

Digital Patterns of the Banai of Meghalaya

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ABSTRACT Finger dermatoglyphics have been analyzed in 167 Banai (77 males and 90 females) a small endogamous population with Mongoloid affinities of south Garo Hills district of Meghalaya. Analysis of the data reveals that the average Banai (both male and female) possess more loops than whorls.

INTRODUCTION

The Banai is a numerically small endogamous population of South Garo Hills district of Meghalaya. Originally their ancestors were inhabiting in 'Hajo' in Kamrup district of neighbouring Assam. But they had to forced to migrate to the plain lands on the Southern border of South Garo Hills of Meghalaya, middle of nineteenth century. At present, concentration of the population is observed in Batabari and Jatrakona villages of Baghmara sub division of South Garo Hills district of Meghalaya. The present paper deals with the dermatoglyphics characters among the Banai of Meghalaya.

MATERIAL AND METHODS

The material presented here includes finger patterns and ridge counts. Finger prints of 167 Banai (77 males and 90 females) collected from Jatnakona and Batabari villages of South Garo Hills, Meghalaya, during April-May 1996. Fingers patterns were formulated according to

Cummins and Midlo (1961). The digital ridges were counted according to the rules adopted by Holt (1949). The 't' test has been used to find out the degree of significance of differences among them.

RESULTS AND DISCUSSION

The digital characteristics were studied through analysis of the patterns types and determination of digital indices are summarized by the high percentage of loops. Whorls and loops occur almost in the ratio of 47:53 in males and 42:58 in females. The frequency of whorls shows sinistral dominance and is reflected in higher whorl-loop index of Furuhashi's in the left hand of the both sexes. Arch-whorl index is also high in left hand of the females but just reverse in male. Due to higher occurrence of Arches in the male, value of Arch-whorl index is comparatively higher in them than the females. On the other hand due to higher incidence of loops in females, the pattern intensity index is relatively lower in them than their male counterparts.

The males Banai shows the higher mean value of total finger ridge counts than that of female counterparts. The mean value of the T F R C male is 156.48 ± 6.22 and that of female being 147.01 ± 4.89 . Left hand tend to have more ridges in male (right hand 77.26 ± 3.12 and left hand 78.88 ± 3.26) but in case female the right

Table 1: Digital patterns in Banai of Meghalaya

Sex	Hand	Digital Patterns					Digital Indices		
		Whorl	Loop			Arch	Dankmeijer's Index	Furuhashi's Index	Pattern Intensity Index
			Ulnar	Radial	Total				
Male 77	Right	22.08	24.29	0.52	24.81	03.12	14.12	89.01	6.90
	Left	22.34	23.77	1.04	24.81	02.86	12.79	90.05	6.95
	R + L	44.42	48.06	1.56	49.62	05.98	13.45	89.53	13.85
Female 90	Right	18.67	28.67	0.89	29.55	1.78	9.52	63.16	6.69
	Left	21.33	25.00	0.89	25.89	2.78	13.02	82.40	6.86
	R + L	40.00	53.67	1.78	55.44	4.56	11.39	72.14	13.55

hand tend to have more ridges (right hand 76.44 ± 2.423 and left hand 75.89 ± 2.350).

Significance test for bimanual variation are statistically non significant in both sex. Male and female Banai also shows homogeneity with regard to finger ball patterns.

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REFERENCES

- Cummins, H. and Midlo, C.: *Finger Prints, Palms and soles: An Introduction of Dermatoglyphics*. Dover Publication, New York (1961).
Holt, S.B.: A quantitative survey of finger prints small of the British population, *Ann. Eug.*, 14: 329-338 (1949).