

RELIEF AND STRUCTURE OF SANTHAL PARGANA

Dr. Suman Kumari

Research Scholar, Department of Geography, Patna University, Patna, India

Received: 17 Feb 2019

Accepted: 22 Feb 2019

Published: 28 Feb 2019

ABSTRACT

Relief and Structure

Santhal Parganas is mainly a dissected uplands of ancient crystalline rocks which are covered with thick flows of volcanic lava in the east: The latter from the Rajmahal Hills. In between these two main geological formation is a narrow strip of lower Gendwana rocks which fringe the lava formation along its western margin.

The geological structure of Santhal Parganas displays two distinct aspects, one related to denudation of the Precambrian floor and the other being the a gradational plain around the old uplifted erosional surfaces specially laid down after the truncation of the Chotanagpur highlands and the formation of the Rajmahal-Maldah Gap.

The Rajmahal Hills form a series of flat-topped plateau and ridges which rise abruptly from the plain with escarpments 1000 ft. to 2000 ft. high and run south from near Sakrigali Railway Station for about 100 miles Southwards along the border of the Birbhum district of West Bengal. The massive formation of hard rocks is responsible for forcing the Ganga to flow farther east, before finally taking the southerly course to the sea, round the north eastern edge of the lava plateau.

Along its northern margin the lavas extend for about 30 Km. to Pirpaiti railway station. Along but narrow strip of alluvial plain extends all round the edge of the plateau hemmed in between the river Ganga and the Rajmahal Hills.

KEYWORDS: *Relief and Structure*

INTRODUCTION

The ancient crystalline rocks, collectively called the Archean gneisses, cover the greater part of the district in the western and south-western parts. The stretch uninterruptedly from a few kilometers north of Godda. In the north to about 30 Kms. South of Dumka, occasionally giving rise to low hills and range. The principal rock is a granitoid gneiss known as the Bengal gneiss with wide variation in mineralogical composition and texture.

In the region around Deoghar the gneisses have been intruded by olivine hypersthene gabbros and diorites.

Hybrid streaky gneiss with streaks and bands of granulitic diopside amphibolite in grey gneiss occurs at Rakudih, Rohini, about one kilometer to the east of Rakudih and on Nandan Pahar near Deoghar.

Around Simra near the north eastern border of the Godda district, the gneissic complex comprises granite gneisses and composite-gneisses formed by the late intrusion of older country rocks by a granitic magma.

The hills consist of a succession of basaltic lava flows with interstratifications of shale and sandstone. The Rajmahal hills have given their name to a series in the Gondwana system and there is also a group of sandstone and Conglomerated to the south-east of Dumkadistt., south of Brahmani river, there is a small range of hills known as the Ramgarh hills. There are an extension of the Rajmahal hills range and consist of bedded basic volcanic lavas or the nature of dolerites and basalts and also alternate beds of conglomerated, quartz, grit and neiss pebbles.

The Jalwa Pahar is a huge mass of basic igneous rocks enclosed in the gneisses- It is about 584 ft. high above the level of the surrounding country. In addition, there are amphibolites containing pyrosene and garnet as in the area to the north near Deoghar.

The Ramjahal landscape have evolved during the tertiary era through a series of fault troughs developed during the Nerayninan revolution in the neighbouring gondwana coal bearing basin. Prior to the tertiary upheavals the Rajmahal area experienced outbursts of lava flows during the Himalayan revolution. Rajmahal was uplifted in the west and tilted in the north and east forming a hinge between them. This upliftment has been responsible for initiating a new and the latest denudation cycle.

During the middle Jurassic and early Cretaceous the super continent disintegrated and the fragments began to glide to the present relative position which had an important bearing on the landscape evolution of Rajmahal.

The Rajmahal highlands were eroded by the Gondwana cycle and the same cyclic Gondwana surface can be identified in south Africa, South America, India and Australia.

A systematic study of geological events related to the Rajmahal highlands from Archean to the tertiary may be made in the following words:-

- A long period of erosion led to the beveling of the Archean mountain.
- The Continuous aulpturing further removed the granitic and gneissic pre-cambrian surface.
- Discontinued Gondwan accumulation took place over the eroded pre-cambrian surface.
- Rajmahal eruptions of Jurassic period were laid down over the Gondwana sediments.
- Denudation modified the original form of Rajmahal traps.
- An uplift of western and south-western parts of Rajmahal followed.
- Tilting of Rajmahal to the east and north occurred during the Himalayan revolution.

The river Ganga forms the northern boundary of Santhal Parganas hills rise abruptly some 300 to 400 metre on the south bank of the river leaving at certain points scarcely enough space for the loop line of the Eastern Railway to pass. The narrow strip of plain land was of immense importance during the pre-railway days and during the Moghal regime, it was the gateway to Bengal. The hill range bifurcate near Borio in Rajmahal Subdivision. The western range passes through Godda and Dumka district and the eastern range runs parallel to the loop line of of the Eastern Railway upto Patna, here it bends eastward to join the western range. These hill ranges enclose between the, about 3000 sq. km. of hilly tract, 2000 sq. kms. Of which are known as Damini-koh.

The southern and south eastern portion of the district, lying west of the hills, is an upland. The monotony of the region is broken by protruding hill here and there. As one travels from east to west, he can have a glimpse of the iphuljorepatardha, Tieurand Koeridh peaks from the terrain situated in the central portion of the region are Nanihat and Massanjore hill which seem to accentuate the general undulatory pattern of the terrain. To the east of the eastern range to the Rajmahal hills lies the plain formed by the alluvium of the hilly rivers and the Ganges.

The general structure of the study area reveals the presence of Pre-cambrian granite and gneiss with a tilt towards the east and north. The out bursts of lava in alliance with faulting to minor importance has resulted is territory was under the grip of late carboniferous glaciations which has had some important bearing on the landscape in the peripheral areas of the study region.

CONCLUSIONS

Detailed study of the geographical conditions specially physical landscape, land use & agriculture and other aspects and its impacts on appraisal of human resource has enabled the investigator to point out some of the findings observed in the present research work. These findings concern impact of physical landscape on land-use agriculture human inhabitation, human resource, rural development etc.

The area is marked with rough terrain having number of flat tophills and valleys where different tribal habitations have developed hill top settlements of different tribes is the spaciality of the study area.

The rough terrain of the area and river has considerably influenced land use pattern. The highly dissected areas or steep slope areas are marked with forest and the low lying areas existing between the hills or ranges are used for agriculture. These low lying area known as 'Don' and relatively higher area known as 'Tanr'. The 'Don' area remain productive and 'Tanr' area remain productive and 'Tanr' area remains relatively less fertile.

Despite the considerable attention of the government the area is least developed. There is lack of proper development of infrastructure facilities like road ways irrigation facilities etc. more particularly villages having tribal dominance lacks proper development.

REFERENCES

1. Ahmad, E. (1965): *Bihar: A Physical, Economic and Regional Geography*. Ranchi: Ranchi University Press.
2. Arora, G.S. (1967) *The New Frontier Mail: A Sociological Study of Indians Immigration in U.K.*, Bombay: Popular Prakashan.
3. Baden Powell, B.H. (1896) *The Indian Village Community*, London,
4. Malley, O' L.S.s. *Santhal Parganas, The Bengal District Gazetteers, Bengal Secretariate, Book Depot, Calcutta, 1910.*
5. Singh R.L.: *OP Cit*
6. Duggal S.L. *OP Cit*

