



PHYSICAL AND CULTURAL BACKGROUND OF THE STUDY

AREA OF A REGION

Dr. GOBINDA PALIT

ASSOCIATE PROFESSOR, DEPT OF ANTHROPOLOGY, HIMALAYAN UNIVERSITY, A.P, INDIA

ABSTRACT

The foot hill area of Dooars is formed of comparatively recent rock formations. Hard rock is exposed along the northern border of Mal subdivision. Gneiss is exposed in Jiti- Bhutan boundary area. The steep lower Himalayan slopes composed of Daling series represented by phyllite, slate, schist and quartzite (Godwin-Austen, 1868). Near Nagrakata tea garden, red soil covers one metre thick black humus beds, develops extensively overlying the younger fluvial deposits of 5-6 meter thick composed of quartzite and gneiss boulder gravels. Sudden change of slope in this area, there formed alluvial fans and terraces. An anticlinal ridge at Chalsa and a synclinal valley at Matiali have a geological phenomenon in the Matiali block (Heim & Ganesser, 1939). The interfluves area between the rivers Mal and Murti is an alluvial fan composed of quaternary sediments characterised by clay, sand, pebble and boulders beds. There are four major terrace surfaces. Two East west scarps named Matiali and Chalsa that cut across the fan represent traces of the Main Boundary Thrust (MBT) and the Himalayan Frontal Thrust (HFT). There are two other NNW-SSE and NNE-SSW lineaments which partially guided the course of the Neora and Murti rivers (Goswami et al., 2013)

INTRODUCTION

The study area, Mal subdivision of Jalpaiguri district is geographically spread over along the foothill of the Himalayas. Historically, once it was the part of the Western Dooars during the British rule. The area bears the diversity in geology, soil, topography, climate, society, language and all other aspects. There are many rivers, terraces, alluvial fans, geological formations and forests. Immigration from the neighbouring countries and immigration from the Chhotonagpur region causes mixture of different ethnic and socio-cultural groups within same administrative set up over the years.

Rangamati surface is covered with huge gneissic boulders which form a large fan-

shaped surface around Samsing to the north of Matiali. These boulders were derived from the outlets of the Neora and Murti rivers from the mountains. This is known as 'Samsing Surface'. The entire area can be grouped into five geological formation units, namely: Shaugaan and Baikanthapur formations of un-oxidised weathered zone. Chalsa formations have yellow coloured sediments, Matiali formations have orange coloured sediments and the Samsing formation has red coloured sediments (Das & Chattopadhyay, 1979). The present Mal river course was fixed only after the formation of the higher terraces of the Neora and old Mal rivers, for while the higher river terrace was being formed. The Mal River joined the Neora river near Nakhati tea garden. In Bagrakot area the

boundary between the mountain and foothill zone is well marked by the Main Boundary Fault which is clearly exposed along the banks of the Chel and Patharjhora rivers. Due to overridden the old and higher surfaces are not recognizable in this area (Nakata, 1972).

METHODOLOGY

The relief characteristics of Mal subdivisions are undulating to even plain. There are tilted plains at the base of the Himalaya and is bounded in the north and south by 300 meter and 66 meter contour lines respectively (Bagchi & Mukherjee, 1983). Pronounced development of conjugal alluvial fans, produced by diverging drainage systems in the catchment areas of Tista and Jaldhaka is very much conspicuous in this section. Between the Neora and Murti rivers, there is a row of small mounds with steep escarpments to the south in the E-W direction around Matiali. These mounds are considered to have been initially a narrow strip of upheaval zone which was disintegrated by stream dissection into small mounds rising 60-90 meter above the surrounding surface to the south and 30-60 meter to the north. There is a tendency that the relative height of the surface from the river beds increases downstream from the outlets of rivers at mountain front ((Nakata, 1972). The Nagrakata upward block occupies between 200 meter and 400 meter in the Jiti Tea estate to the north between the river Diana and Jaldhaka. Asymmetrical topographic and geological features around Matiali and Chalsa have taken place as flexure cliffs. The Chalsa cliffs become steeper in the west than the east. Towards the south of

the Mal block the area is homogeneous plain. Long term rainfall data identify Jalpaiguri as one of the rainiest district in West Bengal with mean annual rainfall reaching more than 3500 millimetre of which 85% descends during the monsoon months between May and October. Most of the rainfall occurs at June to September. July is generally the rainiest month. Average annual rainfall is above 3500 mm. The variation of rainfall from year to year is not large. During the fifty year period, 1901- 1950, the highest annual rainfall amounting to 147% of the normal occurred in 1921 while 1947 was the year with the lowest rainfall which was 58% of the normal. More than 25% rainfall occurs in the month of July. November to February is the driest season. Rainfalls in these four months are very little. December is the driest month in the year. The atmosphere is highly humid throughout the year. During the months from December to March, the relative humidity is less, being only between 50 percent and 70 percent. During the period from February to April, the afternoon relative humidity is comparatively lower, being only between 40 and 50%. During October to April, the sky is generally clear or slightly cloudy. The cloudiness increases from the month of May. On an average there are 116 rainy days in a year.

CONCLUSION

The Mal subdivision shows variation in all three aspects of physical, socio-economic and infrastructural facilities. Physical characteristics are quite diverse in respect of topography, drainage, geology, natural vegetation etc. The social behaviours are diverse in respect of ethnicity, language,



culture and religion. The infrastructural facilities i.e. health, education, electricity, transport-communication and source of drinking water are limited in the area. In conclusion it can be said that the diversity of these three aspects deserve more studies to understand the region properly as well as for the development of the living standard of the people of the region.

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