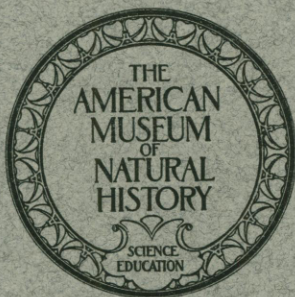


ANTHROPOLOGICAL PAPERS
OF
THE AMERICAN MUSEUM OF NATURAL HISTORY

VOLUME XXX, PART II

SUPPLEMENTARY NOTES ON THE QUIPUS
IN THE AMERICAN MUSEUM OF
NATURAL HISTORY

BY L. LELAND LOCKE



BY ORDER OF THE TRUSTEES
OF
THE AMERICAN MUSEUM OF NATURAL HISTORY
NEW YORK CITY
1928

PUBLICATIONS IN ANTHROPOLOGY

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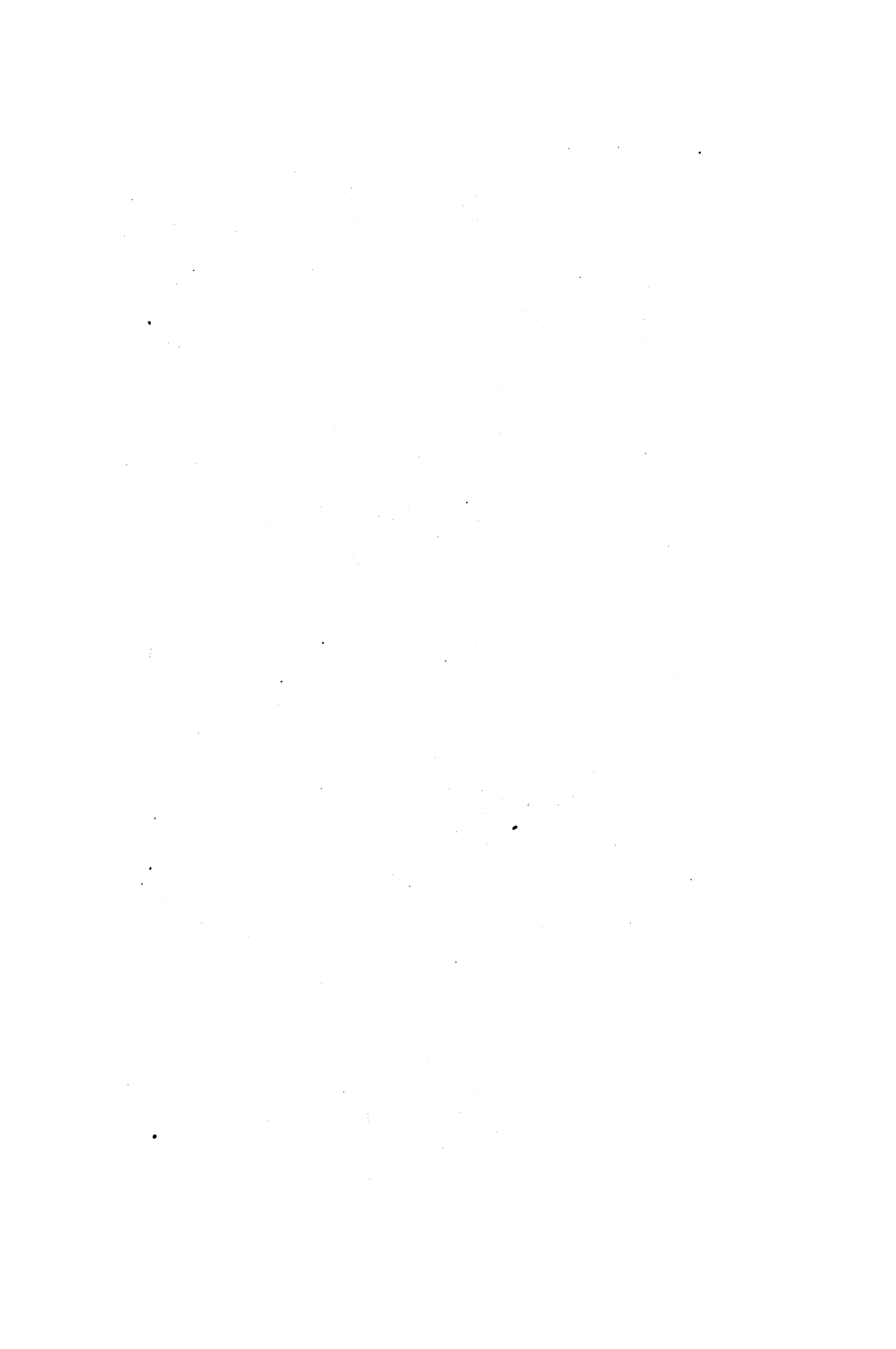
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CONTENTS

	PAGE
INTRODUCTION	43
QUIPU No. 3, B-8707, HUANDO	44
QUIPU No. 4, B-8705, CHANCAY	47
QUIPU No. 6, B-8704, CHUQUITANTA	53
QUIPU No. 5, B-8703, MEDIALIMA	57
QUIPU No. 8, B-8716, CHANCAY	65
QUIPU No. 9A, B-8711, CHANCAY	66
QUIPU No. 9B, B-8711, CHANCAY	66
QUIPU No. 9C, B-8711, CHANCAY	66
QUIPU No. 9E-I, B-8711, CHANCAY	67
QUIPU No. 7, B-8709, CHANCAY	67
QUIPU No. 10, B-8714, CHUQUITANTA	68
QUIPU No. 10, B-8714, CHUQUITANTA	69
QUIPU No. 28, 40.1-1550, ICA	69
QUIPU No. 29, 40.1-1551, ICA	70
QUIPU No. 27, D-N65-11, ICA	71
B-8717, PERU	71
B-8710, PERU	71
B-8712, PERU	73
B-8708, PERU	73

LIST OF ILLUSTRATIONS

TEXT FIGURES

	PAGE
1. Four Quipus from Peru	72

INTRODUCTION

In 1897, Dr. Max Uhle, in closing a description of a modern quipu, made a plea for the publication of all existing specimens of the ancient quipus in the hope that much of the mystery surrounding their use would be cleared up.

In a study of the large collection in the American Museum of Natural History, made during 1910-1911, one specimen was found, which, by the peculiar arrangement of strands and knots, provided an indisputable key to the significance of the knots. A study¹ of this specimen was published in the *American Anthropologist* in 1912. The conclusions arrived at and published were fully justified in the study of the remaining specimens. In 1923, the complete collection was published,² together with such other specimens as were available at the time. The outstanding conclusion of this study was that the specimens examined were all numerical in character and could not be regarded as an exemplification of a system of writing. No attempt was made to determine the explanation of the finding of quipus in graves other than the prevalent habit of placing personal belongings of the dead in the grave. As apparently no significance attached to the numbers appearing on the quipus, it was deemed best to publish only sufficient readings to establish the thesis.

Nordenskiöld, in searching for a satisfactory explanation of the burial habits of the Inca, began with the hypothesis that the quipus which are found in the huacas are calendrical or astrological in nature and that, therefore, the numbers involved are either mystical or astronomical. In the two studies³ published in 1925, the numbers and combinations of numbers appearing in the quipus under examination, bear out this hypothesis in a surprising manner. In such a study the numbers themselves and their arrangement are essential and, obviously, the specimens must be complete or, so nearly so, as to justify conjecture as to the missing parts.

These notes have been prepared to render available for the furtherance of this study, the large collection in the American Museum of Natural History. The readings made in 1910-1911 have been carefully checked, and while it is not always possible to be certain of a reading, when the strand is not hard-twisted, it is believed that they are substantially correct.

¹L. Leland Locke, "The Ancient Quipu, A Peruvian Knot Record" (*American Anthropologist*, N. S., vol. 14, No. 2, 1912).

²L. Leland Locke, *The Ancient Quipu*, American Museum of Natural History, 1923.

³Erland Nordenskiöld, "The Secret of the Peruvian Quipus" and "Calculations with Years and Months in the Peruvian Quipus" *Comparative Ethnographical Studies*, No. 6, Part 1 and Part 2, Oxford Press, 1925.

QUIPU No. 3, B-8707,¹ HUANDO

Strand	1000's	100's	10's	1's	Color
Main					Brown
1		2	2	2	White, stained
2		1	5	2	White, stained
3		3	frag.		White, stained
4		1	7	6	White, stained
5				6	White, stained
6			1	2	White, Loop above ones
6a					2 Pink
Total		7	15	20	2 Part of 3 lacking
Top A		8	9		White
1		2	7	2	White
2		1	8	2	White
3		4	0	2	White
4		2	5	4	White
5		0	0	0	White
6		0	2	2	White, Loop
Total		9	22	12	
Top B	1	1	frag.		White, black and white thread
1 ²		3		9	Brown, Loop
b		2		6	Brown
1			1	2	Blue and white
2				4	Blue and white
3			3	8	Blue and white
3a				4	Blue
4			1	9	Blue and white
5			0	0	Blue and white
5a				1	White
6				2	Blue and white, Loop
Total			5	25	5

¹See Locke, *The Ancient Quipu*, Plate II. The plate references in these notes all apply to the illustrations in the volume cited above.²This section is fragmentary, 1 and b are reversed in the plate.

QUIPU No. 3, B-8707, HUANDO (*Continued*)

Strand	1000's	100's	10's	1's	Color
Top C			7	5	Brown and white
C1				4	White
C2				1	Blue
1				0	Light brown
2			1	6	Light brown
3			1	3	Light brown
4			3	4	Light brown, lighter
5			1		Brown
6				4	Light brown
7		frag.			Brown
Total			6	17	Lacking 7
Top D			7	8	Brown
1		frag.			White and dark brown
2			1	3	White
3			1	frag.	White
4			1	7	White
5			1	frag.	White
6				3	White
7		frag.			White
1-7 are looped through by E, which is tied to main strand.					
Top E			5	frag.	Blue and white, black and white thread in each strand
1			1	frag.	Light brown and white
2			frag.		Light brown and white
3			3	6	Light brown and white
4, 5, 6			frag.		Light brown and white
Top F			7	1	Flemish white
1			frag.		Dark brown
2			frag.		Light brown
3				1	White
4			1		Light brown
No top strand. Loop of 3 tied to a brown loop, possibly end of 2.					

QUIPU No. 3, B-8707, HUANDO (*Continued*)

Strand	1000's	100's	10's	1's	Color
1		1	3	4	White
2			8	1	Flemish white
3		2	5	1	Flemish white
4			9	7	White
5			1	9	Whit
6			1	4	White
Total		3	27	26	
Top H		5	9	6	Light blue and white

QUIPU No. 4, B-8705,¹ CHANCAY

Strand Main	1000's	100's	10's 9L	1's 5S	Color White (96 is the number of pendent cords)
1		3S ²	1S	6L ³	White and blue
2		1S	8L	3S	White
3		5S	1S	4S	White
4		3S	5L	4L	White
5		*6L	5S	4L	White
5a		2S	7L	1S	Blue and white
6		4L	3S	2S	White
7		*1S	4S	7L1S	Blue and white
7a		2S	13L	1S	White
8		7S	6S	6L	White
9		*5S	3S	3S	White
9a		*3S	9L	1S	Red
9a1		5L	3L	3S2S	Blue and white
10		3L	2S	5L	Blue and white
11		5L	1S	4L	Blue and white
12		7L	1S	3L	White
13		4L	7L	3S	White
14		2S	8L	4S	White
15		*2S	3S	7L	Blue and white
15a		5L	5L	5S	White
16		11L	3S	2S	White
17		*1S	1S	6L	White

¹See Plates III and IV, Locke, *l. c.*

²S indicates the single knot.

³L indicates the long knot.

QUIPU No. 4, B-8705, CHANCAY (Continued)

Strand	1000's	100's	10's	1's	Color
17a		4L	5L2S	1S	Blue and white
18	2S		5S	3S	White
19	*4S		5S	2S	Blue and white
19a		*2S		5L	White
19a1			6L		Brown and white
20	4L		11L	3S	White
21	5S		3S	14L	White
22	5L		6S	6L	White
23	6L		12L	2S	White
24	*4L		1S	4S	White
24a		2L	8S	4L3S	Blue and white
25	*4S		3S	3S	White
25a		*7L	3L	2S	Red
25a1				9S	Blue and white
26	*5S	8L	3S	2S	Blue and white
26a		5L	7S	4S	White
27	4S		5S	4S	White
28	4L		3S	3S	White
29	7L		13L	3S	White
30	*9L		12L	2S	White
30a		3L2S	4S	2S	Blue and white
31	6S		13L	1S	White
32	5S		2S	11L	White
33	6L		13L	3S	White
34	*7L		1S	5L	White
34a		3S	2S	6S	Blue and white
35	4L		10L	3S	White

QUIPU No. 4, B-8705, CHANCAY (Continued)

Strand	1000's	100's	10's	1's	Color
36		4L	7L	6L	White
37		*1S	4S	3L	White
37a		5L	6L	6L	Blue and white
38		3S	5S	3S	White
39		3S	5S	3S	White
40		6L	14L	3S	White
41		4L	13L	3S	White
42		5S	4S	3S	White
43		5L	7S	2L	White
44		*2S	5S	1S	White
44a		*8L	1S	3S	Red
44a1		8S	4S	2S	Blue and white
45		*4L	5L	4S	Blue and white
45a		8L	6S	4S	White
46		*3S	5L	1S	White
47		4S	4S	8L	Blue and white
47a		1S	11L	2S	White
48		6S	8L	3S	White
49		4S	6L	3S	White
50		9S	5L	2S	White
51		2S	6S	6L	White
52		2S	4S	1F1S	White
53		5L	5S	2S	White
54		3S	1S	3S	White
55		1S	1S	7L	White
56					White

*If indicates the Flemish or figure 8 knot.

QUIPU No. 4, B-8705, CHANCAY (Continued)

Strand	1000's	100's	10's	1's	Color
57		*1S	5S	10L	White
57a					Blue and white
57a1		*3S	3L	3S	Red and white
58		*2L	3L	5S	White
58a			9L	4S	Gray
59		*8S	4S	3L	White
59a		5L	6L	11S	Blue and white
60		*3L	5L	7S	White
60a			7L	6S	White, red thread
61		*3L	4L	4L	White
61a		*1S	8L	1S	White
62			5S	3S	Gray
62a		*4L	5L	4L	White
63		9L*	6L	6L	Gray
63a			7L	4S	White
64		8L	7L	4S	Gray (below hundreds)
64a		11L	8L	5L	White
65			2S	3L	White
66	9L	*3S	5S	8L	Gray
66a					Blue and white
67					White
67a		3S	1S	6L	White
Space		10L	8L	4L	White
68	2L			12S	White
69	8L				White
70	*3S	5L			White
70a		*2S	3S	6S	White

QUIPU No. 4, B-8705, CHANCAY (Continued)

Strand	1000's	100's	10's	1's	Color
70a1			*5L		Brown and white
70a1b				9L	Red and brown
71	*7L	7L	2L	4L	White
71a			*6L	6S	Blue and white
71a1		7L	2L	6S	White
72		4L3S	6L	6L	White
73	*7L	3S	4S	7L	White
73a					Blue and white
74	*7S	9S	6S	5S	White
74a				3L	Blue and white
75	7L	*9L	7L	11L	Blue and white
75a			8L	6L	White
76		5L	8L	5L	White (below 100's)
77	3L	3L	6L	8L	White
78	*11L	10L	1S	1S	White
78a			11L	1S	Blue and white
79		8L5L	1S	10S	White
80	**4L	1S	11S	3S	White
80a					White
80b				8S	Blue and white
Space				4S	
81			10L		
81a			5L		
81a1		*3S	1S	6L	Blue and white
82		8L	7S	6S	White
83		*9L	8L	1S	Brown and white
83a			8L	4L	White
		*11L	11L	3S	White

QUIPU No. 4, B-8705, CHANCAY (Continued)

Strand	1000's	100's	10's	1's	Color
83a1			5L	8L	Blue and white
84		5L	2S	10S	White
85		*1S	10L	9S	White
85a			4L	10L	White
86		*7L	8S	4S	White
86a		6L	8L	7L	White
87		4L	15L	3S	White
88		*8S	12L	3S	White
88a		*2S	5L	9L	White
88a1			7L	184L1S	Blue and white
89		8S	8S	3S	White
90		1S	10L	5S	White
91		2S	6L	5S	White
92		*6L	9L	1S	White
92a		7S	5S	4L	White
93		*6L	6S	6S	White
93a		*4S	4S	5S	White
93a1			*4L		White
93a1b			10S	7L	White, brown thread
94		6L		5S	Red and brown
94a			*8S	8L3S	White
94b		10L	7L	3S	White
95		*7L	2S	7L	Blue and white
95a		*1S	3S	3S	White
95a1		6S	4L	3S	Red
96		*4L	1S	9L	Blue and white
96a		2S	3S	6S	Blue and white
					White

QUIPU No. 6, B-8704, CHUQUITANTA¹

Strand	100's	10's	1's	Color
Main 1000's				
1				Heavy, white
1a		*2L	1S	Upper brown, lower white
2	*3L	2L	1S	Brown and light brown
2a		3L	1S	Light brown
3	*3L	2L	1S1S	White
3a		2L	1S	Brown
				Upper blue, lower white, tied through a knot in 3
4	*4L	2L	1S	Brown
4a		1S	3L	Upper brown, lower light brown and blue
5	*1S	*3L	2L1S	Brown
5a				Brown and white, mixed
5b		3L		Upper brown, lower brown and dark blue
6	**3L	2L	1S	Brown
6a		2L		Upper light brown, lower light blue and brown
6b		2L	2L	Upper light brown, lower light blue and brown
7	**3L	3L		Brown
7a		3L	2L	Brown and blue, mixed
7b		1S	2L	White
8	3L			Brown
8a		2L	1F	Brown and blue, twisted
8b		2L	1S	White

¹Locke, l. c., Plates-VII and VIII.

QUIPU No. 6, B-8704, CHUQUITANTA (Continued)

Strand	1000's	100's	10's	1's	Color
9	1000's 9a	*1S	*3L	2L	Brown
			2L	1S	Upper white, lower blue and white, twisted
10	9b		3L	1S	Blue and brown, mixed
	10a	*1S	4K	2L	Brown
	10a ₁		*2L	2L	White
				2L	Upper brown, lower blue and brown, twisted
11		frag.			Brown
12	12a		*6L	2L	Brown
	12a ₁		*3L	1S	Brown and blue, mixed
13	13a		**3L	2L	White
	13b		2L	1S	Brown
14	14a	1S	2L	frag.? 1S	Upper brown, lower brown and green, twisted
15	15a		2L	*1S	White
	15b		*2L	3L	Brown
16	16a		*2L*	1S	Upper dark blue, lower white and brown twisted
	16b		1S	2L	Brown and white, mixed
17	17a		*2L	2L	Upper blue, lower white
			2L*	2L	Brown and blue
				2L	White
					Upper brown, lower blue and brown twisted

QUIPU No. 6, B-8704, CHUQUITANTA (Continued)

Strand	1000's	100's	10's	1's	Color
18	17a ₁	* * *	3L	1's	Brown and white, mixed
	18a			***2L	White, heavy
	18a ₁		4L	2L	Brown and white
	18b			2L	Brown, fragmentary
	18c			2L	Light blue
19	19a			1S	Light blue, end of 18b
	19a ₁			**2L2L	White, heavy
	19b		3L	2L	Brown and blue, mixed
20	20a	**3L	2L	1S	Brown and blue, mixed
	20b			2L	Brown and blue, mixed
					White
21	21a	*1S		2L	Upper brown, lower blue
	21b			2L	Upper blue, lower brown and blue
	22a				White
22				2L	White and dark brown, tied in upper knot of 21
				3L	Brown and blue, mixed
23	23a			2L	White
	24a	*4L		2L	Brown and blue, in upper knot of 22
24				1S	White
	25a				Upper white, lower blue
					White
					Brown

QUIPU No. 6, B-8704, CHUQUITANTA (Continued)

Strand 1000's	100's	10's	1's	Color
25b		2L		Brown, end of 25a
26		**2L*		White
26a		3L		Brown
26b		1S		Blue, doubled around 26 and twisted
26c		2L		Brown
26d				Brown, end of 26c, interwoven through strands of 26
27	*1S	*6L	3L1S	White
27a				Brown
27a ₁				Blue
27b			2L	Brown
28		1F	2L	White
28a		2L	3L	Brown and blue, mixed
29	**1S 3L	*3L	2L	White
29a			2L	Brown and blue
29a ₁			3L	Dark blue
29b		2L	1S	Brown and white, mixed, tied in upper knot of 29
30		5L***		White
30a			1S	Brown
30b			5L	White
30c			2L	Blue and white, mixed
31			**1	White
31a		2L	1	Upper blue, lower white and blue
31b		1S	1S	Brown and blue, mixed

QUIPU No. 5, B-8703,¹ MEDIALIMA

On this quipu are forty-six groups of six strands each and one group of two strands. The quipu is read from left to right on Plate V. The main strand is approximately 1 meter in length.

		Knot Readings		Color
Group	Number	Tens	Ones	
	1		1	Upper brown, lower white
	2		3	Upper brown, lower white
	2a		3	Blue and white
	2a ₁		1	Blue and white
	2a _{1a}		1	Upper brown, lower white
1	3		3	Upper brown, lower white
	3a		2	White, brown thread
	4	1	4	Upper brown, lower white
	5		3	Upper brown, lower white
—	6		4	Upper brown, lower white
	1		1	Upper brown, lower white
	2		1	Upper brown, lower white
2	3		3	Upper brown, lower white
	4	1	2	Upper brown, lower white
	4a	frag.		Dark brown
	5		3	Upper brown, lower white
	6		1	Upper brown, lower white
	1		1	White
	2		6	White
	2a		3	Brown
	2a ₁		1	Brown
3	3		3	White
	3a		2	Brown
	3a ₁		1	White, brown thread
	4	1	2	White
	4a			Dark brown
	5		3	White
	5a		2	White, brown thread
	6		0	White
	1		1	Green, brown thread
	2		6	Green, brown thread
	2a		1	
4	3		5	Green, brown thread
	3a		2	White, brown thread
	3a ₁	frag.		Dark brown
	4		1	Green, brown thread
	5	frag.		Green, brown thread
	6		3	Green, brown thread

¹See Locke, l.c., Plate V, p. 22. Sections 1 and 2 on Plate VI, Section 3 on Plate XXXV.

QUIPU No. 5, B-8703, MEDIALIMA (*Continued*)

		Knot Readings		Color
Group	Number	Tens	Ones	
	1		2	Brown and white
	2		3	Brown and white
	2a		3	White
5	3		3	Brown and white
	3a	frag.		White
	4	1	3	Brown and white
	4a	frag.		Dark brown
	5		2	Brown and white
	6		2	Brown and white
	1		2	Brown and white
	2		3	Brown and white
	2a		1	Brown and green
	2a ₁		1	Brown and green
6	3	frag.		Brown and white
	3a	frag.		White
	4		3	Brown and white
	4a		4	Brown
	5		1	Brown and white
	6	frag.		
	1		1	Brown and white
	2	1	2	Brown and white
	2a		3	Dark brown
7	3		3	Brown and white
	3a		1	Dark brown
	3a ₁		1	Brown and white
	4	1	2	Brown and white
	4a		3	Dark brown
	5		2	Brown and white
	6		2	Brown and white
	1		1	Brown and white
	2	1	2	Brown and white
	2a		1	Dark brown
	2a ₁		1	Blue and white
8	3		3	Brown and white
	3a	frag.		Dark brown
	3a ₁		1	Brown and white
	4	1	2	Brown and white
	5		4	Brown and white
	6	frag.		Brown and white

QUIPU NO. 5, B-8703, MEDIALIMA (*Continued*)

		Knot Readings		Color
Group	Number	Tens	Ones	
9	1		1	Blue and white
	2		2	Blue and white
	2a	frag.		Dark brown
	3		0	Blue and white
	4		8	Blue and white
	4a	frag.		Dark brown
10	5		3	Blue and white
	6		3	Blue and white
	1		1	Blue and white
	2		1	Blue and white
	2a		3	Light brown
	2b		8	Blue and white
	3		1	Blue and white
	3a		2	Dark brown
	3a ₁		2	Blue and white
	3a _{1a}		1	Blue and white
	4	1	3	Blue and white
	5		3	Blue and white
	6		0	Blue and white
11	1		1	Blue and white
	2		9	Blue and white
	2a		3	Dark brown
	3		2	Blue and white
	3a		2	Dark brown
	3a ₁		3	White, brown thread
	4		8	Blue and white
	4a		1	Dark brown
	5		3	Blue and white
	6		1	Blue and white
12	1		1	Blue and white
	2		1	Blue and white
	2a	frag.		Dark brown
	2a ₁		9	Blue and white
	2a ₂	frag.		Light brown
	2a ₃		1	White
	3		8	Blue and white
	3a		2	White, brown thread
	3a ₁		1	Blue and white
	4		3	Blue and white
	4a		1	Dark brown
	4a ₁		1	Blue and white
	5		1	Blue and white
	6	frag.		Blue and white

QUIPU No. 5, B-8703, MEDIALIMA (*Continued*)

		Knot Readings		Color
Group	Number	Tens	Ones	
13	1	frag.		Brown
	2	frag.		Brown
	2a	frag.		Blue and brown
	2b	frag.		White and brown
	2b ₁		1	Blue and white
	2ba ₁	frag.		Brown
	3	frag.		Brown
	4	1	6	Brown
	5		2	Brown
	6	frag.		Brown
14	1		1	Brown
	2	frag.		Brown
	3		2	Brown
	3a		2	Brown and white
	4	frag.		Brown
	5	frag.		Brown
15	6	frag.		Brown
	1	frag.		Brown
	2		5	Brown
	2a	frag.		Brown
	3		2	Brown
	3a	frag.		Brown and white
	4		1	Brown
16	4a	frag.		Dark brown
	5	frag.		Brown
	6	frag.		Brown
	1	frag.		Dark brown
	2		9	Dark brown
16	3		2	Dark brown
	3a		3	Brown and white
	4	frag.	2 (single)	Dark brown
	4a		2	Dark brown
	4a ₁		1	White (?)
	5		3	Dark brown
	5a		1	White, brown thread
	6		6(?)	Dark brown
	6a		3(?)	White

QUIPU No. 5, B-8703, MEDIALIMA (*Continued*)

		Knot Readings		Color
Group	Number	Tens	Ones	
	1	frag.		Dark brown
	2	frag.		Dark brown
	3		5	Dark brown
	3a		4	Dark brown
	3b		3	White, brown thread
17	4	frag.		Dark brown
	4a	1	9	Dark brown
	4b		1	White
	5	frag.		Dark brown
	6	frag.		Dark brown
	1		1	Blue and white, twisted
	2		4	Blue and white, twisted
	2a	frag.		Brown
	2a ₁		2	Blue and white, mixed
18	3		2	Blue and white, twisted
	4		6	Blue and white, twisted
	5		2	Blue and white, twisted
	6		3	Blue and white, twisted
	1		1	Upper brown, lower white
	2	frag.		Upper brown, lower white
	2a	frag.		White
	3		3	Upper brown, lower white
19	3a		3	Brown
	4	1	3	Upper brown, lower white
	5		3	Upper brown, lower white
	6	frag.	3	Upper brown, lower white
	1	frag.		Upper brown, lower white
	2		6	Upper brown, lower white
	2a		2	Brown
	3		1	Upper brown, lower white
20	3a	frag.		Brown
	4	1	2	Upper brown, lower white
	5		2	Upper brown, lower white
	5a		1	White
	6	frag.		Upper brown, lower white
	1	frag.		White
	2		9	White
	2a		1	White
21	3		2	White
	4	frag.		White
	5	frag.		White
	6		4	White

QUIPU No. 5, B-8703, MEDIALIMA (*Continued*)

		Knot Readings		Color
Group	Number	Tens	Ones	
22	1		1	Brown and green
	2	frag.		Brown and green
	3	frag.		Brown and green
	3a		1	Brown and white
	4	1	1	Brown and green
	5	frag.		Brown and green
	6	frag.		Brown and green
23	1-5	frag.		Blue and white
	6		1	Blue and white
24	1-6	frag.		Brown and white
25	1	frag.		Brown and white
	2	1	3	Brown and white
	2a		1	White
	3		4	Brown and white
	3a		1	Dark brown
	4	1	8	Brown and white
	5	frag.		Brown and white
	5a		5	White
	6		4	Brown and white
26	1		2	Brown and white
	2	1	1	Brown and white
	2a		2 (high)	Dark brown
	3		4	Brown and white
	3a		1	Dark brown
	4	1	8	Brown and white
	5		0	Brown and white
	6		1	Brown and white
27	1		1	Blue and white
	2		8	Blue and white
	3		2	Blue and white
	3a		1	Brown
	3a ₁		2	Brown and white
	4	1	4	Blue and white
	4a		2 (high)	Dark brown
	5		2	Blue and white
	5a		1	White
	6		3	Blue and white

QUIPU No. 5, B-8703, MEDIALIMA (*Continued*)

		Knot Readings		Color
Group	Number	Tens	Ones	
28	1		1	Blue and white
	2		8	Blue and white
	2a		1	Blue and white
	3		1	Blue and white
	4	1	6	Blue and white
	6		4	Blue and white
29	1		2	Blue and white
	2		7	Blue and white
	2a		1	Dark brown
	3		2	Blue and white
	3a		2	Dark brown
	3a ₁		2	Brown and white
	4	1	2	Blue and white
	4a		3	Dark brown
	5		3	Blue and white
	6		4	Blue and white
30	1		1	Brown
	2		6	Brown
	2a		1	White
	3		5	Brown
	3a		5	Brown
	4	1	7	Brown
	5		2	Brown
	5a		1	White
	6		3	Brown
31	1		1	Brown
	2		4	Brown
	2a		3	White
	2b	frag.		Brown
	3		4	Brown
	3a		1	Brown
	4	1	4	Brown
	4a		1	Brown
	5		1	Brown
	5a		2	White
	6		8	Brown

QUIPU No. 5, B-8703, MEDIALIMA (*Continued*)

		Knot Readings		Color
Group	Number	Tens	Ones	
32	1		1	Brown
	2		5	Brown
	3		1	Brown
	3a		2	Brown
	3b		1	Brown and white
	4	1	2	Brown
	5		0	Brown
	5a		2	White
	6		4	Brown
33	1		0	Brown
	2	frag.		Brown
	3		2	Brown
	3a		1	Brown and white
	4	1	2	Brown
	5		0	Brown
34	6		0	
	1	frag.		Dark brown
	2	1	1	Dark brown
	3	frag.		Dark brown
	4	1(?) or	1	Dark brown
	4a		2	Dark brown
35	5	frag.		Dark brown
	6		1	Dark brown
	1	frag.		Dark brown
	2	1	0	Dark brown
	2a		3	White
	2a ₁	frag.		Brown and white
36	3		8	Dark brown
	3a		1	Dark brown
	4	frag.		Dark brown
	5	frag.		Dark brown
	5a		4	White
	6		2	Dark brown
36	1	frag.		Dark brown
	2	frag.		Dark brown
	3		2	Dark brown
	3a	frag.	2	Dark brown
	3a ₁		2	Brown and white
	4-5	frag.		Dark brown
36	6		1	Dark brown

QUIPU No. 5, B-8703, MEDIALIMA (*Continued*)

		Knot Readings		Color
Group	Number	Tens	Ones	
	1		1	Blue and white, twisted
	2		6	Blue and white, twisted
	3		4	Blue and white, twisted
37	3a		1	Dark brown
	4	1	0	Blue and white, twisted
	5		3	Blue and white, twisted
	6		1	Blue and white, twisted
38	1-6	0	0	Upper brown, lower white
39	1-6	0	0	Upper brown, lower white
40-41	1-6	0	0	White
Space				
42	1-2	0	0	White, long
43-46	1-6	frag.		Upper brown, lower white

QUIPU No. 8, B-8716, CHANCAY¹

Strand	1000's	100's	10's	1's	Color
Main			Broken		Mixed brown and white
1			frag.		Brown
2			frag.		White
3				3L	Brown, frag. tied to M. S.
4				4L	Brown
5				0	White
6			frag.		White
7			4L	1F	Brown and white, mixed
8				5L	White
9			1	frag.	White
9a				2L	Brown and white, mixed
10			2S		White
10a				4L	Brown and white, mixed
11				0	Brown and white
12			1		White
13			5S		White
13a			1	6L	Light brown

¹See Locke, *l. c.*, Plate X.

QUIPU No. 9A, B-8711, CHANCAY¹

Strand	1000's	100's	10's	1's	Color
Main					Light brown
1			5	6	White
2			3	0	White
3			7	0	White
4		1	4	0	White
5			4	0	White
6			7	frag.	Light brown
End looped in loop of M. S. 4 frag.					Brown, sums the pendent strand knots

QUIPU No. 9B, B-8711, CHANCAY²

Strand	1000's	100's	10's	1's	Color
Main					White
1				4	White
2				1	Light green
2a					Brown

QUIPU No. 9C, B-8711, CHANCAY³

Strand	1000's	100's	10's	1's	Color
Main			1	8	Heavy, white, indicates number of strands
1	*3S	2S	5L		Green
1a			1S	2L	White
2		1S	5L	1F	White
3		3S	1S		White
4		2S	2L		Green
5		4S	9L		White or light brown
6		1S	1S1F	5L	White
7	2S	7L	1F	4S	Green
8	2S	2L	5L		White
9		1S	6L		Light brown and white
10			0		White (light brown ?)
11	**1S	5S	8L		White, tied to M.S.
11a left			frag.		Light brown
11a right			1S	2S	9L White
12			0		White
13		4L	1F		Green
14			4L		Light brown and white
15			4L		White
16		3L	1F		White
17		1S	5L		Green

Supplementary strands are looped about pendent strands.

¹See Locke, *l. c.*, Plate XI, left.

²See Locke, *l. c.*, Plate XI, right.

³See Locke, *l. c.*, Plate XII.

QUIPU NO. 9E-I, B-8711, CHANCAY¹

Strand	1000's	100's	10's	1's	Color
9e First from left, Plate XIV ¹					
				7	Light blue and white
9f Second from left					
Main					Dark brown and white
1			1	7	White and green
2			5	7	Green
9g Third from left					
Main					White
1				6	White
2				3	Brown
3			1	frag.	Brown
End sums up pendent strand knots					
			? 2	2	Light brown, looped in loop of M. S.
9h Fourth from left					
Main					White
1			1		Green
1a				1	White
2			1	5	White
3			3	frag.	Dark blue
9i Right, Plate XIV					
Main					Brown
1			1		Brown
2			7	frag.	Brown
3			6	7	Brown
4			8	broken	Brown, white ?
5				0	White

QUIPU NO. 7, B-8709, CHANCAY²

Strand	1000's	100's	10's	1's	Color
Main					Light brown and dark brown
1	frag.				Golden brown
2	1S	3S			White
3	1S	3S	4S		Light brown
4	1S	5S	6S	8L	White
Space					
5	8S	3S	frag.		White, heavy
6	4S		6S	5L	White
7	1S		3S		Light brown
8	4S		2S		White
9	6S		1S		White

¹See Locke, *l. c.* Plate XIV.²See Locke, *l. c.* Plate IX.

QUIPU No. 7, B-8709, CHANCAY (*Continued*)

Strand	1000's	100's	10's	1's	Color
10	6S			5L	White, with green thread
Space					
11				7L	White
Space					
12				3L	White
13				1F	White
14			1S	5L	White
15	6S	6L	frag.		Dark blue
16	1S		8S	3L	White
17	2S		3S	frag.	White
18			5S	3L	White
19	3S	5S			Brown
20	3S			8L	White
21			1S	4L	White
22	3S	8L	frag.		Light and dark brown, mixed
23	1S		-7L	frag.	Light and dark brown, mixed
24		1S	6S		Green
25			3S	6L frag.	Light brown
26					White
27		frag.			Green
28			3S	6L frag.	Light brown
29		4S		2L	White
30		3S		4L	Light brown
31		1S	9S		White
32				9L frag.	Blue, with brown thread
33		3S		4L	Green

QUIPU No. 10, B-8714, CHUQUITANTA¹

Strand	1000's	100's	10's	1's	Color
Main					White
1		1S	frag.		White
2		1S		7S1F	White
3		frag.			Light brown
4		1S			White
5		frag.			White and dark brown
6		3S		1F	White with brown thread
7					Blue
8			7S	1F frag.	White
9			5S		Brown
10		1S	4S	1F	White
11		1S			Brown
12		2S			White
13		1S	3S	frag.	Light brown

¹See Locke, *l. c.*, Plate XVII.

QUIPU No. 10, B-8714, CHUQUITANTA (*Continued*)

Strand	1000's	100's	10's	1's	Color
14			7S		White
15		3S	2S		White
16			frag.		White and dark brown
17		3S	2S		Light brown
18		8S	2S		White
19		2S	4S	6L	White
20				1F	Light blue
21				1F	Dark blue
22				5L	White
23			1S		White
24					White
25			1S		White
26			1S	3L	White
27			3S		White
28			4S		White
29		1S	1S	8L	White

QUIPU No. 10, B-8714, CHUQUITANTA¹

Strand	100's	10's	1's	Color
Main				White
1		2	frag.	White
2		3	1	Brown and white, mixed
3	1	3	3	Light brown
4	1		1	White
5	1		6	White
6			frag.	White and dark brown
7	1		7	White

QUIPU No. 28, 40.1-1550, ICA²

Strand	100's	10's	1's	Color
1		3S	4L1	Flemish white
2		*1S	9L1	Flemish white
2a		1S		Mixed brown
3		*1S	1	Flemish white
3a			7L	Light brown
4		*1S	1	Flemish white
4a			6L	Light brown
Space				
5				Brown
6			1	Flemish white
7			1	Flemish brown
8			1	Flemish white
9				Brown

¹See Locke, *l. c.*, Plate XIX, left.²See Locke, *l. c.*, Plate XXXVI, reading from right.

QUIPU No. 28, 40.1-1550, ICA (*Continued*)

Strand	100's	10's	1's	Color
10			1	Flemish white
11			1	Flemish brown
12			1	Flemish white
13			1	Flemish brown
14			1	Flemish white
15			0	Brown
16			1	Flemish white
17			0	Brown
18			1	Flemish white
19			1	Flemish brown
Space				
20			0	White
21			1	Flemish brown
22			0	White
23			1	Flemish brown
24			1	Flemish white
25			0	Brown
26			1	Flemish white
27			1	Flemish brown
28			1	Flemish white
29			0	Brown
30			1	Flemish white
31			0	Brown
Space				
32			0	White
33			0	Brown
34			0	White
35			0	Brown
36			0	White
37			1	Flemish brown

QUIPU No. 29, 40.1-1551, ICA¹

Strand	100's	10's	1's	Color
1		2L		Brown
2		4L		Brown
3		3L		Brown
4		2L		Brown
Space				
5	3S			White
6	2S			White
Space				
7		8L		Brown
8		7L		Brown
9		4L		Brown

¹See Locke, *l. c.*, Plate XXXVII.

QUIPU No. 29, 40.1-1551, ICA (*Continued*)

Strand	100's	10's	1's	Color
10		4L		Brown
11		0		Brown
Space				
12		3S	4L	White
12a			3L	Brown
13		3S		White
14		3S		Dark brown
14a			4L	White
15		4L		Dark brown
Space				
16			0	White
17		frag.		Brown
18			0	White

QUIPU No. 27, D-N65-11, ICA

Strand	10's	1's	Color
Main	2S	5L	White
1	5S	4L	White
2	2S	3L	Brown
3	2S	8L	White
4	1S	6L	Brown and white mixed
5		9L	White

B-8717, PERU (Fig. 1b)

Strand	100's	10's	1's	Color
Main				White
1		2L		Brown and white, mixed
Space				
2		3L		Brown and white, mixed
3		3L		White
Space				
4		*	3L	Brown and white, mixed
4a			3L	Brown and white, mixed
5		1F		White
6		4L		White

B-8710, Peru (Fig. 1a)

Main				Color
1	2S	*		Blue and white, mixed
1a			4L	White
2	1S	7L		Light blue
3	1S			Brown
Space				White
4	1S	4L		Light blue
5		8L		White

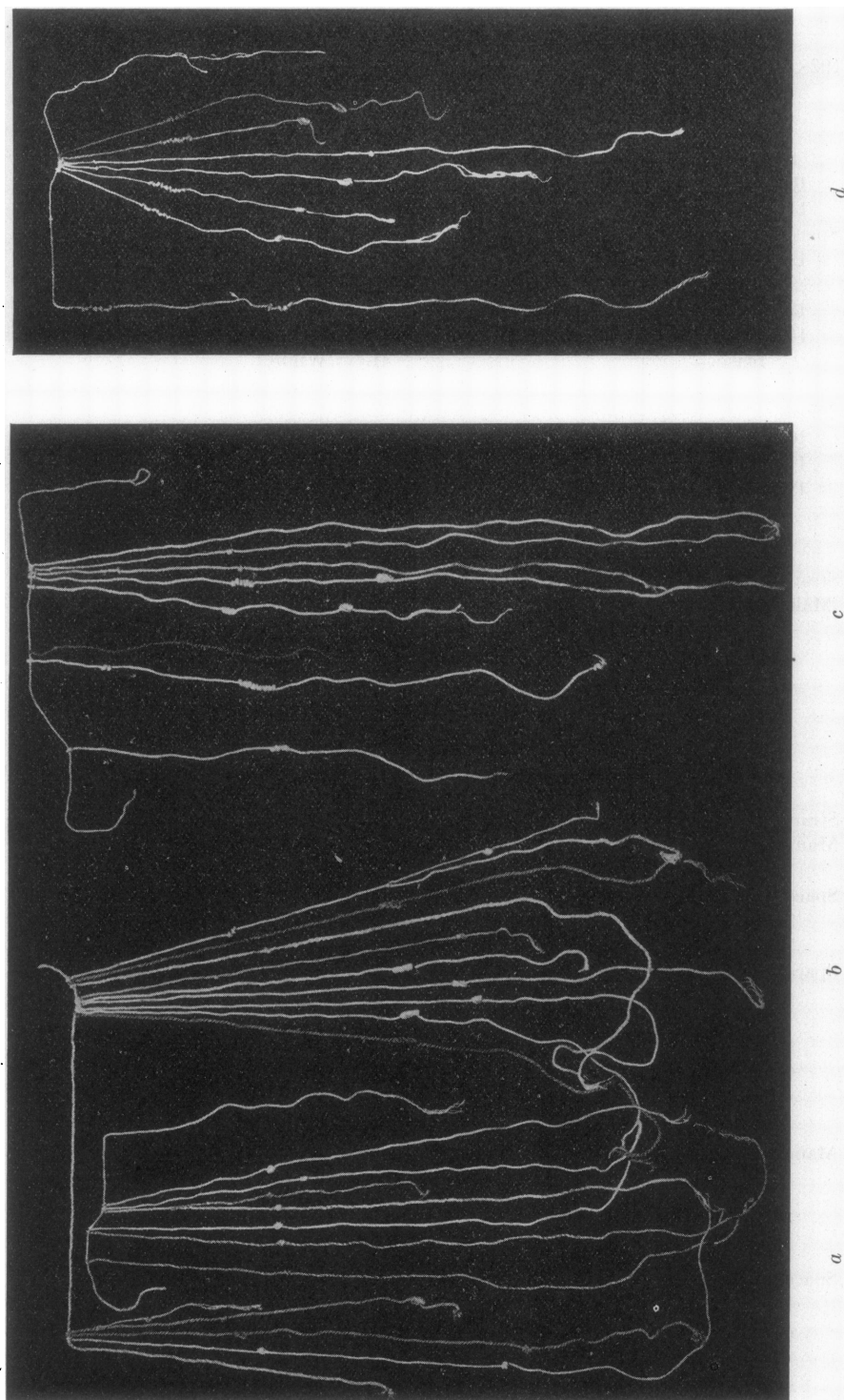


Fig. 1 *a-d* (B-8710, 8717, 8708, 8712). Four Quipus from Peru.

B-8710, PERU (Fig. 1a) (*Continued*)

Strand	100's	10's	1's	Color
6			5L	White
7			4L	White
8			8L	White
9			8L	Brown
Space				
10		1S	6L	Brown
10a			1F	Light brown
11		4L	3L	Brown
12		3L	2L	White

B-8712, PERU (Fig. 1d)

Main				White
1		8S	4L	White
2		9S	5L	White
3	1S		7L	White
4	1S		2L	White
5		8S	6L	White
6		6S	6L	White

S 5S 4S

Summation strand looped in end of main strand sums numbers on pendent strands

B-8708, PERU (Fig. 1c).

Strand	100's	10's	1's	Color
Main				White
1				White
2		2S	2L	White
3	1S	1S		White
4		5S	7L	White
Space				
5		4S	5L	White
6		4S	frag. ¹	Brown
Space				
7	2S	9S		White
Space				
8		5S	frag. ¹	White

¹From the length of strand it is probable that no knots are missing on strands 6 and 8.

