

QUIPU AS31

Museum identification: No. F/851 (Peabody Museum, Harvard University)

Main cord: color DB-LB-G-W

- § 6.0 cm: pendant cord (1), then space of 3.5 cm.
 9.5 cm: group of 8 pendant cords (2-9), then space of 2.5 cm.
 12.0 cm: group of 8 pendant cords (10-17), then space of 15.0 cm.
 29.0 cm: group of 8 pendant cords (18-25), then space of 1.5 cm.
 32.5 cm: group of 8 pendant cords (26-33), then space of 0.5 cm.
 35.0 cm: group of 7 pendant cords (34-40), then space of 1.0 cm.
 38.0 cm: group of 2 pendant cords (41-42), then space of 2.0 cm.
 40.5 cm: group of 8 pendant cords (43-50), then space of 5.0 cm.
 47.5 cm: group of 4 pendant cords (51-54), then space of 170 cm.
 218.0 cm: end ç

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
1	--	37.0ç	MB	0	4:5.5-6.5; 2:8.0-8.5
1s1	1s(5.5); 1E(11.5)	46.5ç	W	11	
1s2	1s(5.5); 5L(11.0)	21.0b	W	15	
1s3	--	4.0b	W	?	
1s4	2L(10.5)	48.5ç	W	2	
1s5	1s(5.5); 1E(12.0)	33.0	W	11	
1s6	1s(6.0); 9L(12.0)	34.0ç	W	19	
2	8L(16.5)	30.5ç	W	8	
3	1s(5.5); 3s(15.0); 2L(23.5)	33.0ç	W	132	1:5.0

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
3s1	--	21.0	DB:LB	0	
4	1s(16.0); 3L(22.5)	34.5¢	W	13	
5	1s(14.0); 6L(20.5)	29.5¢	W	16	2:3.0-3.5
5s1	8L(18.5)	22.5¢	LB:W	8	
5s2	--	16.5	DB:LB	0	
6	1s(5.5); 5s(16.5); 8L(21.5)	32.5¢	W	158	1:3.0
6s1	--	13.0	DB:LB	0	
7	1s(16.0); 1E(23.0)	37.0¢	W	11	
8	8L(22.5)	32.5¢	W	8	
9	1s(6.0)	38.0¢	W	100	
10	1s(15.0)	41.0¢	W	10	
11	1s(5.0); 2s(16.0)	38.0¢	W	120	
12	3s(13.5); 8L(21.5)	26.5¢	W	38	
13	1s(14.5); 6L(23.0)	31.0¢	W	16	
15	1s(6.0); 1s(15.0); 9L(21.0)	26.0¢	W	119	2:2.5-3.0
14s1	--	9.0	DB:LB	0	
15	2L(14.0); 8L(21.0)	28.0¢	W	28	
16	1s(14.0); 5L(22.5)	32.5¢	W	15	
17	1s(14.0); 5L(24.0)	29.0¢	W	15	
18	8L(25.0)	44.0¢	W	8	
19	7s(11.5); 7L(26.5)	37.5¢	W	77	1:7.5
19s1	8s(4.5); 2L(17.5)	24.5¢	LB	82	2:1.0, 10.5
19s1s1	1E(17.0)	25.5¢	W	1	

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
19s1s2	--	0.5b	MB	?	
20	1s(12.0); 7L(25.0)	37.0c	W	17	
21	1s(11.0); 7L(23.0)	42.0c	W	17	
22	8s(11.5); 3L(23.5)	58.5c	W	83	1:3.0
22s1	8s(9.0)	17.0	LB	8?	
23	1s(10.0)	16.5b	W	1?	
24	1s(11.0); 6L(23.5)	43.5c	W	16	
25	1s(11.0); 1E(23.0)	44.5c	W	11	
26	1s(11.0); 1E(24.0)	48.0c	W	11	
27	9s(10.5); 7L(19.5)	39.5c	W	97	2:3.5, 4.0
27s1	1E(12.0)	28.0c	W	1	2:0.5, 6.5
27s1s1	2s(5.5); 4L(11.5)	19.0c	W	24	
27s1s2	1E(6.5)	19.5c	MB	1	
27s2	--	5.5	DB:W	0	
28	3s(10.0); 2s(23.0)	36.0c	W	32	1:15.0
28s1	1E(9.0)	10.5	MB	1	
29	1s(13.5); 6L(22.5)	52.5c	W	16	1:3.5
29s1	1E(19.5)	42.5c	LB	1	1:8.0
29s1s1	--	0.3b	W	?	
30	9s(9.5)	30.5c	W	90	2:7.0, 8.0
30s1	--	1.0	MB	?	
30s2	3s(2.5); 2L(9.0)	15.0c	W	32	
31	4L(19.5)	71.5c	W	4	

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
32	9L(18.5)	42.5¢	W	9	2:7.0, 7.5
32s1	6L(11.0)	21.0¢	W	6	
32s2	--	0.5	LB	?	
33	2s(9.5)	18.5	W	2?	
34	8s(6.0)	32.0¢	LB/W (4.0/32.0)	80	
35	7s(5.0); 7L(15.5)	25.5¢	LB/W (4.0/25.5)	77	1:0.5
35s1	6s(5.0); 2L(17.5)	25.5¢	LB	62	
36	4s(4.5); 4L(14.0)	30.5¢	LB/W (4.0/30.5)	44	
37	8s(5.0); 3L(13.0)	25.0¢	LB/W	83	1:0.5
37s1	5s(5.0); 9L(16.0)	18.0¢	LB	59	
38	2s(5.5); 6L(14.5)	28.5¢	LB/W (4.0/28.5)	26	
39	1s(5.0); 7L(14.5)	33.0¢	LB/W (4.0/33.0)	17	
40	1s(5.0); 7L(16.0)	33.0¢	LB/W (4.0/33.0)	17	
41	4s(5.0)	48.0¢	W	40	1:1.0
41s1	5s(3.5); 5L(11.5)	24.5¢	RB	55	
42	1s(4.5); 1E(12.0)	50.0¢	W	11	1:1.0
42s1	6s(3.5); 5L(10.5)	15.5¢	RB	65	
43	1s(5.0)	15.5b	W	1?	
44	9s(6.5)	18.0b	W	90	1:0.5
44s1	3s(4.5); 3L(15.0)	34.0¢	RB	33	

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
45	5s(5.5)	15.0b	W	5?	
46	1s(5.0); 6L(15.0)	28.5ç	W	16	
47	9s(5.0)	31.5ç	W	90	1:2.5
47s1	5s(2.0); 8L(12.5)	19.0ç	RB	58	
48	4L(16.0)	33.0	W	4	
49	1s(6.0); 9L(16.5)	28.5ç	W	19	
50	2s(6.0); 1E(17.0)	54.0ç	W	21	
51	--	30.0	LB	0	
52	--	37.0ç	LB	0	
53	--	33.5ç	LB	0	
54	--	33.5	LB	0	

Observations

1. This quipu can be viewed as six groups of 8 pendants (assuming that it is the 4th pendant in the 5th group that is not present) with 3 additional pendants (1, 41, 42) and a final group of 4 blank pendants (51-54). Referring to them as groups 1, 2, 3, 4, 5, 6, the following regularities are noted:

A) All pendants in a group are the same color. Group 5 is LB/W and the rest are W.

B) For all 6 groups, there are subsidiaries on pendants 2 and 5.

C) For all 6 groups, the values of pendants 2 and 5 are between 77 and 158 while the values of the other six pendants are each less than 59. When subsidiary values are added to pendant values, the values of positions

2 and 5 are increased so that they are between 120 and 163(+?), but the values of the other 6 positions remain less than 59.

D) Alternate groups show similarities:

For groups 1, 3, 5: $P_5 > P_2 > P_4 \geq P_3 > \begin{cases} P_7 \\ P_8 \end{cases}; P_1 = 8$

while for groups 2, 4, 6: $P_2 > P_5 > P_3 > P_4; P_4 = 16$

For groups 3, 5: $P_1 = 8; P_2 = 77; P_5 = 83$

while for groups 4, 6: $P_4 = 16; P_5 = 90; P_6 = 4.$

2. There seem to be an excessive number of values that are multiples of 8 or 11. Of forty-four unbroken, nonzero pendant values, 12 are multiples of 8, and 8 are multiples of 11. When subsidiary values and pendant values are considered, of sixty-five values, fifteen are multiples of 8 and twelve are multiples of 11. The multiples of 8 that appear are 8, 16, 24, 32, 40, and 120. The multiples of 11 are 11, 33, 44, 55, 77, and 132.