	WE.F	T	UC	UC	S[i]	-	-		-	[i]All the width is preserved
214	90	919/2	W	M	4	7	S	S	M	L	13	22	WE.F	T	DG	DG	-	-	+		-	Size of frag. 9x9cm; patches from the same material
215*	90	919/3	W	M	7	5	Z	S	T	L	3	5	WE.F	T	UC	UC	-	-	-		-	Very thick threads
216	90	919/4	W	M	6	7.4	S	S	M	M	17	14	T	M	G	G	-	B	+		-	
217	90	919/5	W	H	1.4	1.6	S	S	T	L	16	26	T	T	UBE	UBE	-	-	-		-	
218	90	919/6	W	M	5	2	S	S	T	L	12	20	T	T	UBE	UBE	-	-	-		-	
219	90	919/7	W	M	1.2	45	S	S	M	L	12	24	WE.F	T	R	R	-	-	+	1.8×2.3	-	
220	90	919/8	H	M	14	10	S2Z	S2Z	T	M	4	4	BAL	M	Pig. DB	Pig. DB	-	-	-		-	
221	222	3311/1	W	M	8	7.5	S	S	T	L	13	16	T	T	UC	B	-	-	-	6.5×3.7, 4.5×3.3	-	
222	222	3311/2	W	M	11.5	14	S	S	T	L	9	20	WE.F	M	UC	UC	-	B	-	11×8.5	-	
223	222	3311/3	H/W	M	13.5	9.5	Z2S	S	T	M	3	16	WE.F	M	Pig. B	UBE	-	-	-		-	
224*	222	3311/4	W	G	18	7.5	S	S	OT	L	14	12	T	T	UBE	UBE	-	B	-	8×2.7	-	Cut
225	222	3311/5	W	M	2.5	1.5	S	S	T	L	17	22	T	T	BL	BL	-	-	-	Many pieces	-	
226	222	3311/6	W	M	8	6	S	S	T	L	9	16	T	T	UC	UC	-	-	-	5×3.5	+	
227	222	3311/7	W	M	5.5	6	S	S	T	L	13	20	T	T	UC	UC	-	-	-		+	
228	222	3311/8	W	M	11	2	S	S	T	L	12	16	T	T	UC	UC	-	-	-		+	
229	222	3311/9	W	M	1.5	15	S	S	T	M	11	24	T	M	UC	UC	-	-	+		-	Weft threads thinner

Appendix 1. Mo'a Textiles (cont.)

No.	Loc.	Basket	M	C	Size (cm)		Spinning Direction		Spinning Tightness		Threads per cm		WT	D	Color		Edge	Dec.	S	Other Frag.	F	Comments
					WA	WE	WA	WE	WA	WE	WA	WE			WA	WE						
230	222	3311/10	B	M	7	9	S2Z	S2Z	T	T	2.5	3	BAL	T	UBE	UBE	-	-	-		-	
231	222	3311/11	W	M	9.5	5	S	S	T	L	9	10	T	T	UC	UC	-	-	-		-	
232	222	3311/12	W	M	4	3.5	S	S	T	L	9	20	WE.F	T	LR	LR	-	-	-	+	-	
233	222	3311/13	W	M	9	4	S	S	T	L	17	28	T	T	O	O	-	-	+	+	-	
234	222	3311/14	W	M	11	3.2	S	S	T	L	13	18	T	T	UC	UC	-	-	-		-	Cut strip
235	222	3311/15	W	M	4	3	S	S	T	L	9	10	T	M	UC	UC	-	-	-		-	Weft threads thinner
236	222	3311/16	H	M	7	2	S2Z	S2Z	T	L	7	12×2	EX.T	T	Pig. B	Pig. B	-	-	-	+	-	
237	222	3311/17	W	M	10	3	S	S	T	L	10	19	T	M	UC	UC	-	-	-	8×4	+	
238	222	3311/18	W	M	9.5	6	S	S	T	L	11	16	T	T	UC	UC	-	-	-		-	
239	222	3311/19	W	M	3.5	8	S	S	T	L	17	38	WE.F	T	UC	UC	-	-	-		-	Very delicate
240	222	3311/20	W	M	6	4	S	S	T	M	8	10	T	M	UC	UC	-	-	-		-	
241	222	3311/21	W	M	12	13	S	S	T	M	11	11	BAL	M	UC	UC	-	-	-		-	
242	222	3311/22	W	M	31	2	S	S	T	M	12	12	BAL	T	UC	UC	-	-	-		-	Cut strip
243	222	3311/23	W	M	3	6	S	S	T	M	9	14	T	T	B	B,BLA	-	-	-		-	
244	222	3311/24	W	G	15	1.5	S	S	T	L	10	14	T	T	UC	UC	-	-	-		-	Cut strip
245	222	3311/25	W	M	26	9	S	S	T	L	15	20	T	T	UC	UC	-	-	-		-	
246	222	3311/27a	W	M	8	8	S	S	T	L	13	20	T	T	UC	UC	-	B	+		-	
247	222	3311/27b	W	M	6.3	6	S	S	T	L	9	-	-	T	UC	UC	-	B	+		+	Patch on /27a; only the band is preserved
248	222	3311/27c	W	P	3.5	4	S	S	T	L	10	12	T	T	UC	UC	-	-	+	7×7	-	Stitched to /27a
249	222	3311/28	W	M	12	8	S	S	T	L	10	19	T	T	UC	UC	-	-	-		+	
250	222	3311/29	W	M	9	7	S	S	T	M	10	20	T	T	UC	UC	-	-	-		+	
251	222	3311/30	W	M	15.5	1.5	S	Z	T	L	8	?	WE.F	T	UC	UC	S[i]	B	-	14×1.2	-	[i]Type D

Appendix 1. Mo'a Textiles (cont.)

No.	Loc.	Basket	M	C	Size (cm)		Spinning Direction		Spinning Tightness		Threads per cm		WT	D	Color		Edge	Dec.	S	Other Frag.	F	Comments
					WA	WE	WA	WE	WA	WE	WA	WE			WA	WE						
252	222	3311/31	W	M	9.5	5	S	S	M	M	11	11	BAL	T	UC	UC	-	-	-		-	
253	222	3311/32	W	M	3	3	S	S	T	L	13	24	WE.F	T	UC	UC	-	B	-		-	
254	222	3311/33	L	M	13	3.5	S	S	M	M	12	12	BAL	T	UC	UC	-	-	-	12×3	-	
255	222	3311/34	W	M	5	4	S	S	OT	L	21	30	T	T	UC	UC	-	-	-	2.5×2.5	-	
256	222	3311/35	L	G	17	2	S	S	M	M	14	7	WA.F	T	UC	UC	-	-	-		-	Cut strip
257	222	3311/36	W	M	14	6	S	S	T	L	8	12	T	T	UC	UC	-	-	+	2.5×6 stitched	+	
258	222	3311/37	W	M	1.2	7	S	S	T	L	11	20	T	T	UC	UC	-	B	-		-	
259	222	3311/38	W	M	7	2	S	S	T	L	15	18	T	T	UC	UC	-	-	-		-	Cut strip
260	222	3311/39	W	M	7	4	S2Z	S	T	M	9	24	WE.F	T	UC	UC	-	-	-	+	+	
261	222	3311/40	W	M	13	7	S	S	T	M	10	11	T	T	UC	UC	-	B	-		-	
262	222	3311/41	W	M	12	1.5	S	S	T	L	12	16	T	T	UC	UC	-	-	-		-	
263	222	3311/42	W	M	5.5	1.5	S	S	T	L	12	13	T	T	UC	UC	-	-	-		-	
264	222	3311/43	W	M	4.5	4.5	S	Z	T	L	13	22	T	T	ULY	ULY	-	-	-		-	
265	222	3311/44	W	M	20	2	S	S	T	L	9	12	T	T	UC	UC	-	-	-		+	
266	222	3311/45	W	M	5	5	S	S	T	L	8	9	T	T	UC	UC	-	B	-	4×5	+	
267	222	3311/46	W	M	6.5	4	S	S	T	L	10	18	T	T	UC	UC	H	-	-		+	
268	222	3311/47	W	M	12	8	S	S	T	L	13	15	T	T	LG, UBE[i]	UBE	-	-	+		-	[i]Not consistent
269	222	3311/48	W	M	7.5	2	S	S	T	L	13	30	WE.F	T	UC	UC	-	-	+		-	
270	222	3311/49	W	M	3.5	7	S	S	T	M	10	11	T	T	UC	UC	-	-	-	3×3.5	+	
271	222	3311/50	W	M	7	2.5	S	S	T	L	12	22	T	T	UC	UC	-	-	-		-	
272	222	3311/51	W	M	1	3	S	S	T	L	9	20	WE.F	T	UBE	UBE	-	-	-		-	
273	222	3311/52	W	M	3.5	1.5	S	S	T	M	8	16	T	T	UC	UC	-	-	-		-	
274	222	3311/53	W	M	4	3	S	S	T	L	12	36	WE.F	T	UC	UC	-	-	-		-	
275	222	3311/54	W	M	3.5	2	S	S	T	L	12	16	T	T	UC	UC	-	-	-		-	
276	222	3311/55	W	M	3.7	2.2	S	S	T	L	12	14	T	T	UC	UC	-	-	-		-	

Appendix 1. Mo'a Textiles (cont.)

No.	Loc.	Basket	M	C	Size (cm)		Spinning Direction		Spinning Tightness		Threads per cm		WT	D	Color		Edge	Dec.	S	Other Frag.	F	Comments
					WA	WE	WA	WE	WA	WE	WA	WE			WA	WE						
277	222	3311/56	W	M	4	4.5	S	S	T	L	14	14	BAL	M	UC	UC	-	-	-		-	
278	222	3311/57	W	M	3.5	1.5	S	S	T	L	11	16	T	M	UC	UC	-	-	-		-	
279	222	3311/58	W	M	7	2.5	S	S	T	L	14	20	T	T	UC	UC	-	-	+		-	Two textiles from the same material
280	222	3311/59	W	M	10	14.5	S	S	T	L	11	14	T	T	UC	UC	-	B	-		-	
281*	222	3311/120	W	G	31	18	S	S	T	M	9	14	T	T	UC	UC	-	B,H	-		-	
282	222	3311/130	W	M	16	11	S	S	T	M	10	20	T	T	UC	UC	H	B	+		-	
283	222	3311/131	W	M	9	10	S	S	T	L	11	26	T	T	UC	UC	S[i]	-	-		-	[i]Type D
284	222	3311/132a	W	M	10	13	S	S	T	L	10	18	T	T	UC	UC	-	-	+		-	
285	222	3311/132b	W	M	10	8	S	S	T	L	10	11	T	M	UC	UC	-	-	+		-	
286	222	3311/133	W	P	8	7	S	S	T	M	10	10	BAL	M	UC	UC	-	B	-		-	
287	222	3311/134	W	M	5	2.5	S	Z	T	M	7×2	8×2	EX.T	T	UC	BL	-	-	-		-	
288	222	3311/135	H	P	18	1.5	Z2S	Z	T	T	2×2	12	EX.T	T	Pig. B	Pig. B	S[i]	-	-		-	[i]Type D
289	222	3311/136	W	P	1.5	7.5	S	S	T	M	9	20	WE.F	T	DR	DR	-	-	-	1.5×4.5	-	
290	222	3311/137a	W	P	6.5	2.5	S	S	T	L	12	12	BAL	T	LB	UC	-	-	-		-	a+b stitched together
291	222	3311/137b	W	P	5	2.5	S	Z	T	L	7×2	44	EX.T	T	UC	UC	-	-	-		-	
292	222	3311/138a	W	M	6	5	S	S	T	L	12	14	T	T	UC	UC	-	-	-		-	a+b stitched together
293	222	3311/138b	W	P	4	5	S	S	T	M	7	16	T	M	UC	UC	-	-	-		-	
294	222	3311/139	W	P	2.5	6	S	S	T	L	12	20	T	T	UC	UC	-	-	-	2×5	-	
295	222	3311/140	W	M	8	3.5	S	S	T	L	14	26	T	T	UC	UC	-	-	-		-	
296	222	3311/141	W	M	3	2.5	S	S	T	L	13	28	WE.F	T	UC	UC	S[i]	-	-		-	[i]Type D

Appendix 1. Mo'a Textiles (cont.)

No.	Loc.	Basket	M	C	Size (cm)		Spinning Direction		Spinning Tightness		Threads per cm		WT	D	Color		Edge	Dec.	S	Other Frag.	F	Comments
					WA	WE	WA	WE	WA	WE	WA	WE			WA	WE						
297*	NL	?/1	L	M	2	10.5	S	S	M	M	7×2	7×2	EX.T	T	UC	UC	-	-	-		-	Double plaiting
298	NL	?/2	W	M	3	7	S	S	M	M	11	11	BAL	T	UC	UC	CB	-	-		-	
299*	NL	?/3	L	M	0.7	8	S	S	M	L	16	10	T	T	UC	UC	CB[i]	-	-		-	[i]Braiding
300	NL	?/4	H	M	4.8	3.4	S2Z	S2Z	T	L	3	5	T	M	Pig. B	Pig. B	-	-	-	2.6×2.7	-	
301	NL	?/5	W	M	18	12	S	S	T	L	7	14	WE.F	T	UBE	UBE	-	-	-		-	
302	NL	?/6	H	M	20	24	S2Z	S2Z	M	M	5	4	BAL	M	Pig. DB	Pig. DB	-	-	+		-	
303	NL	?/8	W	M	11	7	S	S	T	L	11	11	BAL	M	UC	UC	-	-	-	Thicker threads	-	
304	NL	?/50	L	M	7.5	1.5	S	S	M	M	13	13	BAL	M	UC	UC	-	-	-		-	
305	NL	?/51	W	M	18	25	S	S	T	M	12	20	T	T	ULY	ULY	S[i]	B	-	Many pieces	-	[i]Reinforced
306	NL	?/52	L	M	10	6.5	S	S	M	M	6×2	4×2	EX.T	M	UC	UC	-	-	-		-	
307	NL	?/53	L	M	7.5	3.5	S	S	M	M	12	12	BAL	T	UC	UC	-	-	-		-	
308	NL	?/54	L	M	26	4	S	S	M	M	14	9	T	T	UC	UC	H	-	+		-	
309	NL	?/55a	L	M	28	2.5	S	S	M	M	17	12	T	T	UC	UC	H	-	+		-	
310	NL	?/55b	L	M	28	2.5	S	S	M	M	17	17	BAL	M	UC	UC	-	-	-		-	

Appendix 2. Mo'a Basketry

No.	Loc.	Basket	Size		Braid Width (cm)	No. of Elements (at braid)	No. of Elements per 10 cm	Frond Width (cm)	Handle		Reinforced Cords		Rim		First Braid Length (cm)	Rope Cord Diam. (cm)	Comments
			Height (cm)	Width (cm)					Length (cm)	Diam. (cm)	Length (cm)	Diam. (cm)	Length (cm)	Diam. (cm)			
311	2	246/21	18	18	3.5	9	11	0.6							8	0.4	
312	2	246/22	19	12.5	3.2	9	13	0.5								0.4	
313	2	246/23	46	53	4.2	9	10	0.6	I20	1.3	13	0.5	53			0.4	Rim: connecting cord, e.g., Bernick 1994:298, Type 4 upper figure; 3 reinforcement cords from each end of the handle
314	3	213/ 1	13	24.5	6.4	14	10	0.7								0.4	
315	3	213/ 2	19.5	84	5	14	10	0.5							5.5	0.4	
316	3	213/ 4	13	20	3.6	9	15	0.6								0.3	
317	3	222/15	9	12	3.5	9	16	0.5								0.4	
318	3	222/16	12	18	6.5	14	11	0.7								0.4	
319	3	222/17	18	9	4.4	9	11	0.7								0.4	
320	3	222/18	13	17	3.5	9	12	0.7								0.4	
321	3	222/19	7	17	6.7	14	14	0.8								0.3	
322	3	222/20	9	22	5	14	10	0.6								0.4	
323	3	222/21	6	14	4.3	14	16	0.4			5,5,5	0.4				0.3	
324	3	222/22	17	25	2.8	9	14	0.5							4.5	0.5	
325*	3	222/23	19	W86	3.5–4.5	9,14	14	0.5	17	1.2	13,14	0.3	86	0.8		0.4	The distance between the ends of the handle is 5 cm
326	3	222/24	26	W82	3.5	9	14	0.6			18					0.3	
327	3	222/25	12.5	33	6.2	14	11	0.6			15	0.6				0.3	
328	3	222/26	21	25	4.5,5.5	9,14	10	0.5								0.4	
329	3	248/ 5	22	20	5	4?		1.2								0.4	Twill braiding 1/1
330	3	249/1	13	17	3.7	9	14	0.6								0.4	Traces of sewing string Z2S

Appendix 2. Mo'a Basketry (cont.)

No.	Loc.	Basket	Size		Braid Width (cm)	No. of Elements (at braid)	No. of Elements per 10 cm	Frond Width (cm)	Handle		Reinforced Cords		Rim		First Braid Length (cm)	Rope Cord Diam. (cm)	Comments
			Height (cm)	Width (cm)					Length (cm)	Diam. (cm)	Length (cm)	Diam. (cm)	Length (cm)	Diam. (cm)			
331	3	249/2	23	10	3.5	9	15	0.5								0.3	
332	3	249/3	14	20	3.7	9	14	0.6								0.3	
333	3	249/4	-	-	-	-	-	-	16	1.2	I9, 9,9	0.4	9	0.7		0.4	
334	3	317/4	5	8	3	9	17	0.5								0.4	
335	3	317/6	30	114	4	9	14	0.5	+	+	32	0.4	114			0.4	Repaired handle by adding cord; 4 reinforcement cords from one end of the handle and 3 from the other; between them 2 more reinforcement cords
336	3	317/7a	15	83	3.1	9	16	0.5					43			0.4	
337	3	317/7b	78	16	5	9	10	0.8								0.4	A repair of 336 with untidy and ununiform stitches of Z2S cord, diam. 0.4 cm
338*	3	317/8	20	28	3.5	9	23	0.6								0.3	
339*	3	317/9a	15	48	3.4	9	15	0.5							5.5	0.4	
340	3	317/9b	9.5	12	3.4	9	14	0.5								0.4	A repair of 339 with untidy and ununiform stitches of Z2S cord, diam. 0.3 cm, 2.7 cm size of stitches
341	3	317/10	18.5	36	3	9	16	0.4								0.4	

Appendix 2. Mo'a Basketry (cont.)

No.	Loc.	Basket	Size		Braid Width (cm)	No. of Elements (at braid)	No. of Elements per 10 cm	Frond Width (cm)	Handle		Reinforced Cords		Rim		First Braid Length (cm)	Rope Cord Diam. (cm)	Comments
			Height (cm)	Width (cm)					Length (cm)	Diam. (cm)	Length (cm)	Diam. (cm)	Length (cm)	Diam. (cm)			
342	3	317/11	6.5	11	3.8	14?	13	0.5	22	1.3	+	0.4	36			0.4	3 reinforcement cords from each end of the handle
343	3	319/8	6	12	3.6	9	11	0.6								0.4	
344	5	271/2	11	13	5	14	15	0.5								0.4	
345	5	271/3	12	11	5	9	11	0.9								0.4	
346	11	356/1	12	16	5.5	14	16	0.5								0.4	
347	12	564/1	6	7	3.6	9	12	0.6								0.3	
348	54	726/1	4	W20	2	9	18	0.4	I30	1.1	11	0.3				0.3	IAA No. 81/1738
349	59	789/1	12.5	6	-	-	15	0.5	I13	0.6	4.5,8	0.4	+				Very small basket; the distance between the ends of the handle is 2 cm
350*	81	903/1	12	5	4.4	5		1.2								0.5	Twill braiding 1/1; one reinforcement cord from each end of the handle
351*	86	871/1	17	W51	2.8	9	13	0.6					26			0.5	IAA No. 81/1872.
352	88	882/5	26	13	3.2	9	15	0.5	19	1	I23, 23,23	0.3	16	SIMPL		0.3	Rim: connecting cord
353	88	882/6	21	20	6.2	14	10	0.7								0.3	
354	222	3311/136	10	12	4.2	9	12	0.7				0.4					
355	222	3311/137	11.5	13.5	5.4	9	10	0.8				0.4					
356	NL	?/7	7	11	3.2	9	14	0.5								0.2	

Appendix 2. Mo'a Basketry (cont.)

No.	Loc.	Basket	Size		Braid Width (cm)	No. of Elements (at braid)	No. of Elements per 10 cm	Frond Width (cm)	Handle		Reinforced Cords		Rim		First Braid Length (cm)	Rope Cord Diam. (cm)	Comments
			Height (cm)	Width (cm)					Length (cm)	Diam. (cm)	Length (cm)	Diam. (cm)	Length (cm)	Diam. (cm)			
357*	53	694/44			16×2.2	5	6										Braid
358*	88	882/7			10.5×5	5	5										Braid
359*	53	694/67			16×7.7												Base of a sandal
360*	222	3311/26			7×7.5, 1.7×8												Net (two pieces)

Appendix 3. Mo'a Cordage

No.	Loc.	Basket	Material	Spin Direction	Length (cm)	Diam. (cm)	Twists per 10 cm	Knots	Comments
361	1	556/1	P	Z2S	13	0.2	18		
362	1	556/2	P	Z3S	9,12.5	1	14		
363	1	556/3	P	Z2S2Z	23	0.8	?	+	Overhand knot at the edge
364	1	556/4	P	Z2S3Z	17	1.4	6	+	Many knots; creating a loop probably for a rod, inner diam. 1.5 cm
365	1	556/5	P	Z2S4Z	43	2.1	5		
366	1	556/6	P	Z2S	9	0.6	18		
367	1	556/7	P	Z2S	19	0.3	22		
368	3	209/1	P	Z3S	79	1.5	8	+	Overhand
369	3	213/3	P	Z2S	7	0.5	12		
370	3	213/5	P	Z2S	4	0.3	28		
371	3	216/1	P	Z3S	4.7	0.7	18		
372	3	222/1	P	Z3S	20	1	14		
373	3	222/2	P	Z3S	19	0.9	21		
374	3	222/3	P	S2Z	12	0.4	10		
375	3	222/4	P?	Z3S	34	0.7	14		
376	3	222/5	P	Z3S	32	0.7	12		
377	3	222/6	P	Z2S	19	0.5	16		
378	3	222/7	P	Z2S	30,75	0.7	7		
379	3	222/8	P	Z2S	21	0.4	14		
380	3	222/9	P	Z2S	14	1.2	10		
381	3	222/10	P	Z2S2Z	11	1.2	6		
382	3	222/11	P	Z2S	8	0.3	18		
383	3	222/12	P	S2Z	12	0.4	10		
384	3	222/13	P	Z2S	15	0.3	17		
385*	3	222/14	P	Z2S	9.5,18, 28	0.4	28	+	Overhand; string Z2S ties all of them
386	3	248/6	P	Z2S3Z	17.5	1.3	7		
387	3	248/7	P	Z2S	13,18	0.4	17		
388	3	248/8	P	Z3S	33	0.8	9		
389	3	248/9	P	Z3S	39	1	9	+	Many knots
390	3	290/1	P	Z3S	13	0.6	17		
391	3	290/2	P	Z3S	16	0.6	22		
392	3	306/1	P	Z3S	15	1.1	9		
393	3	319/1	P	S	14	1.3			
394	3	319/2	P	Z3S	8,10	0.7	16		
395	3	319/3	P	Z3S	45	0.8	12	+	2 overhands knots
396	3	319/4	P	Z2S3Z	14	0.7	12		
397	3	319/5	P	Z2S	6	0.7	15	+	Overhand
398	3	319/6	P	Z3S	14	0.7	?		

Appendix 3. Mo'a Cordage (cont.)

No.	Loc.	Basket	Material	Spin Direction	Length (cm)	Diam. (cm)	Twists per 10 cm	Knots	Comments
399	3	319/7	P	Z2S	17[i], 20,52	0.8	10	+	[i]Complete at one edge
400	5	271/1	P	Z2S3Z	23, 58	0.8	5	+	2 cords tied together
401*	5	271/4	P	Z3S	16?	1		+	
402	6	102/1	P	Z2S	18	0.4	10		
403	6	102/2	P	Z	20	0.3			
404	6	102/3	P	Z3S	41	1.1	10		
405	6	102/4	P	Z3S	29	0.8	5		
406	6	102/5	P	Z2S	14	0.3	22		
407	6	102/6	P	Z2S	14	0.4	20		
408	6	102/7	P	Z2S	9	0.2	14		
409	6	102/8	P	Z3S	5.5	0.5	17		
410	10	?/1	P	S2Z3Z	64	1.4	7	+	Overhand knot at the edge and many more knots
411	11	356/2	P	Z2S	20	0.4	10	+	Square knot
412	11	356/3	P	S2Z	12	0.6	12		
413	11	356/4	B	S2S3Z	11	0.7	12		
414	16	166/1	P	Z3S2Z	30	1.3	4		Folded
415	53	694/7	P	Z4S	15	0.6	?		
416	53	694/8	P	Z3S	15	0.6	18		
417	53	694/9	P	Z2S	25	0.4	9		
418	53	694/10	P	PLAIT	15[i]	1.2		+	Square; [i]2 pieces together
419	53	694/11	P	Z3S	14	0.7	18		
420	53	694/12	P	Z2S	10	0.3	18		
421	53	694/13	P	Z3S	60	0.8	9	+	Knot at the edge
422	53	694/14	P	Z3S	11	0.5	14		
423	53	694/15	P	Z3S	45	1.3	12		
424	53	694/16	H	Z3S	10	0.4	26	+	Many knots
425*	53	694/17	H	8(Z2S)	3	0.6	-		Braiding
426	53	694/18	P	Z2S	22	0.7	8		
427	53	694/19	P	Z2S4Z	32	0.8	?		
428	53	694/20	P	LEAVES	6	-	-	+	Square
429	53	694/21	P	Z2S	19	0.4	18		
430	53	694/22	P	Z2S	15	0.5	?	+	Overhand
431	53	694/23	P	Z3S	8	0.5	17		
432	53	694/24	P	Z3S	8	0.6	16		
433	53	694/25	P	Z2S	3.7	0.3	30		
434	53	694/26	P	S3Z	25	?	?	+	Overhand
435	53	694/27	P	Z2S	15	0.5	7		

Appendix 3. Mo'a Cordage (cont.)

No.	Loc.	Basket	Material	Spin Direction	Length (cm)	Diam. (cm)	Twists per 10 cm	Knots	Comments
436	53	694/28	P	Z2S	5.3	0.2	?		
437	53	694/29	P	Z2S	13	0.4	10		
438	53	694/30	H	Z2S	3.5	0.1	60		
439	53	694/31	W	S2Z2S	9	0.1	30	+	Overhand at the end
440*	53	694/42	P	Z2S3Z	16	0.7	14		Intact fragment; with remains of a leaflet
441*	53	694/43	P	Z2S3Z	72	1.8	6	+	One end is intact, one end with a knot
442	53	694/50	W	S2Z2S	9.5	0.2	46	+	Overhand at the end
443	53	709/1	P	Z3S	32	0.7	14	+	Overhand at one end, knot at the other end, creating a loop 2 cm inner diam.
444	80	801/1	P	Z3S	18	0.8	10		
445*	80	801/2	P	Z2S3Z	27	1.2	8	+	Creating a loop of 6.5 cm inner diam.
446	80	809/8	P	Z2S	62	0.6	16		
447	80	809/9	P	S3Z	19	0.8	12		
448	80	809/10	P	Z2S	26	0.7	7		
449	80	809/11	P	Z2S3Z	54	1.5	7	+	Many knots
450	80	889/1	P	Z2S	19	0.4	10	+	
451	80	889/2	H	Z2S3Z	7,8, 10.6	0.6	16	+	
452	82	808/1	H+W	Z2S	10.5	0.05-0.3	2		
453	82	890/12	H	S2Z3S	15.5	0.8			
454*	84	887/2	H	Z4S	20	0.5	?		Pig. B, UC threads twisted together
455	87	854/1	H	Z2S3Z	23	0.3	21		
456	87	854/4	H	Z2S	7	0.2	18		
457	90	910/2	P	Z2S	6.8	0.3	11	+	Overhand
458	90	910/3	P	Z2S	12	0.5	14		
459	90	910/4	H	Z2S	14	0.2	24		
460	90	910/5	H	Z3S	14	0.5	18		
461*	90	918/1	P	Z2S3Z	30	1.7	6	+	Knotted to a rod 39 cm
462	90	919/1	P?	S3Z	23,27	0.7	16	+	
463	222	3311/60	W	S2Z	3.5	0.1	80		
464	222	3311/61	H	Z2S	9	0.3	8		
465	222	3311/62	P	Z2S	55	0.45	13		S cord folded to 2 and twisted
466	222	3311/63	P	Z2S	18	0.3	26		
467	222	3311/64	P	Z4S	26	0.45	-		

Appendix 3. Mo'a Cordage (cont.)

No.	Loc.	Basket	Material	Spin Direction	Length (cm)	Diam. (cm)	Twists per 10 cm	Knots	Comments
468	222	3311/65	P	Z3S	34	0.5	15		
469	222	3311/66	H+W	Z2S	16	0.3	19		
470	222	3311/67	B	Z3S2Z	16	1.1	4		
471	222	3311/68	P	Z2S	26	0.55	14		
472	222	3311/69	B	S2Z	7.5	1.7	10		S cord folded in 2 and twisted
473	222	3311/70	H	Z2S	13.5	0.35	18		
474	222	3311/71	P	Z3S	14	0.8	14		
475	222	3311/72	P	Z3S	12	1.1	8		
476	222	3311/73	P	Z2S	21	0.9	9		
477	222	3311/74	P	S3Z	14.5	0.9	14		Palm fronds
478	222	3311/75	P	Z3S	17	1.1	11		
479	222	3311/76	P	Z2S3Z	46	1.7	6		
480	222	3311/77	P	Z3S	15, 23.5,24	0.6-0.9	17		
481	222	3311/78	H+W	Z2S	8.5	0.5	12		
482	222	3311/79	P	Z2S	20	0.4	18	+	
483	222	3311/80	P	Z2S	13	0.4	14	+	Z cord folded in 2 and twisted overhand
484	222	3311/81	W	S11Z2S	8	0.4	20		
485	222	3311/82	P	S2Z	19	0.3	-		
486	222	3311/83	P	Z2S	14.5	0.55	19		
487	222	3311/84	B	S2Z	12	0.2	44		
488	222	3311/85	W	Z2S	6.5	0.3	15		
489	222	3311/86	H+W	Z2S	14	0.4	16		
490	222	3311/87	P	Z3S	34	1	9		
491	222	3311/88	P	Z2S	26	0.3	17		
492	222	3311/89	W	S3Z2S	46	0.25	41	+	S3Z cord folded in 2 and twisted, overhand at one end
493	222	3311/ 90	P	Z2S	17	0.4	12		
494	222	3311/ 91	P	Z2S	7	0.5	15		
495	222	3311/ 92	P	Z3S	16	0.6	14		
496	222	3311/ 93	P	Z3S	18	0.6	22		
497	222	3311/ 94	P	Z2S	8	0.7	11		
498	222	3311/ 95	H	Z4S	15	0.4	-		
499	222	3311/ 96	P	Z2S	12	0.4	18		
500	222	3311/ 97	H+W	Z2S	16	0.15	40		
501	222	3311/ 98	W	S2Z	15	0.4	20		
502	222	3311/ 99	P	Z2S	11	0.3	-		
503	222	3311/100	P	Z2S	17	0.4	14		
504	222	3311/101	P	Z3S	11.5	0.8	-		

Appendix 3. Mo'a Cordage (cont.)

No.	Loc.	Basket	Material	Spin Direction	Length (cm)	Diam. (cm)	Twists per 10 cm	Knots	Comments
505	222	3311/102	P	Z2S	14	0.4	18		
506	222	3311/103	P	Z2S	11.5	0.3	12		
507	222	3311/104	P	Z3S	16	0.8	15		
508	222	3311/105	W	Z3S	29	0.4	26	+	Knot at the edge creating a loop, inner diam 1.5 cm; overhand knot at the other edge
509	222	3311/106	H	Z2S	16	0.4	15		
510	222	3311/107	P	Z2S	33	0.4	16	+	Create a loop, 9.5 cm long
511	222	3311/108	P	Z2S	11	0.45	18		Z cord folded in 2 and twisted
512	222	3311/109	P	Z2S	25	0.3	14		
513	222	3311/110	P	Z3S	18.5	0.8	-	+	Overhand
514	222	3311/111	H+W	Z2S2Z	43	0.3	-		Z2S cord folded in 2 and twisted
515	222	3311/112	H	Z2S	32	0.5	14	+	Overhand
516*	222	3311/113	P	Z2S3Z	28	1.4	8		Intact, Z2S folded in 3
517	222	3311/114	P	Z2S	22.5	0.1-0.45	14-34		
518	222	3311/115	P	Z2S	40	0.4	18		
519	222	3311/116	P	Z3S	52	0.8	16	+	Knots 15 cm before the edge
520	222	3311/117	P	Z2S	12, 12	0.3	13	+	Square; 2 tied together, 23 cm both
521*	222	3311/118	P	Rushes	13	0.3	-		Delicate loop, inner diameter c. 3 cm
522	222	3311/119	H	Z2S	9, 10	0.3	15	+	2 cords tied together
523*	222	3311/121	P	Rushes	11	0.5	-		Delicate loop, inner diameter c. 2 cm
524	222	3311/135	P	PLAIT	23,25	0.7			Leaves
525	NL	? /9	P	Z3S	33	0.8	17	+	Many knots
526	NL	? /10	P	Z2S	29	0.6	14		

REFERENCES

Avizur S. 1976. *Adam Ve'Amalo: Historical Atlas of Tools and Workshops in the Holy Land*. Jerusalem (Hebrew).

Baginski A. and Shamir O. 1995. Textiles, Basketry and Cordage from Naḥal Omer. *'Atiqot* 26:21–42.

Baginski A. and Shamir O. 1998. Textiles, Basketry and Cordage from Jazirat Fara'un (Coral Island). *'Atiqot* 36:39–122.

Bernick K. 1994. Masada Basketry, Cordage and Related Artifacts. In Y. Aviram, G. Foerster and E. Netzer eds. *Masada* IV. Jerusalem. Pp. 289–317.

Cohen R. 1982. New Light on the Date of the Petra–Gaza Road. *BA* 45:240–247.

Cohen R. 1991. Ancient Routes From Petra to Gaza In Light of New Findings. In A. Orion and Y. Eni. eds. *The Spice Route*. Sedé Boker. Pp. 28–77 (Hebrew).

Crowfoot E. 1974. Textiles. In P.W. Lapp and N.L. Lapp. *Discoveries in the Wâdi ed-Dâliyeh* (AASOR 41). New Haven. Pp. 60–77.

Crowfoot G.M. and Crowfoot E. 1961. The Textile and Basketry. In P. Benoit, J.T. Milik and R. de Vaux. *Discoveries in the Judaean Desert* II*:* Les Grottes de Murabba'at. Oxford. Pp. 51–63.

Forbes R.J. 1956. *Studies in Ancient Technology* IV. Leiden.

Fowler C.S. 1990. James Creek Shelter Textiles. *Anthropological Papers* 115:137–152.

Granger-Taylor H. 1993. The Grouping of Warp Threads for Areas of Weft-Faced Decoration in Textiles of the Roman Period: A Means of Distinguishing Looms? *Vlaamse Vereniging voor Oud en Hedendaags Textiel Bulletin 1992 (aan Daniek de Jonghe)*. Pp. 18–28.

Granger-Taylor H., Jenkins I.D. and Wild J.P. 1989. From Rags to Riches: Two Textile Fragments from Cyprus. In V. Tatton-Brown ed. *Cyprus and the East Mediterranean in the Iron Age: Proceeding of the Seventh British Musuem Classical Colloquium*. London. Pp. 146–165.

Nodet E. 1980. Fusaioles et Pesons. In J. Briend and J.B. Humbert. *Tell Keisan (1971–1976): Une Cite Phenicienne en Galilee*. Paris. Pp. 315–321.

Ryder M.L. 1983. *Sheep and Man*. London.

Shamir O. 1999. Textiles, Basketry, and Cordage from 'En Raḥel. *'Atiqot* 38:91–124.

Sheffer A. and Granger-Taylor H. 1994. Textiles from Masada—A Preliminary Selection. In Y. Aviram, G. Foerster and E. Netzer eds. *Masada* IV. Jerusalem. Pp. 153–256.

Sheffer A. and Tidhar A. 1991. The Textiles from the 'En-Boqeq Excavation in Israel. *Textile History* 22:3–46.

Smith M.E. and Hirth K.G. 1988. The Development of Prehispanic Cotton-Spinning Technology in Western Morelos, Mexico. *JFA* 15:349–358.

Wendrich W. 1991. *Who is Afraid of Basketry?* Leiden.

Wendrich W. and Veldmeijer A.J. 1995. Basketry and Cordage. In S.E. Sidebotham and W.Z. Wendrich eds. *Berenike 1994: Preliminary Report of the Excavations at Berenike and the Survey of the Eastern Desert.* Leiden. Pp. 69–84.

Wild J.P. 1970. *Textile Manufacture in the Northern Roman Provinces.* Cambridge.

Yadin Y. 1963. *Finds from the Bar Kokhba Period in the Cave of Letters.* Jerusalem.