STUDIES ON THE PALM-PATTERNS OF THE INHABITANTS
OF KISHIMA-GUN, SAGA PREFECTURE. I.

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The results of the fingerprints of the inhabitants of Kishima-gun, Saga prefecture have been reported previously. The results of the analysis on the palm-patterns of the same individuals are reported in the present paper.

MATERIALS AND METHODS

The palm-patterns of 328 (167 males and 161 females) of middle school students were studied, among which 118 (64 males and 54 females) were taken in Ariake-machi, and 210 (103 males and 107 females) in Fukudomi-mura. Experiments were performed in June, 1963.

The palm-patterns were classified according to Wilder's method, and the results were compared with those of previous studies done in Saga prefecture.

RESULTS

1. Triradii metacarpophalangeales

The main line formulae of 81 kinds were observed, among which 58 were in the males (34 in the right hand and 46 in the left) and 59 were in females (34 in the right hand and 44 in the left). There were 44 kinds of formulae in the right hand and 66 in the left.

The frequencies of the common formulae are shown in Table 1. The common formulae were 7553 (23.63 %), 9753 (14.18 %) and 11973 (7.01 %).

The frequency of the negro-formula was 28.51 % whereas that of the white-formula was 12.35 % (Tables 2 & 4).

The frequencies of types 7, 9, and 11 were 44.51 %, 28.51 % and 26.68 %, respectively (Tables 3 & 4). The ratio of type 11 to type 7 was 0.60 (Table 4).

There is no appreciable difference between the percentage of the hand formulae, such as the negro-formula, the white-formula, type 7, 9, and 11 of the inhabitants

TABLE 1.
Frequencies of common main line formulae

Formula	Ariake									Fukudomi									Total
	Males			Females			Total			Males			Females			Total			
	R	L	R+L	R	L	R+L	R	L	R+L	R	L	R+L	R	L	R+L	R	L	R+L	
7553	16	8	24	18	17	35	34	25	59	25	22	47	22	27	49	47	49	96	155
9753	9	16	25	5	6	11	14	22	36	11	14	25	21	11	32	32	25	57	93
11973	12	1	13	6	2	8	18	3	21	8	1	9	12	4	16	20	5	25	46
Others	27	39	66	25	29	54	52	68	120	59	66	125	52	65	117	111	131	242	362
Total	64	64	128	54	54	108	118	118	236	103	103	206	107	107	214	210	210	420	656

TABLE 2.
Frequencies of the negro-formula and the white-formula

Formula	Ariake									Fukudomi									Total
	Males			Females			Total			Males			Females			Total			
	R	L	R+L	R	L	R+L	R	L	R+L	R	L	R+L	R	L	R+L	R	L	R+L	
Negro-formula	20	9	29	21	20	41	41	29	70	30	26	56	30	31	61	60	57	117	187
White-formula	17	4	21	11	2	13	28	6	34	15	2	17	24	6	30	39	8	47	81

TABLE 3.
Frequencies of types 7, 9 and 11

Type	Ariake									Fukudomi									Total
	Males			Females			Total			Males			Females			Total			
	R	L	R + L	R	L	R + L	R	L	R + L	R	L	R + L	R	L	R + L	R	L	R + L	
7	23	21	44	23	31	54	46	52	98	39	55	94	37	63	100	76	118	194	292
9	18	29	47	11	14	25	29	43	72	26	31	57	33	25	58	59	56	115	187
11	23	13	36	20	9	29	43	22	65	38	17	55	37	18	55	75	35	110	175
Total	64	63	127	54	54	108	118	117	235	103	103	206	107	106	213	210	209	419	654

TABLE 4.
Percentile frequencies of handformulae

	Males (n=167)	Females (n=161)	Total (n=328)
Negro-formula	25.45	31.68	28.51
White-formula	11.38	13.35	12.35
Type 7	41.32	47.83	44.51
Type 9	31.14	25.78	28.51
Type 11	27.25	26.09	26.68
Type 11 / Type 7	0.66	0.55	0.60

TABLE 5.
Percentile frequencies of the negro-formula and the white-formula of the inhabitants of Saga prefecture

Districts	Number of persons	Investigator	Negro-formula	White-formula
Saga and Nishikaratsu	190	Kutsuna et al. (1936)	31.6	14.7
Madara island		Narasaki (1957)		
Hon-mura	124		18.55	21.37
Shin-mura	234		29.70	13.25
Nishimatsuura-gun	3,735	Sugimori (1959)	26.81	13.25
Fujitsu-gun	3,148	Minami (1959)	29.42	11.71
Kishima-gun	328	Authors (1963)	28.51	12.35

of Kishima-gun, Saga prefecture, and that of the previous reports of Saga prefecture, with the exception of Madara Island of the Narasaki series and criminals of the Takamori series (Tables 5 & 6).

The terminals of the four main lines were as follows. Line D terminated most frequently in 7 (39.94 %), secondly in 9 (27.13 %) and thirdly in 11 (26.68 %) as seen in Table 7. Line C, as shown in Table 8, terminated most frequently in 5 (38.72 %), secondly in 7 (23.63 %) and thirdly in 9 (15.70 %). In Table 9, line B terminated most frequently in 5 (64.63 %) and secondly in 7 (25.46 %). Line A terminated most frequently in 3 (66.92 %) and secondly in 5 (12.35 %) as shown in Table 10.

The percent frequencies of the several positions of terminations of palmar main lines are listed in Table 11.

2. *Figura tactilis interdigitalis*

TABLE 6.

Percentile frequencies of types 7, 9 and 11 of the inhabitants of Saga prefecture

Districts	Number of persons	Investigator	Type 7	Type 9	Type 11
Saga prefecture	106*	Takamori (1949)	37.9	36.0	26.1
Saga and Nishikaratsu	190	Kutsuna et al. (1936)	40.5	31.3	28.2
Ogi	2,989	Hiramatu (1959)	43.40	33.23	23.37
Higashimatsuura-gun	9,295	Narasaki (1957)	40.22	34.34	25.45
Madara island		Narasaki (1957)			
Hon-mura	124		33.06	38.71	28.23
Shin-mura	234		43.38	35.47	21.15
Nishimatsuura-gun	3,735	Sugimori (1959)	40.08	33.36	26.56
Fujitsu-gun	3,148	Minami (1959)	42.61	33.18	24.21
Kishima-gun	328	Authors (1963)	44.51	28.51	26.68

* Criminal

TABLE 7.

Frequencies of terminals of main line D

Position	Ariake									Fukudomi									Total
	Males			Females			Total			Males			Females			Total			
	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	
7	22	17	39	22	30	52	44	47	91	32	49	81	32	58	90	64	107	171	262
8	1	1	2	1	1	2	2	2	4	7	3	10	5	2	7	12	5	17	21
9	17	29	46	11	13	24	28	42	70	26	28	54	32	22	54	58	50	108	178
10	1	0	1	0	1	1	1	1	2	0	3	3	1	3	4	1	6	7	9
11	23	13	36	20	9	29	43	22	65	38	17	55	37	18	55	75	35	110	175
X	0	3	3	0	0	0	0	3	3	0	3	3	0	3	3	0	6	6	9
0	0	1	1	0	0	0	0	1	1	0	0	0	0	1	1	0	1	1	2
Total	64	64	128	54	54	108	118	118	236	103	103	206	107	107	214	210	210	420	656

TABLE 8.
Frequencies of terminals of main line C

Position	Ariake									Fukudomi									Total
	Males			Females			Total			Males			Females			Total			
	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	
3	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1
5	20	19	39	22	27	49	42	46	88	31	45	76	31	59	90	62	104	166	254
6	1	1	2	1	1	2	2	2	4	7	3	10	5	2	7	12	5	17	21
7	14	24	38	7	11	18	21	35	56	21	28	49	28	22	50	49	50	99	155
9	19	5	24	11	6	17	30	11	41	19	6	25	26	11	37	45	17	62	103
10	1	0	1	2	0	2	3	0	3	5	1	6	2	0	2	7	1	8	11
11	0	0	0	1	0	1	1	0	1	1	0	1	0	0	0	1	0	1	2
X	5	10	15	8	8	16	13	18	31	14	14	28	9	7	16	23	21	44	75
0	4	5	9	2	1	3	6	6	12	5	5	10	6	6	12	11	11	22	34
Total	64	64	128	54	54	108	118	118	236	103	103	206	107	107	214	210	210	420	656

TABLE 9.
Frequencies of terminals of main line B

Position	Ariake									Fukudomi									Total
	Males			Females			Total			Males			Females			Total			
	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	
3	0	6	6	0	3	3	0	9	9	1	15	16	1	12	13	2	27	29	38
4	0	0	0	0	1	1	0	1	1	0	1	1	1	0	1	1	1	2	3
5	38	45	83	33	40	73	71	85	156	64	66	130	65	73	138	129	139	268	424
6	1	0	1	1	1	2	2	1	3	0	2	2	2	3	5	2	5	7	10
7	24	13	37	16	9	25	40	22	62	32	18	50	36	19	55	68	37	105	167
8	1	0	1	2	0	2	3	0	3	5	1	6	2	0	2	7	1	8	11
9	0	0	0	1	0	1	1	0	1	1	0	1	0	0	0	1	0	1	2
0	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	1
Total	64	64	128	54	54	108	118	118	236	103	103	206	107	107	214	210	210	420	656

TABLE 10.
Frequencies of terminals of main line A

Position	Ariake									Fukudomi									Total
	Males			Females			Total			Males			Females			Total			
	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	
1	0	5	5	1	9	10	1	14	15	2	16	18	3	26	29	5	42	47	62
2	0	0	0	0	2	2	0	2	2	0	2	2	0	2	2	0	4	4	6
3	44	49	93	36	38	74	80	87	167	69	66	135	72	65	137	141	131	272	439
4	5	6	11	5	3	8	10	9	19	8	13	21	12	10	22	20	23	43	62
5	15	4	19	12	2	14	27	6	33	21	4	25	19	4	23	40	8	48	81
11	0	0	0	0	0	0	0	0	0	3	2	5	1	0	1	4	2	6	6
Total	64	64	128	54	54	108	118	118	236	103	103	206	107	107	214	210	210	420	656

TABLE 11.
Percentile frequencies of terminations of palmar main lines

Positions	Line D	Line C	Line B	Line A
1	0	0	0	9.45
2	0	0	0	0.91
3	0	0.15	5.79	66.92
4	0	0	0.46	9.45
5	0	38.72	64.63	12.35
6	0	3.20	1.52	0
7	39.94	23.63	25.46	0
8	3.20	0	1.68	0
9	27.13	15.70	0.30	0
10	1.37	1.68	0	0
11	26.68	0.30	0	0.91
X	1.37	11.43	0	0
0	0.30	5.18	0.15	0

TABLE 12.
Frequencies of the second, third, and fourth interdigital patterns

Pattern			Ariake									Fukudomi									Total
			Males			Females			Total			Males			Females			Total			
			R	L	R+L	R	L	R+L	R	L	R+L	R	L	R+L	R	L	R+L	R	L	R+L	
—	—	S	34	39	73	30	39	69	64	78	142	55	69	124	63	76	139	118	145	263	405
—	—	—	8	16	24	9	8	17	17	24	41	18	18	36	15	17	32	33	35	68	109
—	S	—	18	4	22	12	4	16	30	8	38	17	6	23	25	10	35	42	16	58	96
—	—	T	1	2	3	0	0	0	1	2	3	0	0	0	0	1	1	0	1	1	4
—	—	ST	1	2	3	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	3
—	—	TS	0	0	0	0	2	2	0	2	2	2	3	5	1	1	2	3	4	7	9
—	—	STS	0	0	0	0	0	0	0	0	0	3	4	7	0	1	1	3	5	8	8
—	ST	—	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	1
ST	—	—	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1
—	S	TS	2	1	3	1	1	2	3	2	5	2	1	3	1	1	2	3	2	5	10
—	ST	S	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	2	0	2	2
ST	S	—	0	0	0	1	0	1	1	0	1	4	0	4	0	0	0	4	0	4	5
ST	—	TS	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1
T	S	TS	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	1
ST	S	TS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	1
Total			64	64	128	54	54	108	118	118	236	103	103	206	107	107	214	210	210	420	656

TABLE 13.
Frequencies of axial triradii

Figura	Ariake									Fukudomi									Total
	Males			Females			Total			Males			Females			Total			
	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	
C or P	50	54	104	43	44	87	93	98	191	83	83	166	86	90	176	169	173	342	533
Ch	12	7	19	10	8	18	22	15	37	14	16	30	19	13	32	33	29	62	99
C C	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	1	1	2	2
C Ch	2	3	5	1	1	2	3	4	7	4	3	7	2	4	6	6	7	13	20
Unclass.	0	0	0	0	1	1	0	1	1	1	0	1	0	0	0	1	0	1	2
Total	64	64	128	54	54	108	118	118	236	103	103	206	107	107	214	210	210	420	656

TABLE 14.
Frequencies of hypothenar patterns

Figura	Ariake									Fukudomi									Total
	Males			Females			Total			Males			Females			Total			
	R	L	R+L	R	L	R+L	R	L	R+L	R	L	R+L	R	L	R+L	R	L	R+L	
Ha	10	15	25	10	13	23	20	28	48	19	30	49	17	29	46	36	59	95	143
Hb	1	1	2	0	1	1	1	2	3	2	2	4	2	4	6	4	6	10	13
Hc	3	0	3	3	0	3	6	0	6	4	1	5	3	2	5	7	3	10	16
Hs	1	1	2	0	0	0	1	1	2	0	0	0	1	0	1	1	0	1	3
Hw	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	1	3	4	4
Hcarp	1	1	2	1	0	1	2	1	3	0	1	1	0	0	0	0	1	1	4
HaHb	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	1
HaHc	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1
No pattern	48	46	94	40	40	80	88	86	174	77	68	145	83	69	152	160	137	297	471
Total	64	64	128	54	54	108	118	118	236	103	103	206	107	107	214	210	210	420	656

TABLE 15.
Frequencies of thenar and first interdigital patterns

Pattern	Ariake									Fukudomi									Total
	Males			Females			Total			Males			Females			Total			
	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	R	L	R+ L	
Th I	1	4	5	0	2	2	1	6	7	0	1	1	0	2	2	0	3	3	10
Th	0	3	3	0	4	4	0	7	7	1	2	3	0	3	3	1	5	6	13
I	0	0	0	0	0	0	0	0	0	0	2	2	1	0	1	1	2	3	3
Th (I)	1	1	2	0	1	1	1	2	3	0	5	5	0	7	7	0	12	12	15
(Th I)	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1
(Th)	1	0	1	0	0	0	1	0	1	0	0	0	1	1	2	1	1	2	3
(I)	0	0	0	0	0	0	0	0	0	3	0	3	0	2	2	3	2	5	5
No pattern	61	56	117	54	47	101	115	103	218	99	92	191	105	92	197	204	184	388	606
Total	64	64	128	54	54	108	118	118	236	103	103	206	107	107	214	210	210	420	656

TABLE 16.

Percentile frequencies of hypothenar, thenar, and first interdigital patterns of the inhabitants of Saga prefecture

Districts	Number of persons	Investigator	all H	all Th	all I
Saga prefecture	106*	Takamori (1949)	22.8	2.4	3.3
Saga and Nishikaratsu	190	Kutsuna et al. (1936)	26.1	9.5	0
Ogi	2,989	Hiramatu (1959)	26.57	6.42	6.32
Higashimatsuura-gun	9,295	Narasaki (1957)	22.40	7.12	6.53
Madara island		Narasaki (1957)			
Hon-mura	124		21.14	2.44	2.85
Shin-mura	234		16.45	7.26	6.62
Nishimatsuura-gun	3,735	Sugimori (1959)	20.13	8.80	9.73
Fujitsu-gun	3,148	Minami (1959)	21.35	7.35	7.93
Kishima-gun	328	Authors (1963)	28.20	6.40	5.18

* Criminal

The frequencies of the second, third and fourth interdigital patterns are shown in Table 12. The most frequent interdigital pattern was—S (61.74 %), the second was— — (16.62 %) and the third —S— (14.63 %).

3. Triradius carpalis

The frequencies of the patterns of the triradius carpalis are shown in Table 13. C or P were most frequent (81.25%), Ch the next (15.09%) and CCh least frequent (3.05 %).

4. Figura tactilis hypothenari

The frequencies of the patterns of the figura tactilis hypothenari are shown in Table 14. The frequency of the hands with any pattern was 28.20 %.

5. Figura tactilis thenari et interdigitalis I

The frequencies of the thenar and the first interdigital patterns are shown in Table 15. The percentile frequency of the hands with any pattern was 7.62 % (all Th: 6.40 %, all I: 5.18 %).

The frequencies of the hypothenar, thenar and first interdigital patterns of the inhabitants of Saga prefecture are shown in Table 16. There is no appreciable difference between the percentage of the three patterns of the inhabitants of Kishima-gun, Saga prefecture and that of previous reports of Saga prefecture, with the exception of Madara Island of the Narasaki series and criminals of the Takamori series.

SUMMARY

The palm-patterns of the inhabitants of Kishima-gun, Saga prefecture were

studied. The common main line formulae were 7553, 9753 and 11973. Type 7 showed the highest frequency, types 9 and 11 being next in order. The common interdigital patterns were --S, --- and -S-. The highest frequencies of hypothenar, thenar and first interdigital patterns were 28.20 %, 6.40 % and 5.18 %, respectively.

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