

A Note on Palmar Flexion Creases Among the Mann Tribe of Meghalaya, North -East India

B. Mondal¹ and Sarit Chaudhuri²

1. Department of Anthropology, North Eastern Hill University, Shillong 793014, Meghalaya, India

2. Department of Tribal Studies, Arunchal University, Itanagar 791 111, Arunachal Pradesh, India

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ABSTRACT Palmar flexion creases in the Mann tribe of West Garo Hills district of Meghalaya, North East India were studied in a sample of bilateral palm prints of 123 male and 116 female subjects. It was found that there exists no bimanual or bisexual variation with regard to this trait in the present population. The Mann tribe was found to differ significantly from most of the other populations of North East India in respect of palmar flexion creases.

INTRODUCTION

The study of palmar flexion creases has been fully recognised in the field of physical anthropology, human biology as well as medical science (Hirsch, 1972; Schauman and Alter, 1976; Woolf and Giaons, 1976; Sharma, 1989). In their pioneer work, Bali and Chaube (1971) have recommended a method of classifying the palmar flexion creases in terms of their origin from the radial base point of the palm into three main categories, viz., (i) Single Radial Base Crease (SRBC), (ii) Double Radial Crease (DRBC) and (iii) Triple Radial Base Crease (TRBC). The objective of the present study is to find out the distribution of different types of palmar flexion creases and to examine the bisexual and bimanual differences among the Mann tribe of Meghalaya for this trait. Results have been compared with other tribal populations of North-East India.

The term 'Mann' literally means "Burmese migrant" (Barua, 1994). The Mann, a Scheduled Tribe population, are mostly inhabiting the six villages, viz., Haldibari, Sankaropara, Rangangola, Deldela, Bangalkhata and Shyamnagar, under the Selsela Block of West Garo Hills district of Meghalaya. According to the District council authority of West Garo Hills, the total population of this tribe is 1,000.

The Mann came to this North-Eastern part of India as invading soldiers and afterwards they were recruited by David Scott, a British administrator, to fight with the Garo in the second decade of the nineteenth century (Gait, 1967). However, in course of time, majority of them went back to their native land (Burma), and remaining section settled down in the Garo Hills. Since all of them who settled in this country were exclusively males and married with the women belonging to various neighbouring communities, viz., Assamese, Bengali, Garo, Hajong and Koch, they ultimately formed a separate community. They adopted Assamese as their mother tongue. Besides, they can also speak Bengali and Hindi to communicate with others. Cultivation is their main occupation.

MATERIALS AND METHODS

The present study is based on bilateral palm prints taken from 123 males and 116 females of the Mann tribe. The prints were collected from the aforementioned six villages falling under the Selsela Block of West Garo Hills district of Meghalaya by one of us (S.Ch.) following the techniques suggested by Cumins and Midlo (1961). Palmar prints were analysed following the methods recommended by Bali and Chaube (1971).

RESULTS AND DISCUSSION

The bisexual and bimanual distribution of three main types of palmar flexion creases of the present population are shown in table 1. It appears that the frequency of DRBC is comparatively higher in both the sexes as well as in both hands than the frequencies of both SRBC and TRBC. It is also observed that the occurrence of

DRBC is equal in both the hands of male sample whereas in case of females it is higher in right hands. It is further seen that the frequency of SRBC is lower than that of TRBC; it holds true for both the sexes separately as well as for the pooled data. In case of males, the frequency of SRBC is greater in right hands than in left hands, while in case of the TRBC the opposite is true. Again, in case of females the left hands exhibit the higher percentage of SRBC as well as TRBC in comparison with right hands.

Table 1: Distribution of palmar flexion creases among the Mann of Meghalaya

Sex	Hand	Palmar flexion creases		
		SRBC	DRBC	TRBC
Male (n = 123)	Right	6 (4.88)	113 (91.87)	4 (3.25)
	Left	3 (2.44)	113 (91.87)	7 (5.69)
	Both	9 (3.66)	226 (91.87)	11 (4.47)
Females (n = 116)	Right	3 (2.59)	102 (87.93)	11 (9.48)
	Left	6 (5.17)	98 (84.48)	12 (10.34)
	Both	9 (3.88)	200 (86.21)	23 (9.91)
Total (n = 239)	Right	9 (3.77)	215 (89.96)	15 (6.27)
	Left	9 (3.77)	211 (88.28)	19 (7.95)
	Both	18 (3.77)	426 (89.12)	34 (7.11)

Figures in parenthesis are %

The chi-square test suggests that the bimanual ($\chi^2 = 0.51$ d.f.2) as well as bisexual ($\chi^2 = 5.41$, d.f.2) variations in respect of palmar flexion creases are not statistically significant ($p > 0.05$) in the Mann tribe. This observation is in agreement with that of earlier studies (Das and Das, 1981; Das, 1985; Sengupta and Dutta, 1988). Mondal (1994) found a significant bisexual difference among the Tangsa tribe of Arunachal Pradesh, but no bimanual difference was recorded.

Several tribal populations in North East India have been studied for palmar flexion creases (Das and Das, 1981; Dutta and Sengupta, 1984-85; Sengupta and Dutta, 1988; Dutta and Sengupta, 1991; Mondal, 1994). In almost all of populations, it is seen that DRBC is the most

common type, followed by SRBC and TRBC. Among males the Mann differ significantly from other population groups of North-East India excepting the Hill Garo, while among females the only significant difference is found between the Mann and Deuri.

This study therefore demonstrates that palmar flexion creases can be used as a significant tool for studying population variation like any other physical trait.

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