

**MORPHOLOGY OF TRIBAL-NON-TRIBAL BOUNDARY :
CASE STUDY FROM FOUR SELECTED DISTRICTS
OF WEST BENGAL**

Dissertation submitted to the Jawaharlal Nehru University
in partial fulfilment of the requirements
for the award of the Degree of
MASTER OF PHILOSOPHY

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1990



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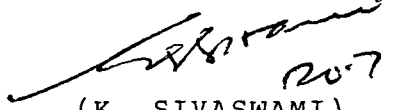
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ACKNOWLEDGEMENT

I express my sincere gratitude to Dr. Aijazuddin Ahmad, Professor, Centre for the Study of Regional Development School of Social Sciences, J.N.U., New Delhi for his care and supervision of the dissertation. Working with him has been a great pleasure.

I record my gratitude to the members of the library staff of J.N.U., Planning Commission, Yojana Bhawan, New Delhi; Calcutta University, Calcutta; NIEPA, New Delhi and Seva Bhawan, New Delhi for their kind co-operation.

I feel indebted to Mr. Debendra Kumar Nayak, Lecturer, Department of Geography, NEHU, Shillong who extended invaluable help at various stages of the writing of the dissertation. I am also grateful to my friends, Mahavir, Gopa, Bhupinder, Rajashree, Balakrishna, Styendra, Shakeel and Manish who came forward to assist me whenever they felt I was in need of it.

Mr. Chinmay Nath eminently deserves my gratitude for his help in photographic exercises. My thanks are due to Mr. Jamaluddin Farokhi for the assistance in cartographic work.

I wish to record my sincere gratitude to my parents and all other members of the family for their constant

encouragement and moral support.

I take this opportunity to thank my husband who quietly did everything to see the work completed.

Last, but not the least Mrs. Iyengar eminently deserves my thanks for the care she took while typing the manuscript.

Madhumita Bandyopadhyay
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Chapter 1

INTRODUCTION

1.1 STATEMENT OF THE PROBLEM:

According to 1981 Census, Scheduled Tribes account for over 7.7 percent of the total population. However insignificant it may be at the aggregative level, the distribution of tribes at lower levels shows a tendency towards clustering and concentration over space.¹ This aspect of spatial distribution of scheduled Tribes has serious implications in terms of tribal-non-tribal interaction and in articulating the process of regional development. The distribution of tribal population as it exists today has been a product of long historical processes in close conformity with the geographical diversity of the sub-continent. This process has been manifested over space by marked concentration of tribal population in certain regions where they constitute an overwhelming majority, in areas referred to as "tribal territories" - generally the hilly and forested tracts. At a very broad level, these territories merge into the dominantly non-tribal regions -

1. Moonis Raza, A. Ahmad and et. al.(1977), "The Tribal Population of India - Spatial Patterns of Clustering and Concentration", C.S.R.D. Occasional Paper No.5, J.N.U., New Delhi, P.10; also see, An Atlas of Tribal India, Concept, New Delhi, 1990.

(a)

the plain and agriculturally prosperous tracts. How exactly this transition takes place, provides an interesting arena for investigation as it is not only a transition between tribal concentration and non-tribal concentration but a transition also between two distinct social set-ups, modes of economy and cultural worlds.

While this transition at broad aggregative level is marked by distinct boundaries, at lower levels, the morphology of tribal-non-tribal boundaries assumes different forms which is the subject matter of investigation in this dissertation.

The present study makes an attempt at understanding the nature of morphology of tribal and non-tribal boundaries at the lowest unit of reference i.e., the village in the four districts of West Bengal namely Purulia, Bankura, Medinipur and Birbhum. The pattern of distribution of Scheduled Tribes has also been analysed at the thana and village levels and various zones of their concentration have been identified. The nature of tribal-non-tribal boundaries has been analysed with the help of a series of village traverses which reveal the diverse nature of the tribal-non-tribal transition in space. In order to study the problem of tribal-non-tribal boundary, the state of West Bengal has been selected. The

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state constitutes the eastern-most part of the Mid-Indian tribal belt which merges into the dominantly non-tribal areas. Thus the region provides an ideal ground for examining the nature of transition in the boundary of the tribal and non-tribal areas. It was decided to select only 4 districts which have a very significant proportion of their population as Scheduled tribes. The region has also experienced substantial redistribution in tribal population, particularly due to the processes of regional development in terms of development of infrastructural facilities and establishment of modern industries and urbanization breaking the isolation of the region opening it to exogenetic forces.

1.2 BACKGROUND

1.2.1 Tribal Situation in India: Historical Background

Contemporary evidence regarding the spatial distribution² of Scheduled Tribes suggests their near exclusive concentration in certain pockets in the country. At a very broad macro level, these areas are characterised by dry, hilly and forested tracts. These areas have been variously described as areas of "isolation", "repulsion".

2. B. Subba Rao (1958), "Personality of India", M.S.U. Baroda, and O.H.K. Spate & A.T.A. Learmonth (1967), India and Pakistan, Methuen & Co, London.

"blind-alleys" or "culs-de-sac".³

The concentration of tribal population in these areas, negative from the point of view of agriculture, was historically engendered by a process of displacement of the less-advanced groups by the technologically superior social groups. The former found "these negative areas as refuge zones" where people managed to survive in a perfect ecological equilibrium in small communities with simple life suited to their technological attainments."⁴

This process of concentration and clustering of the tribes in enclaves in the hilly and forested tracts, however, gave rise to differences in the processes of development, one experienced in the tribal territories and the other in the plains. Ahmad remarks that, "the areas of tribal concentration have historically remained away from the main foci of population agglomeration and seem to have suffered from varying degrees of isolation. The restricted nature of interaction with the non-tribal groups and the operation of endogenetic processes of change at low key have permitted the continuation of the old tribal order in

3. B. Subbarao, (1958) op. cit., p. 142.

4. Ibid., p. 142.

varying degrees of intensity.⁵ This process of interaction of tribals and non-tribals, in fact, started centuries ago.

1.2.2. Ancient Period:

These primitive people had long been settled in different parts of the country before the penetration of Aryans in India. During that time the sub-continent was sparsely populated and people with different levels of material and cultural development could live side by side without impinging to any great extent on each other's resources and territories which allowed tribals to live independently according to their rules and customs.⁶

During the ancient (Vedic) period, with the advent of Aryans the tribes it is believed left their original homeland and took shelter in inaccessible areas of forested and hilly tracts as a consequences of conflicts with the non tribal elements. Subsequently, these two groups remained separated physically i.e. advanced people lived in the plain area and tribal people remained isolated from them. But

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5. A. Ahmad (1985), Regional Development policy and Redistribution of Tribal population in India. UGC Workshop in Research Methods in Regional and Urban Planning, Centre for the study of Regional Development, J.N.U., New Delhi.
 6. C.V.F.Haimendorf (1982) Tribes of India: The struggle for survival, Oxford Univ. Press. Delhi p.33.

gradually over time, a process of acculturation and assimilation of tribes in some areas started with the cultural exchange taking place between the two groups. This process continued upto the introduction of British Raj. As Haimendorf declares, before the nineteenth century there was more or less frictionless co-existence between tribal folks and Hindu caste society in the truest sense of the word".⁷

This periods of interaction between tribal and Aryan speaking people have been described by Surajit Sinha as "pre-British", "pre-industrial" and "pre-market phase". During this period, some of these tribal groups tried to follow Aryan culture and were assimilated into them, although obtaining very low position in the society. Others took refuge in the forested and isolated parts of country in order to keep themselves aloof from these advanced people. From Puranas, Ramayana, Mahabharata and other classical texts it has been noted that they were known as 'janas' and lived in Atavika Rajyas, or forested areas and pratyanta Pradesh or frontier regions.⁸

7. Quoted in A.R. Desai (1977), "Tribes in Transition" in Romesh Thapar (ed.), Tribe, Caste, Religion in India. Macmillan, New Delhi p.24.

8. Nihar Ranjan Ray, (1982) "Introductory Address" in K.S. Singh (eds.) Tribal Situation in India, Indian Institute of Advanced Studies Simla, p.11.

1.2.3 British Period:

The next phase of tribal/non-tribal interaction started during the British Raj. The policy of "non-interference" in the socio-cultural life of tribals allowed them to live in those inaccessible pockets, being aloof from the mainstream of life which created a wide gap between tribals and non-tribals in every aspect of life.

In the later part of the British period, with the development of roads, railways, and with the advent introduction of zamindari system, moneylenders and Christian missionaries, the tribal people came in direct contact with non-tribals. Mining activities and new industries have been opened up in tribal areas which resulted in non-tribal penetration in those areas, on the other hand, tribal people migrated as labourers to areas of plantation, agriculture, road and railway construction sites and mining centres. This process of immigration and outmigration of both the groups affected the demographic and ethnic composition of these areas, and seriously modified the pattern of tribal distribution in space.

1.2.4. After Independence :

After independence the process of non-tribal-tribal interaction increased more with the new industries and urban

development which affected the tribal areas. This phase of socio-economic change has been explained by Ahmad as follows:

"The pattern of tribal/non-tribal interaction underwent a qualitative change after independence. With the advent of developmental planning in the early 1950's an era of overall economic growth began. The economy gradually recovered from the impact of colonial rule. Even though the process of socio-economic development was not uniformly distributed in space, its impact on the traditional economies in tribal areas was quite evident. The tribal regions, which happened to be lagging in economic development, could no longer remain outside the ambit of the development processes as new planning strategies and democratic process slowly infiltrated and exposed them to varied influence both negative and positive."⁹

With this historical background of the tribal/non-tribal interaction, the changing morphology of tribal/non-tribal boundary, showing the distribution pattern of these two different groups should be mentioned. Historically it has been noted by many scholars (Schwartzberg, 1985; Ahmad,

9. A. Ahmad, (1984), "Regional Development Process and Redistribution of Tribal population in Mid-India" in. L.A. Kosinski, and K.M. Elahi (eds.), Population Redistribution and Development in South Asia.

Singh, 1983) that the physiographic conditions largely determined the nature of tribal-non-tribal boundaries over space. This was, however, due to the differences in the distinct modes of economy pursued by these two social groups. As Schwartzberg points out, the areas of tribal concentration, as distinct from those of the non-tribals "generally constitute " regions of rugged terrain, large parts of which remain under forest. They may be considered areas of refuge, relatively unattractive to the characteristically plains-dwelling, plough cultivating peasantry in the mainstream of Indian culture."¹⁰

However, this need not be taken as a static scenario, as many of the recent historical and politico-economic processes have often altered, modified and transformed the distribution pattern of both the tribes and non-tribes which have produced far-reaching changes in the morphology of tribal-non-tribal boundary over space. For example, Ahmad brings out the role played by recent changes in the economy in effecting the redistribution of tribal population. He points out four main forces. These are as follows:

First, the regional development impulses transmitted into the tribal areas of Bihar and Madhya Pradesh have

 10. J.E. Schwartzberg, (1978) Historical Atlas of South Asia. University of Chicago Press, Chicago, p.233.

initiated a process of population redistribution on an unprecedented scale thus drastically changing the ethnic composition. Secondly, the process of redistribution of population has brought about far reaching structural changes in the socio-economic framework of the tribal communities. Thirdly, the influx of the non-tribal elements into the tribal areas has accelerated the process of alienation of tribals from land and accumulation of land among the more enterprising immigrants with the result that a large proportion of the tribal agricultural workforce has been reduced to the status of landless labourers. Fourthly, the process of absorption of tribal workforce in the emergent local industrial units is inhibited by the fact that it is largely unskilled and alien to the industrial ethos. Consequently, the alienated tribals find their way into the overgrown tertiary sector and subsist on its weak economic base.¹¹

The tribal and non-tribal boundary have not remained static throughout the long historical past. It has changed over period due to the re-shuffling of the population with development and modernisation of the economy and society.

The reasons for the change in the tribal and non-tribal

11. A. Ahmad, (1984) op.cit.

boundary can be explained as Schwartzberg points out (a) that the difference may stem in part from differences between the censuses in classification (most notably in the cases of Uttar Pradesh, Jammu and Kashmir and several Union territories where no lists of Scheduled Tribes were promulgated, thus making the Scheduled Tribe population "nil" by administrative fiat); (b) that significant de-tribalisation has occurred and groups once considered tribal have shifted out of the tribal category; (c) that, owing to rates of natural increase lower for the tribal population than for the population at large (a function of higher rates of mortality), that group suffered a relative decline within the larger society; (d) that immigration of non-tribal settlers into largely tribal regions, coupled perhaps with emigration of tribals to areas of plantations, mines, cities and other economic attractions outside the largely tribal areas, also led to a relative decline of the tribals in the latter, and, finally (e) some combination of two or more of the foregoing. ¹².

The present study is the exercise of demarcation of tribal and non-tribal boundary in the tribal region, comprised by four districts in West Bengal, namely, Birbhum, Purulia, Bankura and Medinipur, which itself is a part of mid-Indian Tribal belt.

12. J.E. Schwartzberg, (ed.) (1978) p.223.

1.3 TRIBAL-NON-TRIBAL INTERACTION IN WEST BENGAL:

Tribal areas in mid-India have witnessed rapid growth of urban population and industrialisation at a phenomenal pace. An immediate result of this has been the immigration of non-tribal people into tribal areas. The demographic pattern has thus been disturbed and there has been a consequent decrease in the tribal population.

West Bengal accounts for 7 per cent of total tribal population of India. As many as 32 tribes, predominant among them being Santhal, Munda, Oraon, Bhumij, Kora, Lodha, Kharia etc. are inhabiting in this region.¹⁴

Early histories of these tribes are not reliably known. Most of the tribal settlements in the state are non-contiguous in nature and they are very interspersed with the settlement of other population. No tribal development block could be set up in the state because of the non-existence of compact areas with two-thirds proportion of tribes in the population.¹⁵

14. Census of India (1981) Primary Census Abstracts for Scheduled Tribes and Scheduled Castes, West Bengal, Series 23.
15. Report of the Commission for Scheduled Caste and Scheduled Tribe (26th Report).

Unlike some other states, the problems of tribal population of the state are not the result of isolation or seclusion of any type. Rather their problem is that of confrontation of the traditional integrated society with different social and economic forces of modernity.¹⁶ However, the tribal settlements are located in inaccessible and inhospitable areas. In most cases the tribal lands are located in such areas where irrigation facilities are mostly lacking. Areas of major tribal concentration in the districts of Medinipur, Bankura and Purulia, persistently suffer from droughts. Tapping of irrigation potential in tribal areas and utilising water resources for tribal lands are still the basic problems for agricultural development coupled with poor condition of their soil and meagre flow of inputs like seeds, fertilizers etc. Cropping pattern remains traditional, leading to poor agricultural output.¹⁷ Alienation of tribal land has been continuing till now, although the transfer of land from tribals to non-tribals is prohibited by legislation. All these factors have been important causes for change and modification in tribal-non-tribal boundary. The faulty categorisation of Scheduled Tribes in census reports and discriminatory attitude to them, is another reason of this change. The list of

16. Ibid., p.321.

17. Ibid., p.322.

Scheduled Tribes differed from state to state. As is evident, Bhumijis are considered as a Scheduled Tribe. But the same group of people living in Bihar state is not considered as a Scheduled Tribe. As a result, the Bhumijis living in the district of Purulia were not regarded as Scheduled Tribe, as this district is a transferred area from Bihar.¹⁸ Some tribes, either are not included at all in the list or some of them are clubbed with others. Bhowmik pointed out " in the present list of Scheduled Tribes as well as in the Census reports also, the lodhas have been mixed and enumerated with the Kharias, without any justified reasons, though these two groups of people have their distinctive cultural life. Except this scheduling or recommendation of scheduling, there are a few communities in this state who have many tribal attributes, but they have not been included in the schedule, to get social, economic and political benefits."¹⁹ The faulty representation of Census data also causes the change in the demographic pattern of tribes. As for example, according to 1961 census, the numerical strength of the Munda was about 1,60,245 but it was only 82,923 in 1961. This sudden increase in the number of this tribe has been explained by

18. P.K. Bhowmik, Indian Anthropology. p.4

19. Bhowmik, P.K., (1985) "Tribal situation in West Bengal", Indian Anthropologist, Vol.5, No.1, June. p.5-6

the superintendent of census operations in the following words: "It is hardly possible to ascribe specific reasons to these variations, but a part of it seems to have been caused by such indeterminate factors as confusion over names, ignorance of the respondent, personal equation of the enumerators".²⁰

Most of the tribal groups have migrated from the adjoining states from early historic times. As Risley (1891) explained that Ho, Munda, Kora, Oraon - all these people have migrated either from Singhbhum, Mambhum and Chotanagpur plateau or from Orissa.²¹ Like all these groups, Santal is also another immigrant tribe who occupied most of the tribal dominated villages of this area with large numerical strength. In this linguistic survey of India (vol.V,Part I) Dr.Grierson states that they (Santhals) entered Midnapore (renamed as Medinipur) from Orissa.²²

20. Bhowmik, P.K.,(1981) Vol.No. (1981).

21. Risley, H.H.,Tribes and Castes of Bengal, Ethnographic Glossary, Firma K.L. Mukhopadhyay. Calcutta.p.

22. Quoted in Report of the West Bengal Planning Board (1978), Twenty villages of West Bengal, p.10.

M.Yorke has explained

"We know very little about the Santals before 1820 at which time they first came into the contact with the British Administration. However, we can say that they were not commonly known then as Santals, nor did they call themselves by that name. They lived in isolated villages or Parganas, federations of a dozen or so villages, in the interstices of the Hindu population. They were scattered over an area from the hills of north---Balasore up to the Ramgarh hills... They were a hunting a semi-agricultural people and often classed as chauras or bandits. They fitted almost perfectly the Marxist historian Hobsbawm's definition of a bandit class with no permanent home and a distinct ethic of cultural isolation from other people - the Dikus.

After the great famine of 1770-72 they moved north into the plains of West Bengal occupying abandoned plain land. Later, we find that they came into increasing contact with the caste population as the latter flowed back into the area. The Santals, following their policy of isolation began again to migrants, attempting to avoid the exploitation of the Diku zamindars and Mahajans, they so despised"²³

Another main tribe, Munda is also a migrated tribe and their migration is still continuing due to social and economic pressure. According to Bhowmik "these tribal communities have migrated from Ranchi area accompanied by some other tribes. Three distinct zones of their migration can be categorised on the basis of ecological differences as (1) The West Medinipur region, which is an extension of the Chotanagpur plateau, where migration was easy and spontaneous; (2) the region of lower Bengal, specially

23. M. Yorke (1974), "History and Anthropology: A New Model with Examples from the Santhal Parganas", Indian Anthropologist, Vol.4, No.1, December 1974, p.87.

Sundarban areas of 24 Parganas, where they came for indigo cultivation, and (3) the north Bengal region where they were recruited as plantation Labourer".²⁴ In this way not only the Mundas, other tribes too split up throughout this state. In another article entitled "Tribal situation in West Bengal", Bhowmik holds that these Austro-Asiatic group of people had their homeland somewhere in South-West of this state, mainly in the jungle-covered lateritic zones extending into the Chotanagpur plateau. It is to be noted that the concentration of tribal people, along with geographical regions, do not have conformity with that of political demarcation. Tribal people did not pay any attention to political boundaries, rather they are very mobile and their migration was prompted by the necessity of living, and were allured by the pull of places of prospective future and earning. Thus we find that a good number of tribal population have migrated as labourers to Indigo plantations, tea estates, for jungle clearing in Sundarban and other areas for agricultural purposes, because they were considered more faithful, hard working, productive and sincere. Besides, the wages for them was considered more economic. As a result, the migration of these people accelerated gradually and satellite villages inhabited by

24. P.K. Bhowmik, Indian Anthropology, p.71.

the migrated tribals grew up at various places and assumed a permanent nature...? It is a known fact that the more aggressive Oraons (Dravidian speaking people) pushed away the docile Austric speaking Mundas, and gradually all of them are found to have migrated in many West Bengal districts as well as Assam Tea states... The Lodha tribes are clamped into the jungle covered region of Medinipore and Mayurbhanj. A few of them are found in the contiguous district of Singhbhum in Bihar. The Kherias are a dominant group in Orissa and Bihar and some parts in West Bengal. In this way, almost all the tribal groups have their counterparts in the adjoining states. When necessity for survival arose, they migrated".²⁵

The socio-economic transformation of tribes also affected the tribal-non-tribal boundary. The denotified tribes i.e. Lodha, Birhor, Mahali, Kharia etc. now came under the rehabilitation scheme of government and as a result their livelihood changed a little. The Santals, Munda, Oraons, Bhumijs etc. cleared the jungles and became settled agriculturists. Their culture pattern was also influenced by the regional culture of dominant non-tribal neighbours, which resulted in further assimilation of these

25. P.K. Bhowmik, (1985) "Tribal situation in Bengal", Indian Anthropologist, Vol.5, No.1, June, pp.5-6.

people. The process of infiltration of non-tribals into tribal areas which started with the beginning of development process during colonial period, has increased the exploitation of tribes. From Hamilton's work (1920) information can be collected about the inhibition and socio-economic condition of Santhals of Midinipur district;

"Some parts of the jungles are occupied by a poor miserable prescribed race of men called Santhals, despised on account of their low caste by the inhabitants of the plain country, who would on no account allow anyone of them to fix himself in their villages. The peasantry in the vicinity, by way of distinction, call themselves good creditable people, while they scarcely admit the Santhals within the pale of humanity".²⁶

He also mentioned that "their villages are generally situated between the cultivated plains and the thick jungles, in order that they may protect the crops of their more fortunate neighbours from deer and wild swine".²⁷ Mc Alpin (1909), conducted a survey to enquire about the limit and extent of oppression of Santhals by zamindars and other non-tribals.

26. Walter Hamilton, (1820) Description of Hindustan, London. Mentioned in P.K. Bose (1985) op. Cit. p.p.

27. Ibid.p.p.

The distribution of Santals, he found, was concentrated in the South-West of Bankura, known as Manbhum, and in north-west Medinipur . In the 18th century, a considerable portion of the area was part of an indefinite administrative unit called the jungle Mahals lying between Chota Nagpur and the plains of Bengal. This was subsequently defined as being composed of certain Parganas in Birbhum, Bankura and Medinipur, but on account of the disturbances of the Bhumij's it was split up amongst the neighbouring district in 1833. The name of Jungle Mahal, however, survived as that of a portion of the Maureswar Thana in Birbhum and the whole of the western area of Medinipur. He also found that the Santals live in tolas, separate from the ordinary Bengali.²⁸

The condition of these major tribes of West Bengal changed further over time and their movement from one place to another place forced them to adjust with other neighbouring non-tribal communities at least. From the number of research work of the scholars (Roy, 1912, Sinha, 1953, 1957, 1958, 1959, 1962, Orans, 1959;iii) it is evident, Santal, Munda, Bhumij etc. have assimilated with Hindu culture and some of them were effected by christianity which resulted in the change in process of tribal-non-tribal

28. Mentioned in P.K. Bose, (1985) op. Cit., p.15-16

interaction. But everywhere the degree of this change was not the same. In the case of Lodha, it is a fact that they could not cope up with the sudden change in their economy. Though rehabilitation scheme for these denotified tribes was established but it was not useful for them at all and did not improve their condition in most of the cases. "They remain criminal as they were earlier. Thus the Lodhas remain in isolation as they were, far away from the socio-economic and cultural boundaries of the locality but in touch with criticism and adverse statements".²⁹

Prof.L.P. Vidyarthi also explained in his essay, titled "problems and prospects of Tribal development in India" that "These isolated and relatively backward and primitive tribal communities, some of which are being threatened with demographic extinction need to be studied in terms of their ecological, demographic, ethnic, psychological and historical settings. With such a background of their socio-cultural activities, customary laws and distinct ethos and value-attitude system and above all their distinct problems should be brought in proper relief. Most of these tribal communities are "closed groups" with high degree of tradition-orientation. The impact of modernism in terms of

29. P.K. Bhowmik, "Problems of Denotified tribes", Man and Life, Vol.2, Nos. 1 & 2, Jan-June.

acceptance of education, technology and secular type of living is almost non-existent."³⁰

However, the tribes of this region, have been undergoing both economic and cultural transformation, at least for the last two hundred years. They were not isolated, nor did they remain a homogeneous community with an egalitarian distribution of economic wealth.³¹

This kind of intermixing between tribes and non-tribes and their socio-economic relation definitely affected their spatial distribution, resulting obvious changes in the structure of tribal-non-tribal boundary in the ~~of~~ four districts, i.e. Birbhum, Purulia, Bankura, Midnapur of this state.

An attempt has been made by this study to examine the spatial distribution of Scheduled Tribes and the existing boundary between these tribes and the non-tribes. This study has been conducted at village level depending on the Census data of 1981 only. This study evaluates the spatial aspects of tribal distribution in this area, "identifying their striking tendencies of clustering and concentration,

30. L.P. Vidyarthi, (1972) "Problems and Prospects of Tribal Development in India", Indian Anthropologist, Vol.2, No.2, Dec. p.85

31. Bose, P.K., (1985) p-24.

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and linking them with the diversity of ecological factors which along with their ethno-lingual attributes promote tribal regionalism at various levels of hierarchy".³²

The state level and district level studies are far away from realistic picture of the tribal pattern of concentration which emerges more powerfully at the village level. The fact is that the tribal concentration further accentuated at the village level, and it is quite likely that even in talukas where the tribes do not otherwise constitute a clear majority, the bulk of their population is concentrated in clusters of villages which are largely or exclusively tribal in composition.³³

Village studies are undertaken to understand certain processes and identify some problems and such studies are to be distinguished from estimated studies.³⁴ In such studies, which are mainly qualitative in nature, necessity of collecting quantitative information notwithstanding, statistician's role is obviously secondary. An interdisciplinary approach of such subjects as economics,

32. Moonis Raza, A. Ahmad and et. al., (1977) op. Cit. p.4.

33. Ibid., p.13

34. S. Sengupta, (1971), "Village Study as a Tool of Study in Tribal Areas" in P.C. Goswami (ed), Socio-economic research in Tribal areas, p.106.

sociology, agriculture and geography is required in such a context.³⁵ The village studies conducted so far are either of the "fact-finding" type or are 'problem-oriented'. Thus they are either sources of information and data, or studies concerned with the analysis of the gaps exist between development programmes and their performance at grass-root level. Therefore, they either point to the problems confronting the development of villages or present a partial view about the state of underdevelopment which exists there. But they do not explain the process of development in villages as an integrated part of the spatio-social process of development operating in rural society as a whole.³⁶

The study of spatial distribution pattern of tribal population should be conducted with the view of development processes and historical perspective together, affecting the clustering of tribals in more isolated areas or their splitting up and distribution among the segments of population and their total assimilation and absorption in stratified/caste based society of that region. So here, all the aspects of sociology, economics and geography should be

35. Ibid., p.106.

36. P. Mishra, (1983), "The Village as a Unit of Investigation" in Social Scientist, Vol.II, No. 6, June 1983, p.61

integrated. In this study a conscious effort has been made to integrate the geographical and socio-economic factors to analyse the distribution pattern of tribal population.

The villages in tribal areas differ from the other villages in a number of respects. For instance, in some cases, as Shri Debidas Ray states, "The frequent change of the village site presents difficult problems of identification of the village from time to time".³⁷ In a non-tribal area, village study is generally confined to an administrative unit and the field work is restricted to the population and resources within the boundaries of the administrative unit. This concept has certain advantages mainly because the records relating to land, agriculture, population etc. become readily available for the village as an administrative unit. However, when the investigations have to be carried out in a tribal area the 'village' needs to be defined in a different way. Shri P.D. Saikia in his report on 'changes in Mikir Society' defines a village in the Mikir Hills as a 'Sociological and economic concept rather than a geographical unit.'³⁸

37. Quoted in O.P.Apte, (1971), "Need for a Change in Emphasis of Village Studies in Tribal Areas" in P.C. Goswami(ed) Op. Cit. P-99.

38. Quoted in O.P. Apte, (1971).

The region which has been studied here covers a large number of tribal and non-tribal villages. The process of interaction and the socio-cultural and economic differences has definitely affected their clustering and distribution. In order to study the morphology of tribal-non-tribal boundary in this region it should be remembered that all the changes in villages are related to the changes, which take place in the region, where those villages are situated. The possibility that changes within villages could also bring about changes in the state, that village and state are joined in a dialectical unit- is ignored in the notion of encapsulation."³⁹

However, this research work also attempts to evaluate whether the change in spatial distribution pattern and the socio-economic condition of the tribal people in village level can present the overall picture of change in the entire region.

1.4. STUDY AREA

The area under study covers four districts of West Bengal, namely, Birbhum, Purulia, Bankura and Medinipur. The study area consists of 88 thanas (including Kharagpur town, which is excluded from our study) with 18689 inhabited

39. Harriss, John, (1979) "Why Poor Study Poor in Rural South India", Social Scientist, August. p.20.

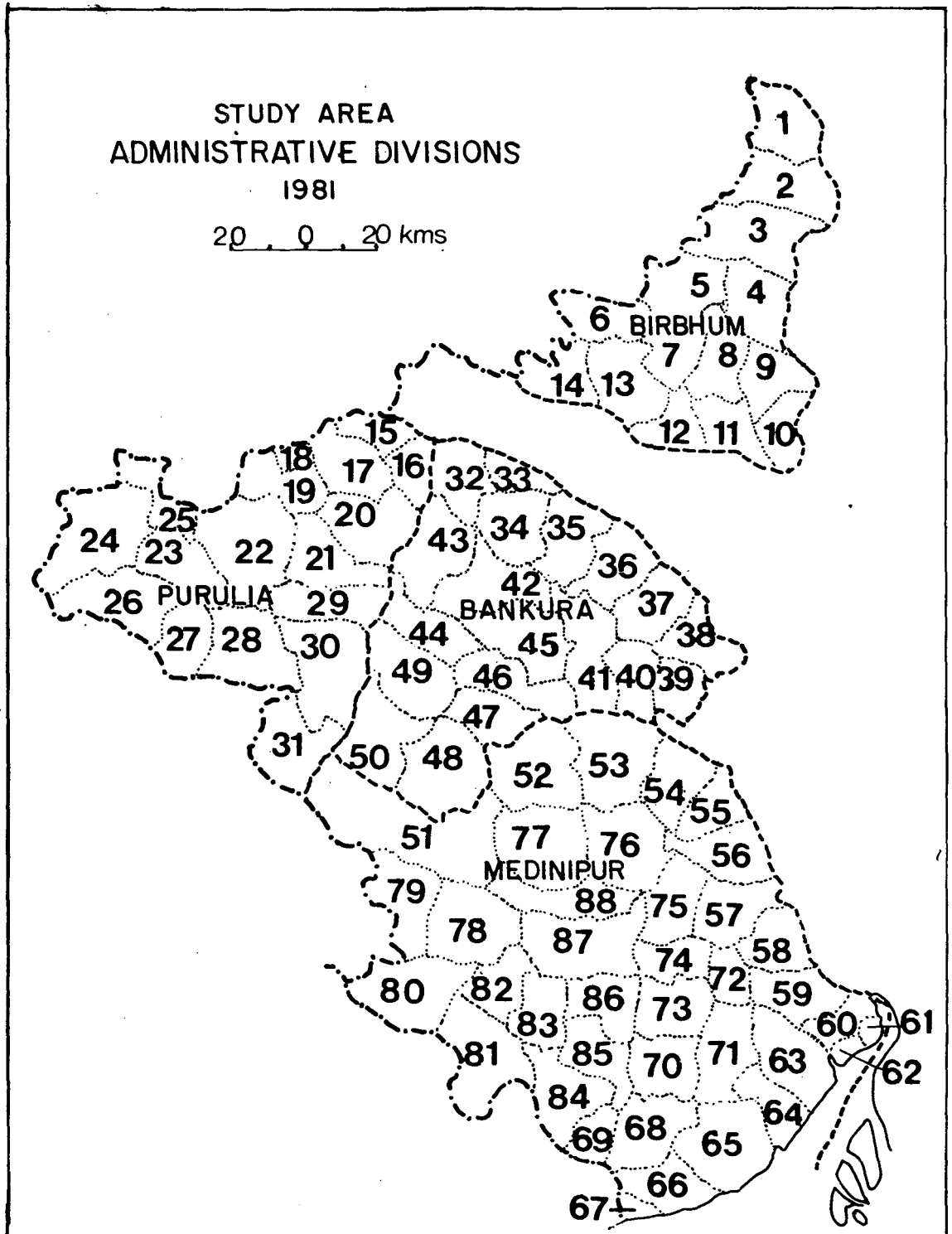


Fig.1.1

(For key to Police Station Location See Appendix-1)

villages. This region is bounded by Bihar and Orissa in the western and south-western part, Bay of Bengal in the South and Murshidabad, Bardhaman, Hooghly and Howrah in the eastern part. Except Birbhum, which remains isolated, the remaining three districts form a cluster. The entire study area contains 1282975 tribal population which accounts for nearly 42 per cent of total tribal population of the state and little more than 2 per cent of total tribal population of India. The entire region is situated between Chotanagpur plateau on the west and alluvium plain tract of the river Hoogly on the eastern side.

1.5 OBJECTIVE OF THE STUDY

The main objectives of this study are as follows:

- (1) To identify the pattern of spatial distribution of Scheduled Tribes in four districts of West Bengal at the thana and village level;
- (2) to explore the morphology of tribal-non-tribal boundary at the village level; and
- (3) to measure the distance-intensity relationship in change of tribal-non-tribal share in population at the village level.

1.6 DATA BASE:

The entire study is based on secondary sources of data and information, available from Census Reports and other government publications. These are as follows:

- (1) Statistical Abstract, West Bengal, 1976-1977 (New Series Nos.2-3).
- (2) Economic Review, Government of West Bengal 1988-89. Statistical .
- (3) 12 years of Left Front Government of West Bengal, Department of information and Cultural Affairs, Government of West Bengal, 1989.
- (4) Census of India, 1981, Series 23, part XIII-A, District Census Handbook, Birbhum district, West Bengal.
- (5) Census of India, 1981, Series 23, Part XIIIB District Census Handbook, Birbhum district, West Bengal.
- (6) Census of India, 1981, Series 23, part XIII A, District Census Handbook, Bankura District, West Bengal.
- (7) Census of India, 1981, Series 23, Part XIIIB, District Census Handbook, Bankura District, West Bengal.
- (8) Census of India, 1981, Series 23, Part XIII A, District Census Handbook, Purulia, district, West Bengal.
- (9) Census of India, 1981, Series 23, Part XIIIB, District Census Handbook, Purulia district, West Bengal.
- (10) Census of India, 1981, Series 23, Part XIII A, District Census Handbook, Medinipur district, West Bengal.
- (11) Census of India, 1981, Series 23, Part XIIIB, District Census Handbook, Medinipur district, West Bengal.

1.7 METHODOLOGY:

The analysis at village level involved the problem of adjusting the taluka boundaries in all the four districts because the talukas were shown with different scales in the Census. They were converted to uniform scale by photographic method.

The analysis of the spatial distribution of tribal population has been attempted at the thana and village levels. The percentage share of the Scheduled Tribes for the thanas have been calculated and cartographically represented after categorizing the share into the following groups:

- i) Below 5 per cent
- ii) 5 - 10 per cent
- iii) 10 - 20 per cent
- iv) 20 - 30 per cent
- v) 30 - 50 per cent

and

- vi) above 50 per cent

To analyse the spatial distribution of Scheduled Tribes at the village level the percentage share of tribal population to the total population of the villages (having scheduled tribes population) has been calculated. Then percentage shares have been categorised in six groups, i.e.

- i) below 5 per cent
- ii) 5 - 10 per cent

ii)	10	-	20	per cent
iii)	20	-	50	per cent
iv)	50	-	80	per cent
v)	80	-	100	per cent

The distribution of tribal population has been cartographically represented at the village level by means of different circles.

Frequency distribution of the number of villages with Scheduled Tribe population in various percentage categories has been shown with the help of histograms.

In order to examine the nature of tribal-non-tribal interaction and the resultant changes in the morphology of boundaries a number of village traverses have been drawn. These traverses have been selected according to the important locational characteristics of villages.

These village traverses help in describing the intensity of tribal concentration and relation between physiographic condition and morphology of tribal-non-tribal boundaries with the change in distance.

An attempt has been made to identify various zones of tribal concentration at the village level by selecting two talukas from each district; one having the highest proportion of the tribal population and the other having the lowest. This maps demarcate the tribal dominated region and non-tribal region leaving the fringe area in between.

1.8. ORGANISATION OF CHAPTERS:

This dissertation has been organized into five chapters. The first chapter discusses the statement of the problem, objectives and methodology. This chapter also include a brief discussion on the nature of tribal distribution and the historical processes responsible for the present day pattern of concentration and clustering.

Second chapter provides a detailed account on the environmental setting of the study area.

Third chapter deals with the economy of the study area. In this chapter, pattern of landuse, irrigation facilities, area yield and production in agriculture, mineral resources and industrial response base etc. have been evaluated.

Fourth chapter deals with the distribution of tribal population in the study area at the taluka and village levels. The nature of morphology of tribal non-tribal boundary has been analysed with the help of several village traverses.

The last chapter provides the summary of conclusions and indicates the scope for further research in the area.

Chapter II

ENVIRONMENTAL FRAMEWORK

2.1. INTRODUCTORY STATEMENT

This chapter provides a general description of the environmental framework of the study area. The purpose is to get an insight into the nature of economy and society in the study area which is largely moulded by its environmental setting. Moreover, the distribution of the tribal population, as numerous studies reveal, closely corresponds to the environmental setting of a region. It has been demonstrated that the tribal population is largely concentrated in those areas characterized by hilly and forested environment while plains and agriculturally prosperous areas have been by and large devoid of tribal population. The environmental setting, therefore assumes greater significance as a background to the study of morphology of tribal non-tribal boundary.

The history and chronicle of a region is largely conditioned by the physical setting or ecological conditions. Physiographically the state of West Bengal can be divided into four parts ¹ : viz. (a) Northern Mountainous

1. Sukhdev Singh Chib, (1980) This Beautiful India, West Bengal, Light and Life Publishers, New Delhi, 1980, p.3.

tract, (b) the tarai or Duars tract, (c) the Western high land and (d) the Deltaic and plain tract.

Northern mountainous region covers the northern parts of the Darjeeling and Jalpaiguri districts. Duars cover Cooch Bihar and Jalpaiguri district. The western highland portion is the projected part of the Chotanagpur plateau that covers Purulia district and the western parts of the Birbhum, Burdwan, Bankura and Medinipur districts. This highland region "forms the tail end of the Chattisgarh state of Orissa and Madhya Pradesh and eastward trailing off of the great Vindyan ranges that geographically divide India into Aryavarta and Dakshinatya."² The surface features of the study area is dominated by this high land. However this highland merges into the alluvial plains towards the east in Medinipur and Bankura. Broadly the study area can be divided into four physigraphic regions i.e. Plateau proper, Plateau fringe, marginal plain and coastal plain. (Fig. 2.1)

2.2. SURFACE FEATURES

The West Bengal uplands, consisting of Purulia, Bankura, Burdwan and Birbhum are known as Rarh. The chief feature of Purulia is the extension of Ranchi peneplains

2. Sachindra Lal Ghosh, (1976), West Bengal, New Delhi. p.6.

e.g. Baghmundi hills in the northwest, the Pocket in the north-east and the Manbazar hills in the south-west. To the east of the Subarnarekha the plateau gradually sinks into the deltaic alluvium.

In the Rarh proper, Bankura is drained east-west mainly by Dalkisore and Kasai. The Dalkisore is joined by the Silai at Ghatai in Medinipur, from which point downward it is called the Rupnarayan. The Kasai joins the Kaliaghai in Tamluk sub-division of Medinipur to form the Haldi river. The Subarnarekha enters at Gopiballavpur in the same district and passes through Nayagram out of Orissa. The Gunamani, Bansloi Mayurakshi drain the Birbhum district before they fall into the Bhagirathi.

Birbhum is a part of Rarh area. The western portion of this district, consisting of Khayrasole, Rajnagar, Dubrajpur, Suri, Mahammadbazar and Rampurhat thanas, is situated at the base of the heavily dissected plateau of Santhal Parganas. This portion is located on the hard impervious crystalline rocks (Archaean) while the rest is made up of the Gondwana sediments, the Tertiaries, the laterites and the alluvium. To the southwest these ridges and valleys became shallow and gradually merge into the broad alluvial plains of Gangetic delta.³ This undulation

3. West Bengal District Gazetteer, Birbhum. p.9.

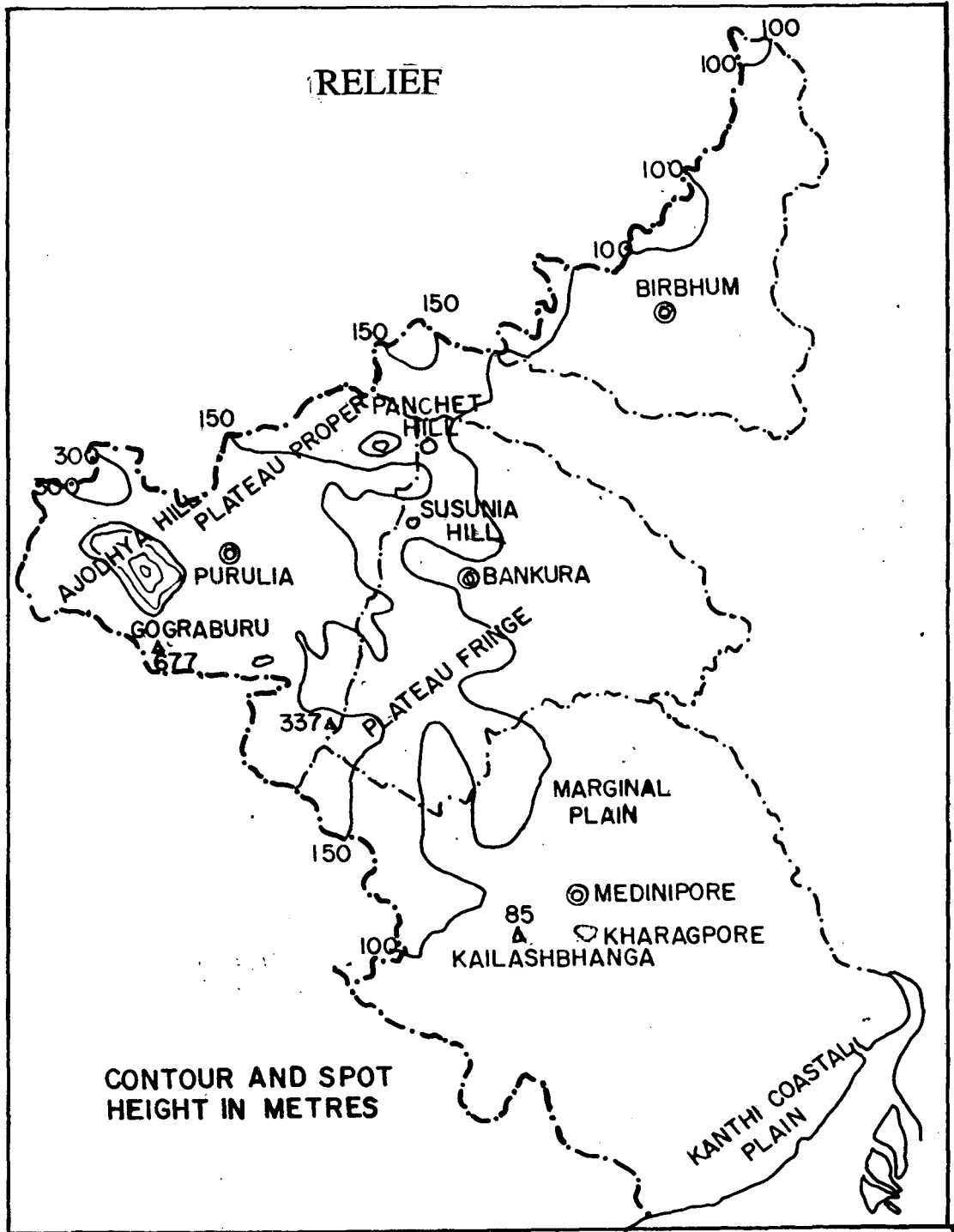


Fig. 2.1

of topography varies considerably from place to place. In the extreme north of the Rampurhat subdivision the high ridges are extension of the Rajmahal hills of basaltic formation. The western portion of the Muhammadbazar and Suri thanas are covered with high spurs extending many miles to the south-east but in northern part of this tract they are succeeded by levelled ground and on the south they disappeared and rise again as low hillocks. Along the north of the Ajoy to the south of Labhpur and Bolpur this terrain is absolutely flat. ⁴

The slope also varies considerably. The general direction of the slope is north-northeast in Murarai. The general slope of Rampurhat is west-east while in Mayureswar above 24⁰N latitude, it is northerly and south of it is easterly. To the south sandy bed can be seen which is dominated by Ajoy river. Evidence of gully erosion is available along the Kopai and Bakreswar river. Keeping Rajnagar at the centre, river valleys radiate in all directions except northwest of the high plateau region. ⁵

The district Purulia is an extension of the chotanagpur plateau. In terms of structure and landforms purulia is a

4. West Bengal District Gazetteers (1975), Birhum. p.8.

5. Ibid p.9-10.

part of Ranchi plateau. The district is having moderately low relative relief with a shield rimland and the absolute relief increases towards the west and south while the rest of the district has gently undulating topography with isolated hills of hard rocks i.e. Panchet.⁶ 300 metre contour line is the dividing line between the higher peneplains of Jhalda, Arsa, Baghmundi, Balarampur, Barabazar and Bandaun thanas and the rest of the districts. The highland rises also upto 500 metres and it was sculptured in a previous cycle of erosion when the climate was probably humid. The gently sloping eroded platform is having an altitude between 150 and 300 metres. The locally dissected badlands (Khowai) also can be seen in the lower peneplain area.⁷

The highland of Purulia is the remnant of Ranchi plateau and acts as watershed of Subarnarekha, Kasai, Damodar group of rivers. There are a number of small isolated residual hills in south and west of Ajodhya pahar. In Jhalda these types of outliers rise steeply from 300 metres to above 500 metres. Chemte (688 metres) is the highest point on the south western flank. These residual

6. West Bengal District Gazetteers Purulia, 1985, p.11.

7. . Ibid p.12.

hills are rounded shaped due to exfoliation of gneiss and such hills are typical features here e.g. Hanunatu dome (542.5 m).⁸

At the southern part of Baghmundi hills, Kadai Pahar (377 m) and Khira Pahari (348 m) and some hillocks of igneous rocks are the most prominent feature of this district. The important peaks on the main highland mass of Baghmundi Ajodhya, Gonjapahar (580.5 m) and Gugai Pahar (580.5 m) are standing in the northwest. On the south-eastern face of Baghmundi, Gogaburu (677 mts) and Korma hill (663 mts) are the highest peaks. The ridge encircling the high peneplain to Baghmundi, Ajodhya has an average altitude of 600 metres. This entire area is covered by dense mixed forest of sal tree.⁹

The Dalma lava range, flanked by Dharwar metamorphics (phyllites, mica-schists and epidiorites), quartzites and granite gneiss are seen in southern margin of the district and acts as a divide between Kumari and Subarnarekha. Bhandari (432.7m) in Bandaun is the highest peak. But due to degradation on these plateau became flat in Manbazar and

8. Ibid p.12-13.

9. West Bengal District Gazetteers, Purulia, 1985, p.13

Barabhum thanas. Dalma range is not as high as Ajodhya hills.¹⁰

At the extreme northwest, the district boundary runs along the centre of Ghoramara pahar, it acts as watershed between Damodar and Subarnarekha. Of the mini peaks, Bijli Pahar (621 m) at the western flank and Jabarban (641 m) at the eastern flank are the most important.¹¹

To the northeast of the district lies the 643.5 metres high panchakot or panchat hill formed of upper Gondwana sedimentaries.

The degraded low land of purulia are flanked on the north by the Damodar valley and the Bagodar uplands, on the south by Dalma range and the east by the rolling and dissected, laterite capped plains. The plains of Purulia have been more thoroughly peneplained than any other part of the Archaean shield.¹² The undulating plains may be divided into a number of interfluves and broad valleys which runs from north to south are: (1) Damodar Valley, (2) Damodar kasai interfluves, (3) The Damodar-Dwarakeswar and

10. Ibid p.13.

11. Ibid p.13-14.

12. Joint Committee for Diagnostic Survey of the Damodar Valley Region-Selected Maps from the Planning Atlas of the Damodar Valley Region, Calcutta, 1968, Map.7.

Dwarakeswar-Kasai interfluves, (4) The Upper Silabati Catchment, (5) The Kasai-Kumari interfluves and (6) the Subarnarekha valley to the west and southwest. The general slope except Subarnarekha is towards east and southeast and the height of the interfluves, sloping north and south range between 150 to 300 metres.¹³

The district Bankura is bounded by alluvial plains of Bengal to the east and the Chotanagpur plateau on the west, Vishnupur, Simlapal, Taldangra, Gangajalghati and Barjora may be described as a plain area. Along the middle of the district the surface rises gradually and elevation becomes more pronounced in the segment in Chhotanagpur plateau. In this area Susunia and Biharinath hills are two prominent uplands of this district.

The district can be divided into three topographic regions: the hilly country to the west, the connecting undulating tracts in the middle, and the levelled alluvial plains to the east.

William Hunter described the hills within the Bankura as "the advanced guard of the hill system of the Central Indian plateau."¹⁴ Spurs of Chhotanagpur plateau also have

13. West Bengal District Gazetters, Purulia, 1985, p.15.

14. William W. Hunter, "Preface" to Volume IV of A Statistical Account of Bengal", Calcutta, 1896, p.5.

been continued in this district which are covered with forest. Biharinath and Susunia are the extension of this Chhotanagpur plateau. Biharinath is situated in the extreme northwest corner of the district in the Saltora police station and rises to 447.8 metres. Susunia is situated in the northern border of Chatna police station, having the altitude of 439.5 metres. There are several low hills in Saltora police station and Mejhia police station. Kora hill, on the north of the Sali river is situated in Gangajalghati police station. There are many small hills in Khatra, Ranibandh and Raipur police station. Mukutmanipur is one of the famous tourist spots in this area. Masakar pahar in Khatra is a historical place.

Medinipur, the largest district of West Bengal is divided into three tracts of well marked characteristics. The north and west part is comprised of laterite formation. The east is deltaic and the south is sea board.¹⁵

The Contai and Tamluk subdivision is situated on the sea-coast and estuary of Hugli river and also contain the mouth of the Rasulpur and Haldi river. In the north, Ghatal subdivision slopes back from the bank of the Rupnarayan. In the north and west the subdivisions consist of wooded and -----

15. Imperial Gazetteer of India, Provincial Series, (1984) Bengal, Vol.I. Usha, Medinipore. p.298.

rocky uplands which are covered by infertile and dry laterite soil. Towards the east and south the surface became levelled down and swampy hallow is formed between the elevated country of the west and the comparatively high ground along the coast. There are several hills at an average height of 1000 ft. covered by Sal forest at the northwestern corner of this district but the rest is nearly levelled.¹⁶ Dharwarian rocks, rich in minerals extend from western part of Medinipur towards Singhbhum of Bihar and Mayurbhanj of Orissa.¹⁷

2.3 DRAINAGE

The rivers of Birbhum district originate from the Chotanagpur plateau and pass south-eastwards across the district (fig. 2.2). Mayurakshi and Ajay are two important rivers. Ajay has formed the southern boundary of this district. The Mayurakshi is a tributary of Dwarka. Dwarka and Ajay both are the tributaries of Bhagirathi. The other important streams are Hingla, a tributary of Ajay, Bakreswar, Brahmani and Bansloi. All these rivers have been originated from Santhal parganas.¹⁸

16. Imperial Gazetteer of India, Provincial Series, Bengal, Vol.I, Usha, 1984, Midnapur District, pp. 298-99.

17. S.C. Bose, Geography of West Bengal, National Book Trust, India, New Delhi, p.16

18. West Bengal District Gazetteer, Birbhum. p.11-14.

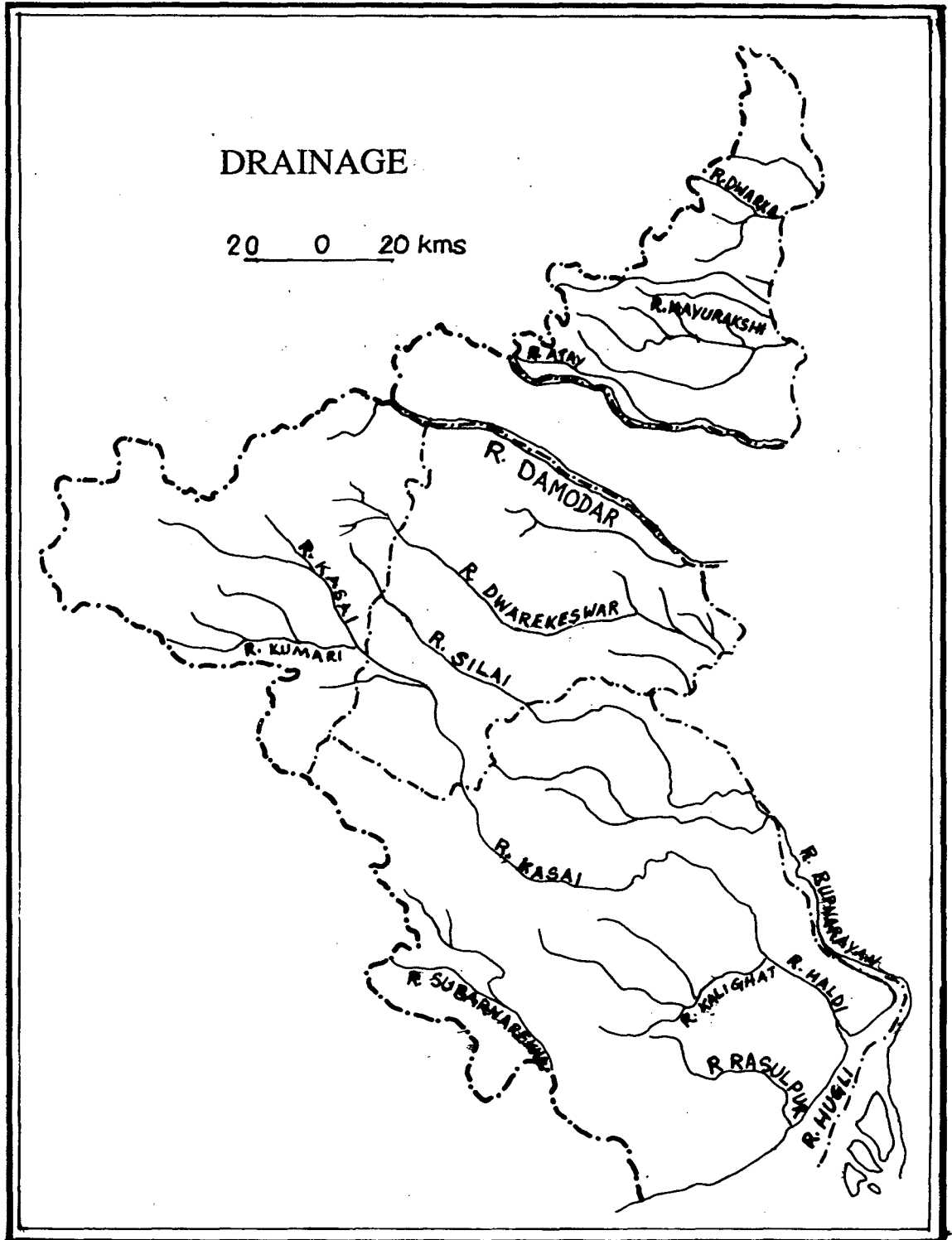


Fig: 2.2

The chief rivers of Bankura district are the Damodar (which forms the northern boundary) and the Dwarakeswar.¹⁹ 'Kasai' is flowing on the south of this district.

The chief rivers of Medinipur district are Hooghly and its tributaries i.e. Rupnarayan, Haldi and the Rasulpur. The Rupnarayan joins the Hooghly opposite the Hooghly point.

Silai, the chief tributary of Rupnarayan is flowing through the north of the district. The Haldi falls into the Hooghly near Sagar island. Kaliaghai and Kasai are the main tributaries of Haldi. Kasai or kangsabati rises in Purulia district and flows past Medinipur town. The Rasulpur rises in the South of the district and joins Hooghly near Kegeree. The Subarnarekha enters the district from Singhbhum and passes through western Medinipur.

Damodar marks the northern boundary of Purulia district. Most of the rivers have an easterly and south-easterly courses. Only Subarnarekha flows south and receives west and south-west flowing tributaries. Kasai is the master stream of the district which drains more than three fifth of the district. All the tributaries of Damodar, Subarnarekha, Dwarakeswar, Kasai, Kumari are non-perennial and subject to flood during rainy season.

19. West Bengal District Gazetteers (1985), Bankura. p-17.

Subarnarekha originated from Ranchi plateau. The main tributaries of Subarnarekha are Sapahi Nala, Salda Nala, Kelari moria Nala, the Karru, Sobna and Sankha Nala, Danka Garha Nala, etc. Gobai is one of the most important tributaries of Damodar, flowing in this district.

Dwarakeswar and its tributaries i.e. Dangra Nala, Kumarinala Futurari Nala, Dudhbharia Nala, Arkusa Nala are also important rivers of Purulia and its lower course is known as the Rupnarayan, flowing through Medinipur.

Silabati originates at Baragram on the Manbazar-Adra Road, flows south east to the Bankura district and then joins the Dwarakeswar on the border of Hugli district.

The Kasai, the most important river of the Purulia originated at Jabarban peak on the Ghoramara pahar. Girgiri Nala, Sahar Jhor, Goura Nala, Chagha Nala, Chimtiu Nala, Burudih Nala, and Sarabisi Nala are important tributaries of Kasai.

Kumari, originated from Baghmundi uplands with its tributaries i.e. Kumari Nala, Hanumanta Nala and Nagasai Nala is another important river of Purulia. The Bandaun thana is covered with large number of hills and several small rivulets which originate from this area itself.

2.4. CLIMATE:

The climate of the region is characterised by hot summer, high humidity and well distributed rainfall during the monsoon. The Winter prevails from middle of November to the end of February, followed by summer from March to May. The south-west monsoon lasts from June to September-October and the first of November constitute the post-monsoon season.

The average annual rainfall according to 1981 data varies between 1234 mm and 1428 mm nearly 80% of which occurs in monsoon months. The highest amount of rainfall occurred in July, about 401.4 mm. The rainfall decreases from eastern part towards the west and the variation of the rainfall from year to year is not large. On an average there are 69 rainy days in Birbhum, in a year.

Temperature begins to rise from March. May is the hottest month with the mean daily maximum temperature of 38.2°C and minimum of 26.3°C . During April to June, sometimes this district experiences the Temperature about 45 or 46°C . January is the coldest month in winter with mean daily maximum temperature of 25.2°C and minimum is about 10.6°C according to 1969 weather report. Sometimes temperature goes down to 6°C or 7°C with the passing of western disturbances spells in the winter months. The air

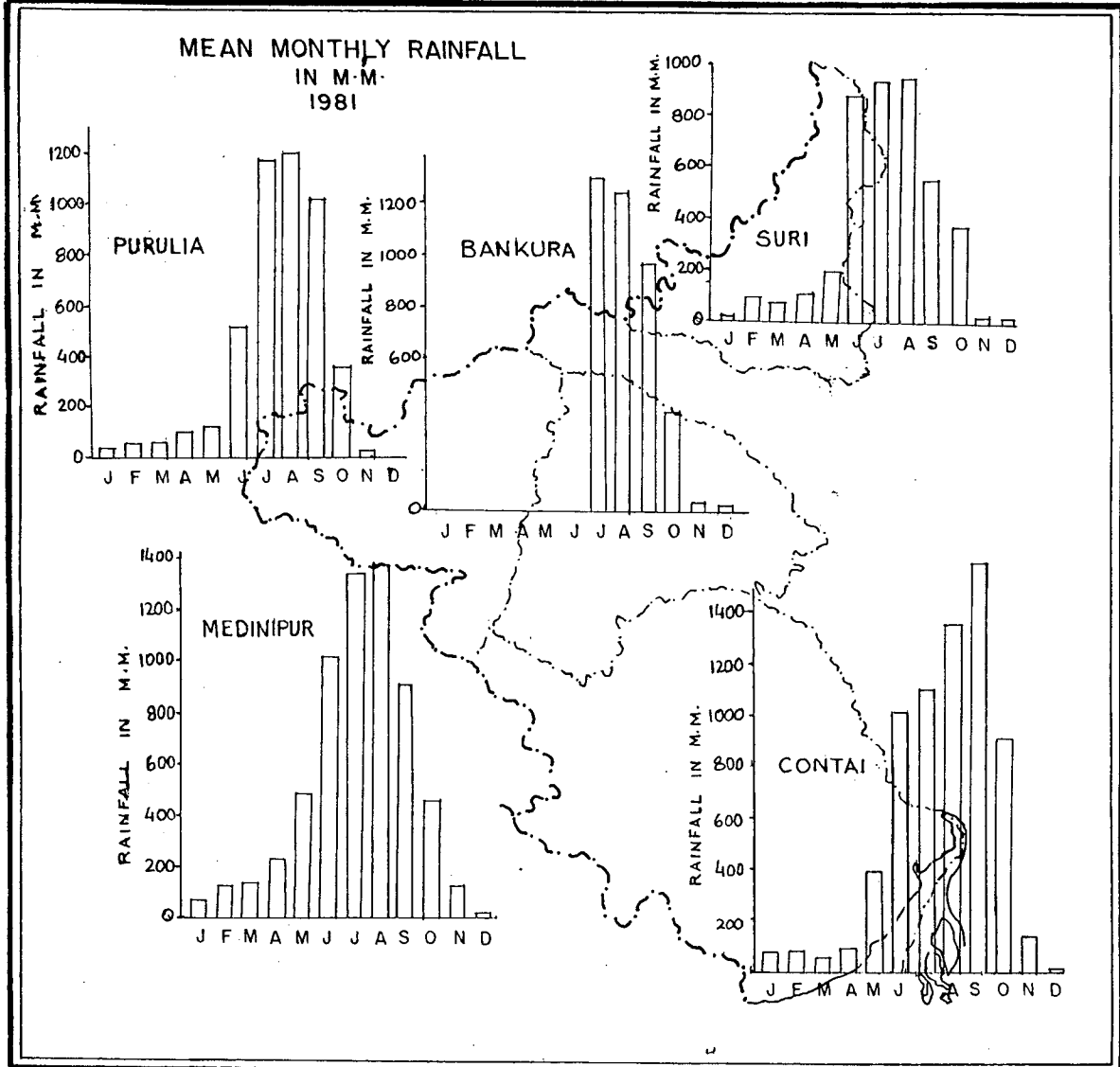


Fig. 2-3

is highly humid through the south-west monsoon season. The plateau region consisting of Bankura and Purulia districts are characterised by arid and dry climate. This part of the region is particularly noted for prolonged hot spell during the summer and rainfall varies between medium to scanty. Almost every year this region suffer from acute drought.

2.5. SOIL:

In Birbhum, mostly Laterite soil, Red soil and Alluvial soils are found. The Laterite soil can be seen in western part of Murarai subdivision, as well as in a narrow fringe across the central part of Nalhati, Rampurhat and Mahammad Bazar; such soils are also found in northern and central part of Dubrajpur, whole of Suri, western part of Bolpur, most of Illambazar and Sainthia eastern Khoyrasole and western Labhpur. Red soil covers areas which include Murarai, Nalhati, Rampurhat, Mayureswar, part of Mahammad Bazar, Sainthia and Bolpur thanas. Rajnagar, on the other hand, Khayrasole, Dubrajpur, northwestern corner of Suri, southwestern part of Illambazar are covered by gneiss. Some parts of Mayureswar, Sainthina, Nanoor, Bolpur and Illambazar are covered with Rajmahal riverine bed. Western part of Nalhati, Rampurhat, Mahammadbazar and northern part of Murarai have some characteristics of Gondwana formation. Eastern part of Nalhati, Sainthia, western part of Labhpur

GA

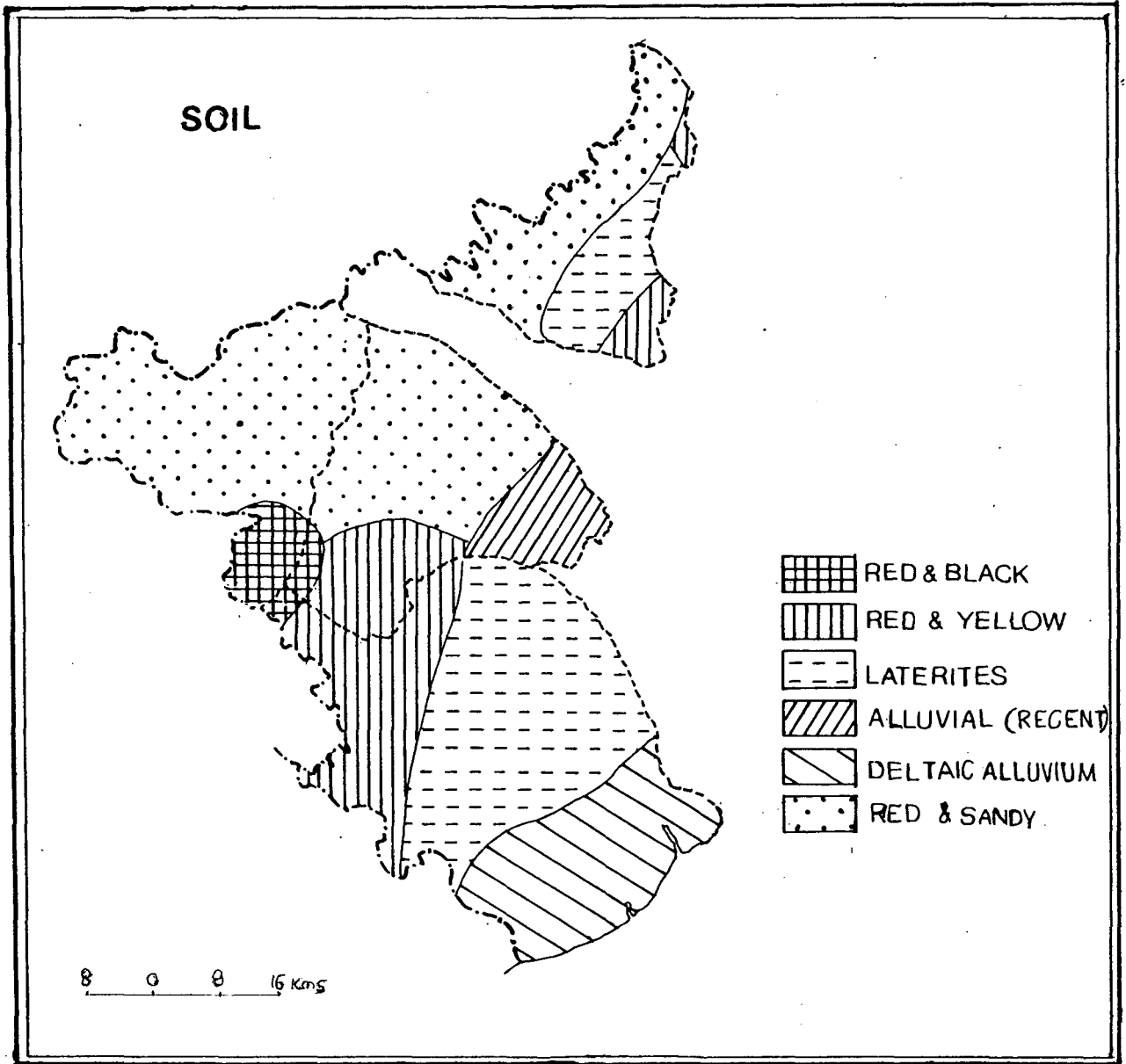


Fig: 24

and Nanoor are part of Rajmahal upland. Eastern part of Mayureswar, Labhpur and most of Nanoor have the characteristics of Rajmahal flat. The characteristics of Ganga upland can be seen only in Murarai police station. Soil erosion is one of the genuine problems of this district.

The district of Bankura is the connecting link between the chotanagpur plateau and alluvial plains of Bengal so the geological formation and characteristics of soils vary extensively. Geological formations range from the Archean era to the recent. The rocks of the Archean era are both of basic and acidic types. The greater portion of the district towards the east is covered by laterite and alluvium. While in the west the soil characteristics are that of metamorphic rocks like gneiss and schist, the rocks of panchet area belongs to Gondwana system.

Broadly speaking, Bankura has three distinct types of soils-Red, Laterite and Alluvial-extending from west to east of the district. The Damodar flat land as also the upland soils have their common source of origin and are classified under the general family name of Vindhyan alluvium. Generally six textural types of soils can be seen in this district, i.e. heavy clay, clay, clay loam, loam, sandy loam and sand.

In Purulia, Gondwana system both upper Gondwana and lower Gondwana is found along the Damodar river. Talcher series can be seen in Bandaun thana. The eastern most part of this district is covered by Laterite soil.

The older alluvium of pleistocene to sub-recent age can be marked at the northern base of Baghmundi hills near the eastern border of the district. While the newer alluvium of sub-recent to recent age also occur in patches along the Subarnarekha, Kasai and Damodar river.

The district Purulia is mostly covered by residual soils formed by weathering of the bedrock. Here the gneissic soil is predominant followed by Gondwana soils on sedimentary rocks and transition soils with varying depths in between these two. The soil of latter type are seen mostly in Manbazar, Bandaun and Jaipur. The district Medinipur consists of four types of soil i.e. (1) Laterites, (2) Red soil, (3) Alluvial soil, and (4) Coastal soil. In the north western part, a small portion is formed of Red soil. Laterite soil covers the western part of which has an undulating surface. These two types of soils are generally poor in organic matter.

Most part of the Medinipur is covered by alluvial soil; mainly Vindhyan alluvium. The southern most part of this district has Coastal soil which are formed from deposits

brought by tidal currents. The original deltaic branches of Ganga had been choked up because the head-water was cut off. As a result numerous tidal flats are formed. These are subsequently bound to prevent ingress of sea water. The parent materials are either rich in calcium or magnesium or consist of half decomposed organic matter. According to the chemical composition of the coastal soils, they are classified as saline, non-saline, alkali and degraded alkali soils.²⁰ The salient features of the distribution of soil in the region are (1) The southern part of Birbhum and coastal part of Medinipur are characterised by clay and clayey loam soil. The large number of rivers which flow with broad valleys help to extend irrigation facilities. (2) Plateau regions, on the other, hand have soils mostly sandy loam and reddish brown. Because of the peculiar porosity of the soil structure the surface water draining out during rains gets lost hindering agricultural development.

20. S.K. Gupta, (1970) "Soils of West Bengal" in A.B. Chatterjee and Pradip K. Mukhopadhyay, (eds.), West Bengal, Firma, K.L., pp. 54-55. .pa

2.6. CONCLUDING STATEMENT

The physical setting is dominated by the plateau dissected by numerous rivers which offer limited opportunity for intensive cultivation. However, the coastal plain and the marginal plains provide some fertile belt for cultivation. The predominance of latiritic and red soil further reduce the potential for agriculture. The rainfall is highly dependent on the monsoon and frequent floods and droughts are characteristic features of the region. The regional variation in relief feature, soil and water resources also imply differences in the economic potential in the region.

Chapter III

ECONOMIC BASE

3.1. INTRODUCTORY STATEMENT:

Environmental setting exerts influences on the nature of economic responses of the people living in a region. This chapter describes the economic base in the study area inhabited by both tribes and the non-tribes. The description includes the pattern of general and agricultural landuse, extent of irrigation, and mineral and industrial resource base. Most parts of Birbhum and Medinipur come under the ecological zone of West Bengal Plain while Bankura and Purulia fall in the plateau region characterized by arid and dry zone. The ecological variety influences to a great extent the distribution of various resources. While the former two districts are relatively fertile and agriculturally more developed; the latter two districts are gifted with wide and scattered forest, but devoid of any important industries.

3.2. GENERAL LANDUSE

About a fifth of the total area of Bankura and nearly 14 per cent in Purulia is under forest. The area under forest-cover is about 12 per cent in Medinipur district. However, agriculture constitutes a major resource base in

Birbhum and Medinipur, as indent from the fact that the percentage of net sown area in these two districts is 75.5 and 66 per cent respectively. The weak agrarian base in the remaining two districts is reflected by a relatively low proportion of net sown area, i.e. 55 and 44.7 per cent only. Even the intensity of cultivation is higher in Birbhum and Medinipur with intensity index being as high as 1.37 and 1.16 respectively. A lower proportion of the available land is used more than once in Purulia and Bankura having intensity index of 1.08 and 1.12 respectively (App. 1).

About 9 per cent of the area in Purulia is either fallow, barren or uncultivable waste. Such land account for a little over 3.5 per cent in Bankura. In the remaining two districts in the plains, the fallow, barren and uncultivable waste lands are negligible in their share. Permanent pastures and grazing land account for very insignificant proportion of the land in all the four districts (i.e. 0.01 and 0.08 per cent in Bankura and Medinipur respectively) indicating less dependence on livestock in the region. However a small proportion of land; i.e. 2.9 per cent in Medinipur, 1.82 per cent in Purulia, 1.59 per cent in Birbhum and 1.07 per cent in Bankura is devoted to miscellaneous tree crops and groves.

The overall picture at the district level shows an

overwhelming dependence of the people on agriculture, though its extent varies between the plateau and plain segment. The importance of forest and forest based economy seems to be relatively high in the plateau. The picture at the police station level brings out the variations in the nature of landuse more strikingly.

3.2.1. Area under Forest

All the four districts together have a very significant area under forest. Of them Bankura has the highest percentage share of forest area i.e about 20.47 per cent followed by Purulia (14.05 per cent). The forested areas account for only 12.64 per cent and 3.43 per cent in Medinipur and Birbhum. However, the area under forest shows enormous variations at the police station level.

Among the thirty-nine police stations of Medinipur as many as twenty one police stations do not have any forest at all while in nine police stations the share of forested areas is less than 10 per cent. In five police stations the area under forest varies between 10-30 per cent of the total area. The share exceeds 50 per cent only in Kharagpur police station.

Among fourteen police stations of Birbhum only three are devoid of any forest area. But most of the police

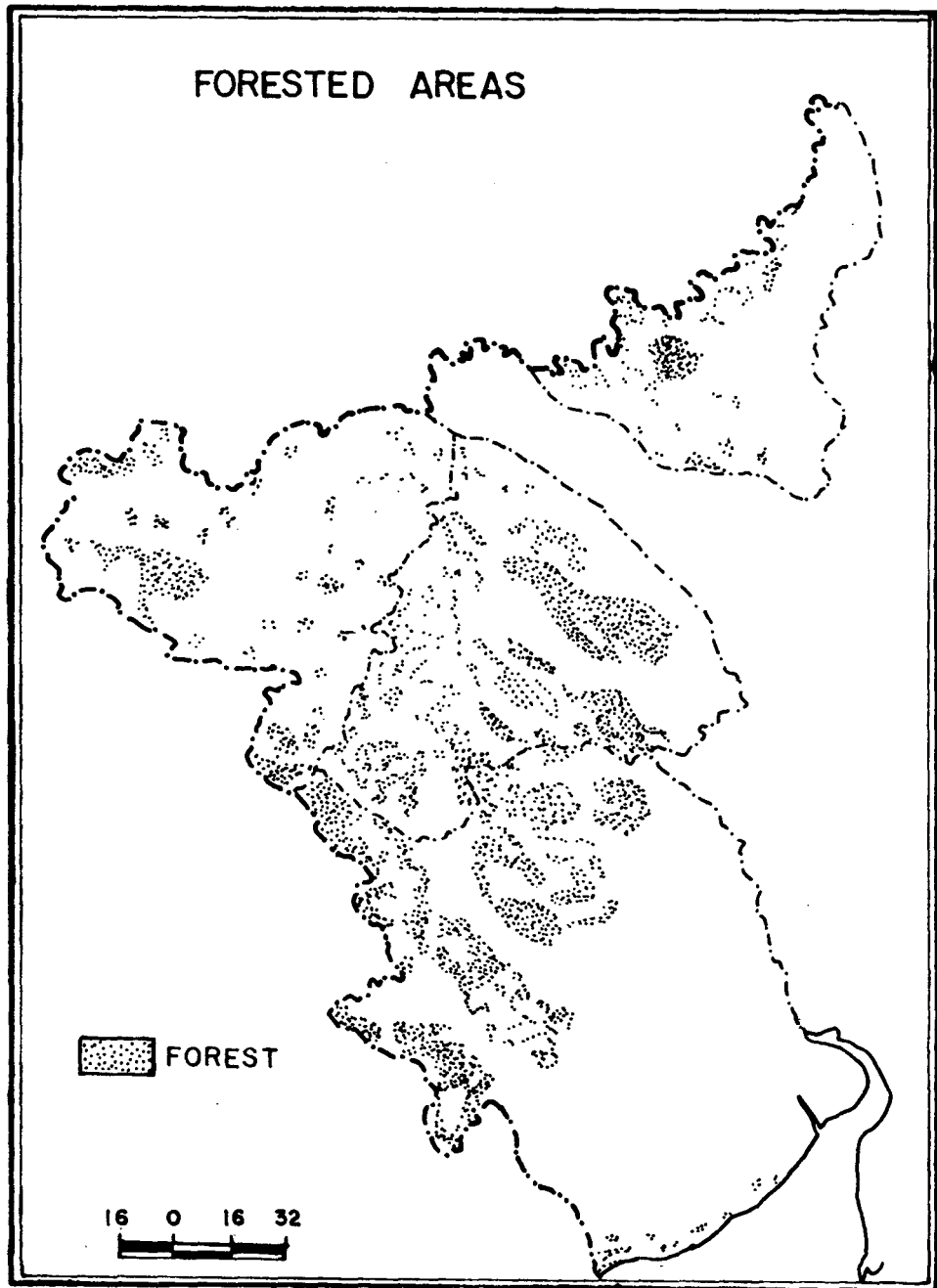


Fig 3.1

stations have a very low share of forested areas. Rajnagar is only one police station having above 10 per cent area under forest. Apart from these four police stations, ten police stations are having 0-10 per cent of land under forest.

Table 3.1.
PERCENTAGE OF LAND UNDER FOREST, 1981

Percentage to total Area	Number of Police Stations				
	Total	Birbhum	Purulia	Medinipur	Bankura
1 - 10	34	12	10	9	3
10 - 30	23	-	5	6	12
30 - 50	7	-	3	1	3
50 - 70	1	-	-	1	-
Above 70	1	-	-	-	1

The extent of forest land is relatively high in Bankura. As many as 12 out of 18 police stations have forested areas ranging between 10-30 per cent. In three police stations the share is as high as 30 to 50 per cent and in one of them the forested areas claim as much as 80.24 per cent of the total area.

In eleven police stations in Purulia, (out of eighteen) less than 10 per cent area is under forest. Six police

stations have 10 to 30 per cent of forest land. Baghmundi is the only police station which has more than 30 per cent forest area.

3.2.2. Culturable waste:

The proportion of culturable waste constitutes a very significant share of total land in the hilly and arid part. As much as 13.95 per cent area is culturable waste in Purulia and it is 9.76 per cent in Bankura. The area under culturable waste is relatively less in the other two districts i.e. 7.38 and 4.83 per cent in Birbhum and Medinipur which have large tracts in the plains.

At lower aggregative levels, the proportion of culturable waste land goes upto 28.53 per cent in the Barabazar police station in Purulia. In Birbhum, 9 police stations have less than 5 per cent of the area under culturable waste; 3 police stations in this district records as high as 24.65 per cent of its area as cultivable waste. Most police stations in Purulia, record culturable wasteland ranging between 10 to 20 per cent of the total area and it goes upto 20 to 50 per cent in three police stations. Barabazar in this district has the highest amount of culturable waste.

Table 3.2.

PERCENTAGE SHARE OF CULTURABLE WASTE LAND, 1981

Percentage to total Area	Number of Police Stations				
	Total	Birbhum	Purulia	Medinipur	Bankura
Below 5	34	10	1	16	7
5 - 10	35	3	4	21	7
10 - 20	14	-	9	1	4
20 - 50	4	1	3	-	-

In Bankura 7 police stations are having 0-5 per cent of culturable waste land and another 7 police stations are having 5-10 per cent of culturable waste land. Culturable waste covers 20-50 per cent of total area only in four police stations of this district. In Medinipur only Sankrail (14.84%) has a very share of culturable waste while 13 police stations are under the category of 0 to 5 per cent and 19 police stations are falling under the category of 5-10 per cent of culturable waste.

3.2.3 Area not available for cultivation:

According to 1970-71 data, the district-wise percentage share of area not available for cultivation shows that Birbhum ranks first with 15.95% of area not available for cultivation followed by purulia (14.66%), Medinipur (10.87%) and Bankura (6.00%).

Table 3.3

PERCENTAGE OF AREA NOT AVAILABLE FOR CULTICATION, 1981

Percentage to total Area	Number of Police Stations				
	Total	Birbhum	Purulia	Medinipur	Bankura
Below 10	9	2	2	4	1
10 - 20	41	9	5	21	6
20 - 30	28	3	6	10	9
30 - 50	8	-	3	3	2

Among all the police stations of these four districts, Neturia of Purulia district is having the highest amount of area not available for cultivation followed by Ramnagar of Medinipur (35.68 per cent). In other districts the highest amount of this land is occupied by Jaipur (33.67 per cent) of Birbhum and Labhpur (22.37 per cent) of Bankura.

In purulia, only two police stations are under the category of 0-10 per cent, five in the category of 10-20 per cent, six in the category of 20-30 per cent and three under the category of 30-50 per cent of area not available for of cultivation.

In Medinipur most of the police stations about 20 are in the category of 10-20 per cent. 8 police stations are occupying 20-30 per cent of this type of area; three are in

30-50 per cent and four police stations fall under the category of 0-10 per cent of area not available for cultivation.

In Birbhum, two police stations are representing the lowest category of 0-10 per cent, 9 police stations are in the category of 10-20 per cent and three are covering 20-30 per cent of total area which is not available for cultivation. Among all the police stations of Birbhum, Labpur is ranking first (22.37 per cent) in this aspect.

In Bankura, maximum number of police stations (i.e. 9) are in the category of 20-30 per cent, and 6 are in the category of 10-20 per cent. Only one police station, Jaipur is falling under the category of below 0-10 per cent while two police stations are representing the category of high percentage of 30-50 per cent.

3.3 AGRICULTURAL LAND - USE

The economy of the four districts in the study area is primarily agriculture. A very large share of the population is engaged in agricultural activities. However, the alluvial tracts of eastern part are more fertile than the uplands of the western part of the region.

In Birbhum, the alluvial tract to the east is well drained and extremely fertile, but the western upland is

arid and barren. Rice is the main crop and nine-tenths of the rice crop is of the variety known as 'aman', which is sown in May and June and reaped in November and December. Among the other food crops wheat, maize, gram and sugarcane are grown. Orchards and gardening activities are also important and mulberry is extensively grown in the east in connection with the silk industry.

In Bankura too the main economic activity is centred around agriculture. The alluvial soil in the east of the Bishnupur subdivision is fertile. Elsewhere, the valleys are generally rich and productive, while the higher lands are comparatively barren, and are for the most part covered with jungles.

The rice is the chief food crop of this district. By far the most important harvest is the aman, which is transplanted in July or August, and harvested in December. The Aus or early rice is sown in May and harvested in September. Maize, pulses etc. are grown in small quantity in higher land. Wheat, flax, cotton, sugarcane and oilseeds are also grown here. The local fertilisers, crowdung and compost are extensively used as manure. In which grow sugarcane and other exhausting staples, rotation is observed, sugarcane being generally followed by til, after which a crop of early rice is taken, followed by mixed mustard and peas.

In Medinipur the new alluvium in the east and south produces abundant rice crops. In the west rice is grown in depression, especially on terrace of slopes and maize, millets, oilseeds are grown. The staple product of this district is also rice which are divided into three types i.e. Aus, Aman and Boro. The other crops i.e. wheat, Barley, peas, linsed, mustard, sesamum, sugarcane, pan, mulberry, cotton, jute etc. Tabacco, turmeric are grown in very small quantity.

The barren upland in the western part of Purulia district is totally unsuitable for agriculture. The surface consists of a succession of rolling uplands with intervening hollows, along which the drainage runs off to join the larger streams produces crops in small quantity. The soil is for the most part composed of hard, dry, ferruginous gravel, which has been furrowed into countless small channels by the discharge of surface drainage; but many of the lower levels are filled with good alluvial soil.¹

The main crop of this district is rice. Aus and Aman two important varieties of rice are grown in plain while "Goradhan" is sown and broadcast in May on the tablelands

1. Imperial Gazetteer of India, Provincial Series, Bengal, vol.I, p.291.

and tops of ridges and is reaped in August². Other important cereals include maize, wheat, various pulses and peas, marua, bazra etc. Tobacco, cotton and sugarcane are also grown. Among oilseeds "rape" and "mustard" are grown. The manure is used for all crops, mainly the cowdung, ash, decayed leaves and grass, clay mud, etc. are used for this purpose. This district has infertile soil and unfavourable climatic condition.

3.3.1 Area Under Cultivation:

Among these four districts, the cultivated land is much below than 50 per cent in Bankura and it does not exceed 50 per cent in Birbhum. In Purulia and Medinipur, the area under cultivation reaches more than 50 per cent. Medinipur is having more than 70 per cent cultivable land and it is one of the most agriculturally developed districts of West Bengal.

The distribution of irrigated land is very uneven in these districts. e.g. being situated in arid zone Purulia needs irrigation for agricultural development but it has only 11 per cent irrigated cultivable land. Due to irrigation development through Damodar Valley Corporation,

2. Imperial Gazetteer of India, Provincial Series. Bengal, vol.II, p.380.

Mayurakshi project and Kangsabati project, Bankura and Birbhum have significant proportion of cultivable land under irrigation. Most of the part of Medinipur which is agriculturally developed are having alluvial soil for which rainfall is enough to grow the crops. The western part of this district needs irrigation but it does not have proper irrigation facility.

Though irrigation is well developed in Birbhum and most of the police stations have more than 50 per cent cultivable land under irrigation, but only in 5 police stations more than 80 per cent land is under cultivation. Khoyradole and Rajnagar have below 10 per cent land under irrigation but Khoyrasole has more than 80 per cent land under cultivation which means, the agriculture in this area is totally depended on rainfall.

In Bankura, most of the police stations are having 50 per cent land under cultivation except Taldangra police station. In Mejhia, Gangajalghati, Indas and Kotalpur exceeds 70 per cent.

Though the land under irrigation exceeds 60 per cent at district level only four police stations in Bankura i.e. Raipur, Simlapal. Taldangra and Kotalpur have more than 50 per cent land under irrigation, and below 10 per cent in Ranibandh, chatna, and Saltora.

In most of the police stations of Purulia the extent of cultivated land varies between 50 and 70 per cent. But it does not exceed 50 per cent in Purulia and Baghmundi. On the other hand Kashipur, Para and Santaldih the percentage of cultivated land exceeds 70 per cent.

Proportion of irrigated land in Purulia varies marginally across police stations. The percentage share of irrigated land exceeds 20 per cent only in Balarampur and Purulia Muffassil, 7 police stations are having Less than 10 per cent cultivated land is under irrigation in seven police stations.

In Medinipur, most of the police stations have high percentage share of land under cultivation but the level of irrigation is poor. Only Tamluk and Panskura have more than 50 per cent of the cultivated land under irrigation while 19 police stations have less than 10 per cent land under irrigation and 6 police stations have irrigated land ranging between 10 per cent to 20 per cent. Irrigated land in other police stations account for 20 to 50 per cent of total cultivated area.

Medinipur has the highest percentage share of area under total food crops followed by Birbhum, Bankura and Purulia. Purulia has 280 thousand acres while Birbhum and Bankura have more than 400 thousand acres under food crops.

Most of the area under food-crops produce cereals only. Very little area under crops is devoted to the production of pulses. All the four districts are mainly rice growing.

The yield of foodcrops is the highest in Birbhum i.e. 1638 kgs/hectare followed by Bankura (1520 kgs/hectare), Medinipur (1330 kgs/hectare) and Purulia (1281 kgs/hectare). The yield of total foodcrops also follows the same trend. The yield of rice is maximum in Birbhum followed by Bankura, Medinipur and Purulia, varying from 1300 kgs/hectare to above 1600 kgs/hectare. The yield of other cereals and pulses is uniformly low in all the four districts.

The total production of foodcrops is around 360 thousand tonnes in Purulia and nearly 1300 thousand tonnes in Medinipur. The production is about one half in Bankura and Birbhum. The production of wheat, and other cereals is also low in Purulia and Medinipur while is relatively high in Birbhum and Bankura. The production of pulses is very low in Bankura and Purulia.

In terms of area, yield and production under different food crops, Purulia lags behind substantially in field of agriculture. This is mainly due to its physiographic conditions which are not suited for intensive agriculture: Near total dependence on rainfall with little irrigation facilities is another factor. Extensive soil erosion,

presence of dry river beds, high-plateau surface and presence of lateritic and red soils do not permit much agricultural development in this area. In Birbhum and Medinipur the agricultural situation is relatively better compared to the other two districts.

3.3.2 Recent Development:

In West Bengal, the state government is taking various measures to increase agricultural production by providing infrastructure and adopting modern techniques and proper agricultural policies. Increase of production mainly depends on the productivity of available cultivated land. In 1988-89 area for Aman rice increased by 2.8 per cent, while productivity recorded an increase of 19.7 per cent and production went up by 23 per cent as compared to the previous year, 1987-88. Increase in the productivity of Aus rice is all time high in 1988-89. As compared to that of the previous year, the productivity increased by 40 per cent and total production has gone up to 10.7 lakh tonnes. It is necessary that various agricultural development activities should be implemented in its totality to reach ultimate goal of increasing agricultural production. The components of this total developmental programme which deserves special mention are continuous agricultural research, studies on agricultural economies, monitoring the survey, extension and

publicity, soil and water conservation, economic development of marginal farmers by growing high value crops etc. The consumption of fertilizer has increased by 13 per cent during 1988-89 over 1987-88. The farmers have become more conscious of balanced use of fertilisers. Special programmes have been implemented in the drought prone areas of Purulia, Bankura and Medinipur. Adaptive Researches to innovate specific location and farmers, resource-based technology are in progress in different agro-climatic regions.

3.4. RECENT DEVELOPMENT IN IRRIGATION

3.4.1. Major Irrigation Projects:

The net cultivable area in the state of West Bengal is estimated to be nearly 60 per cent of the total geographical area of the state. The ultimate irrigation potential is estimated to be 61.10 lakh hectares, of which a total area of 23.10 lakh hectares can be brought under irrigation through the major and medium projects.³ The major and medium projects in the study area include the Kangsabati project, Mayurakshi project, Damodar valley project and Subarnarekha Barrage project.

3. 12 years of Left Front Govt., Department of Information and Cultural Affairs, Gove. of West Bengal, p.66.

The Kangsabati Reservoir project is nearing completion. Water could be supplied for kharif irrigation in an area of 2,73,500 hectares during 1988. The canal system of this project irrigates parched land of the districts of Bankura and Medinipur and passes through porous soil. So the modernization of the project to minimise the loss of water during conveyance by lining the canal system is necessary and conserving water resources, tapping new water sources from the tributaries of the Kangsabati and for conjunctive use of ground and surface water within the command of this project will be helpful for that. Introduction of rotational irrigation, construction of field channels with controlling arrangement and on-farm development also are the elements of modernization of the project. Planning Commission has approved the modernisation scheme. Considering the urgent need to conserve water, Rs.120 crores have been provided for essential works.⁴

The Mayurakshi irrigation project with the achievement of target potential of 250,860 hectares is complete. During the year 1988-89, water for kharif irrigation has been supplied to the full project command area of 2,22,000 hectares. The post kharif availability of water in Mayurakshi Reservoir being satisfactory, Rabi and Boro

4. Ibid., p.66-67

the plain and agriculturally prosperous tracts. How exactly this transition takes place, provides an interesting arena for investigation as it is not only a transition between tribal concentration and non-tribal concentration, but a transition also between two distinct social set-ups, modes of economy and cultural worlds.

While this transition at broad aggregative levels is marked by distinct boundaries at lower levels, the morphology of the tribal non-tribal boundaries assumes different forms which is the subject matter of investigation in this dissertation.

The present study makes an attempt at understanding the nature of morphology of tribal/non-tribal boundaries at the lowest unit of reference, i.e., the village in the four districts of West Bengal, namely, Birbhum, Bankura, Purulia and Medinipur. The pattern of distribution of the Scheduled Tribes has also been analysed at the thana and village levels and various zones of their concentration have been identified. The nature of tribal/non-tribal boundaries has been analysed with the help of a series of village traverses which reveal the diverse nature of the tribal-non-tribal transition in space.

In order to study the problem of tribal-non-tribal boundary, the state of West-Bengal has been selected. The

irrigation programmes have been undertaken for 16,500 hectares and 13,200 hectares respectively.⁵ Barrage and irrigation system of the Damodar Valley project is in advance stage of completion.⁶

The Subarnarekha Barrage project in the district of Medinipur has been set off. The initial organisational set up has been instituted under a separate chief Engineer. The scheme at an estimated cost of Rs.226.82 crores, envisages for creation of irrigation potential of ,30,000 bectares in the district of Medinipur.⁷

3.4.2. Medium Irrigation projects:

Extension of irrigation facilities to a greater area through medium irrigation projects is being continued with the ongoing projects in Purulia, Bankura and Birbhum. During the year 1989-90, programme of work for 25 medium irrigation schemes has been included in plan programme. The projected total irrigation potential of these medium irrigation schemes come to 55,000 hectares. Efforts have been made for the completion of canal systems in 1989-90 of different irrigation schemes where head works have been

5. Ibid. p.67

6. Ibid.p.67

7. Ibid.,p69.

completed to create further irrigation potential to the extent of 3,000 hectares.⁸

3.4.3.Minor irrigation programme:

Minor irrigation is playing a very important role in increasing agricultural production in the state of West Bengal. All projects having individual culturable command area upto 2000 hectare fall under minor irrigation category. Ultimate irrigation potential of the state has been assessed as 61 lakh hectares, out of which 38 lakh hectares are to be created through minor irrigation schemes. Out of 38 lakh hectares, 25 lakh hectares are to be availed through ground water resources and 13 lakh hectare will be from surface water.⁹

Under the minor irrigation programme 25,33 and 50 per cent subsidy is being given to the marginal, small and tribal farmers¹⁰ respectively for installation of Minor Irrigation Schemes in all the block of the state. In 220 blocks of 12 districts, 20,900 shallow tubewells are to be provided during 1989-90.¹¹ The IDA (World Bank) assisted

8. 12 years of Left Front Gove. in West Bengal, p.69.

9. Ibid.p.73.

10. Ibid.,p.75

11. Ibid.,p.75.

West Bengal Minor Irrigation Project envisages installation of 1200 heavy duty tubewells, 900 medium duty tubewells, 1800 low duty tubewells, 5400 shallow tubewells, 10000 open dug wells and modernisation of 200 lift irrigation schemes.¹² The West Bengal State Minor irrigation corporation Ltd. owns 449 deep tubewells of which 392 are complete in all respects.¹³

Apart from all these, the command Area Development Programme will continue in the three major irrigation commands of Kangsabati, Mayurakshi and Damodar Valley. The programme envisaged construction of field channels covering 22,000 hectares during 1988-89. As in the year 1988-89, a provision of Rs.155 lakhs in the state sector and an equal amount in Central Sector have been made for 1989-90 with a target of covering 22,000 hectares by field channels.¹⁴ Irrigation was 135936 hectares during 1976-77 which increased to 158206 hectares in 1980-81. In Purulia during 1976-77 the area under canal irrigation was 1961 hectares only and it increased to 19607 hectares in 1980-81.

12. Ibid.,pp.75-76.

13. Ibid.p.77.

14. Ibid.,p.79.

In the following tables the amount of land under potential crops irrigated in these four districts are given:

Table 3.4

CROPS IRRIGATED IN WEST BENGAL BY DISTRICT 1967-68
(in thousand hectares)

District	Rice	Wheat	Other Cereals and pulses	Sugar-cane	Other food crops including fruits and Vegetables	Other non-food crops including tobacco
Birbhum	234.5	8.0	4.8	2.9	7.7	0.2
Bankura	136.7	1.4	0.9	0.9	2.6	0.0
Medinipur	262.4	0.2	14.5	0.7	9.3	0.0
Purulia	70.3	0.0	3.4	0.0	0.8	0.2

Source: Statistical Abstract, West Bengal, 1976-77.

3.5 MINERAL RESOURCES:

The mineral deposits in the area under study is not very large, though, a variety of such resources are found in the region, particularly in the plateau. The mineral deposits in the Purulia district include China clay, coal, copper ore, feldsper, fluorite and limestone etc. and small quantity of asbestos, calcite, fireclay, garnet, graphite ilmonite, pyrites, rutile etc.¹⁵ China clay is obtained in

15. West Bengal District Gazetteer, Purulia district, 1985, p.195.

Raghunathpur, Purulia, Jhalda and Baghmundi. Coal is also available in Ranipur, Perbelia, Hirakhun, Bhamuria and Neturia of the Neturia police station on the north-east corner of the district.¹⁶ A copper-bearing zone in this district is found in Tamakhun of Manbazar police station, and also it is found in Hatiramgora which is situated at further south. Fluorite is available in Belamu Hills of Jhalda. Limestone deposits of about 20 million tonnes is found in Jhalda with low magnesia content. The small deposit of pure limestone, suitable for chemical industries is found at Gandhdi.¹⁷

Birbhum district is quite rich in mineral resources. The sandstone, conglomerate and pebbles are available here which are used as building materials. Laterite available abundantly in this district is also another cheap building material. Rajmahal trap rocks are quarried near Nalhati, Murarai and Rajgram railway station.¹⁸ Small amount of gold is found in tertiary pebble beds of Birbhum.¹⁹ Birbhum has small extension of Raniganj coalfield across Ajay. The

16. Ibid.

17. District Gazetteer of West Bengal, Purulia, 1985, p.196.

18. Geological Survey of India. p.101. Mentioned in District Gazetteer of West Bengal, Birbhumi- 1975.

19. A Hunday & S. Banerjee, Memoirs of the Geological Survey of India, vol.97, Delhi, 1967, p.101.

principal collieries in the district are Bhadulia, Gangaramchak, Kankartala, Russa, Kasta Bengal and Keewas Khola. Iron ore in this district is obtained from magnetite of Namgulia, also from timonite and Hematite of the Rajmahal trap to the north of this district.²⁰ Calcium carbonate is available from Kankar and soils of Trans Ajay coalfield. Small amount of quartz and Felspar are available near Raspur and Kadirganj in Mahammad Bazar thana. These are used for pottery making industry. The sandstone in the Tangsuli basin near Suri may be investigated with a view to exploiting it for the glass industry. Terracotta plaques of Birbhum are famous from historical period. Good quantity clays are available in Muhammad Bazar, Kumarpur, Khorla, Angargaria, Dewanganj, Deocha, Chaknurai etc. West of Rampurhat, contains clay deposits. A group of sulphurous springs are situated on the right bank of Bakreswar stream, south of Tantipara village.

Important mineral deposits of Bankura district include coal, Wolform and China clay. Coal is available in the extreme north of the district. Worform is available at Chhendapahar in Ranibandh and Khatra thana. Abundant deposits of china clay occur in Khatra thana, Raipur thana

20. Ibid., p.37.

and at Monipur 32 km. south of Bankura town. In a hill near Ambikanagar of Ranibandh thana deposits of white clay are found.²¹

Some other mineral resources are also available in this district in very small amount viz. copper, Garnet, limebearing Kankan, mica-bearing Pegmatite, Galena, quartzite etc which are mainly available in Ranibandh, Khatra and Raipur.²²

The mineral resources of medinipur district are not much of consequences. Only laterite and limestones are quarried in some areas. Alluviul gold, iron and sopetones occur in small quantities in this district.²³

3.6. INDUSTRIES

The region does not have any major industries and most of the industrial activities are in the household sector, or are agro-based. Rice mills are very important agro-based industry in Medinipur district. Excellent mats are manufactured at Raghunathbari, Kasijora and Narajol. Pottery is made in the neighbourhood of ghatal for use in the metropolis. Brass and copper made utensils are made in

21. Gazetteer of India, West Bengal, Bankura, 1968, p.38.

22. Ibid., p.39.

23. Imperial Gazetteer of India, Provincial Series, Bengal, vol.1, 1984, p.306.

Medinipur town. Bell-metal ware is made in Kharar. In the north of the district Tasar silk is manufactured. Weavers are to be found in Chandrakona and other places, but the industry is dying out in competition with machine made imported fabrics. In Guruli of Ghatal subdivision a Lyons firm established silk factory. Earlier salt was used to be prepared in the coastal area but its manufacture has now ceased.²⁴

Purulia is mainly an agricultural district. Coal mining constitutes the major large scale industry. Main industrial activities in the small scale sector are lac cultivation, tassar cultivation, weaving, brass and bell-metal utensils, bidi making and cutlery. Tasar-silk inodustry is located at Raghunathpur and some other places. The decline of forest has resulted in the unavailablity of cocoons so the raw material had to be brought from a distance at a higher cost. The bulk of outturn is supplied in Barddhaman and Calcutta. At present near about 300 units in the curtlery industry can be found in Jhalda, Jaipur and Purulia police station. Brass and Bell-metal industry constitues one of the important household industries in this district. Food processing, bidi-making, chemicals and

24. Ibid.,pp.306-7.

chemical products and manufacture of metal products and some other main industrial activities are found all over the districts.

There are no large scale industries in the district of Birbhum except that of Mayurakshi cotton Mills Ltd. which is located at Panchra. Paddy husking industry is the most important industry in rural areas of Birbhum. Firebricks and potteries are made in Khairakuri ceramic industries private Ltd., Feldsper and china clay are taken from Rajmahal, Barakar, Kasimbazar etc. for this industry, quartz are supplied from Patel Nagar Minerals and Industries Private Ltd. which is situated in Man Bazar Block, enriched in minerals. Some units of Bidi industries are located at Illambazar Mahammad Bazar, Bolpur, Nutun Amda, Lara, Dubrajpur, Murarai etc. cottage industries including carpentry, bamboo-cane products, pottery, weaving of fish nets, cutlery, mat-making, gur-making manufacturing of dairy products are located in several places of this district.

Most of the manufacturing centres in Bankura are located at Vishnupur and Sonamukhi. Important industries in this district include brass and bell metal work, pottery making, cutlery manufacturing, fabrication of couch shell articles, leather work, Amburi tobacco preparation and production of famous terracotta plaques for temple

decoration. Silk weaving is the most important among the old time industries. Sonamukhi, patrasayer in Bankura were very famous for this. A sericulture nursery is located in Vishnupur which is very famous for special silk sarees called 'Dhupchaya'. Tassar weaving industry which was very extensively developed has declined rapidly because of the improvement of silk industries and high cost of Tassar products. Textile Industry is also developed in this district. Lac industry also has been developed in Sonamukhi and Khatra of this district. Brass and bell-metal utensils and various other articles are manufactured on a large scale at Bankura, Vishnupur, Sonamukhi, Parasayer, Kenjakura, Ajodhya, Lakshminagar, Madanmohanpur and Mayanagar. A special alloy, called 'Varuna' are made in Vishnupur and this place is also specialised in producing plates, bowls and tumblers etc. Another rural industry, pottery making is very important mainly in sonamukhi and panchmura where the potters are engaged in the craft of producing terracotta horses, elephants, tigers etc. Other small industries like lantern industry and leather industry also have grown up in various places of Bankura in which rural people mainly of low castes are engaged.

3.7. CONCLUDING STATEMENT:

Like many other tribal areas in the country, the environmental conditions are not much suited for intensive

agriculture in the study area. Particularly, the difficult topography permits a limited development of agriculture only on the manageable slopes and with terracing. In some parts Jhum or shifting cultivation is still a dominant practice. Lack of sufficient irrigation facility and the vagaries of monsoon causing floods and droughts further limit the agricultural potential of the region under study.

Forest as an economic base is also not sufficiently large and is fast depleting. It is being protected by Government reducing its importance as a source of livelihood. Mining and industrial activities too have not been well developed to provide an economic base to the people living in this region.

Thus, despite a weak agrarian base, agriculture constitutes the economic mainstay of the tribal people in the four districts who in most cases are at a subsistence level. For most part a single crop i.e. rice is cultivated. Even many of the primitive tribes such as Birhor and Lodha who were not traditionally agriculturists are increasingly adopting agriculture as the principal means of livelihood. This is supported by collection and gathering activities in areas which contain sufficient forest land. in other.

In the forested parts of Purulia, Bankura and north-western Medinipur, collection of tendu leaves and lac

constitutes a major source of living for the tribes. Employment in Bidi industry, basketry and rope making constitutes supplementary economic activity particularly that of Mahalis and Birhors. However, much of the collection economy is losing out as more and more areas are depleted of forest.

Animal husbandry and stock rearing is negligible as indicated by lack of grazing land.

Table 3.5

PERCENTAGE DISTRIBUTION OF ST WORKERS IN DIFFERENT INDUSTRIAL CATEGORY

58

	% of workers to total po- pulation	% of Culti- vators	% of agri- cultural labourers	% of H.H.I manu- facturers	Others	%of mar- ginal workers
Medinipur	44.21	29.33	64.20	1.70	4.77	5.33
Bankura	41.91	47.98	44.30	1.36	6.36	8.01
Purulia	38.58	55.32	34.80	1.92	7.96	9.73
Birbhum	44.05	30.34	62.99	1.00	5.61	-
W.B	41.48	31.04	48.73	1.05	19.18	41.76

Source : Census of India, West Bengal. District census Hand Book, 1981.

While poor soil condition, arid climate and difficult terrain coupled with lack of irrigation and knowledge of modern techniques of agriculture in most parts keep agriculture at subsistence level, the occupational structure of the tribes shows that most of them are actually agricultural labourers. This indicates extent of landlessness prevailing among them. It is particularly so in the plain areas. For example, in Medinipur and Birbhum, the percentage of agricultural labourers amounts to 64.2 per cent and 62.99 per cent respectively. On the other hand, the plateau districts of Bankura and Purulia have only 44.3 per cent and 34.8 per cent of all workers employed as agricultural labourers respectively. These two districts have a relatively high percentage of workers in "others" category which includes collection and gathering as well as mining activity. The share of these activities is 7.96 per cent and 6.36 per cent in Purulia and Birbhum districts respectively. In any case, over 90 per cent of the Scheduled Tribe workers in all the districts are engaged in agriculture.

Chapter - IV

EXPLORING THE TRIBAL-NON-TRIBAL BOUNDARY:SPATIAL DISTRIBUTION OF TRIBES

4.1 INTRODUCTORY STATEMENT

An attempt has been made to identify the patterns of spatial distribution of the tribal population in the four districts of West Bengal. It has been assumed that the village level patterns offer the clues to the nature of transition in space between the tribal and the non-tribal segments of population. In fact, the initial patterns of mutual exclusivity have been modified with the passage of time into a more complex picture of overlap or interpenetration. The traditional tribal homelands have been penetrated by the non-tribal peasant communities who are now living in close proximity to the primordial tribal settlements. Although the village level data obliterates the real nature of this transition, an attempt has been made to use the percentage share of tribes in the village population as an indicator. The nature of transition reveals the morphology of a possible tribal non-tribal boundary.

Population composition in West Bengal presents a very heterogeneous picture in terms of ethno-religious aspects. The state has a very significant segment of its population

consisting of the Scheduled Castes and Scheduled Tribes.

The share of Scheduled Tribes in the total population of the state is 5.63 per cent according to 1981 census which is lower than the national average. However, the state shows a very high concentration of tribal population as evident from its share of nearly 5 per cent of country's total tribal population.

At the district level, the extent of variation in share of tribal population is extra-ordinary. Medinipur, in the southern part of the state, which is a continuation of the tribal belt of Mid-India has the largest concentration (17.55 per cent) of the state's total tribal population followed by Jalpaiguri (16.02 per cent) and Purulia (11.35 per cent) in the adjoining areas. The urbanised districts of Calcutta and Howrah account for only an insignificant proportion of state's total tribal population, the share being as low as 0.14 per cent and 0.24 per cent respectively.

In terms of the share of scheduled tribes in the total population, Jalpaiguri ranks first with over one-fifth (22.2 per cent) of its population comprised by tribes followed by Purulia (18.79 per cent).

Four districts namely, Birbhum, Bankura, Medinipur and Purulia have been selected for the purpose of the study of the distribution pattern of tribal population. These districts form the eastern-most part of the Mid-Indian tribal belt, extending from Rajasthan and Gujarat through Maharashtra, Madhya Pradesh, Bihar, Orissa to West Bengal. In West Bengal the continuation of the Mid-Indian belt in western and southern districts of the state and the continuation of north-eastern tribal belt in northern districts of Darjeeling and Jalpaiguri can be seen side by side. However, these four districts share certain similar characteristics of the adjoining areas of Bihar and Orissa. In these districts the tribal villages are mainly clustered in the isolated hilly and forested tracts.

4.2 DISTRICT LEVEL PATTERNS:

The total population of these four districts of West Bengal is 13,067,241 out of which 1,282,975 i.e. 9.81 per cent are Scheduled Tribes. The region, however, accounts for as much as 42 per cent of tribal population of the state. The district-wise break-up is as follows: Medinipur 17.55 per cent, Purulia 11.38 per cent, Bankura 8.16 per cent and Birbhum 4.72 per cent.

According to the numerical strength of tribal population in these four districts, Medinipur ranks first

(538,877) followed by Purulia (348,375), Bankura (250,590) and Birbhum (145,133).

Out of the total tribal population of the study area, Medinipur's share is the highest, around 42 per cent followed by Purulia (27.15 per cent), Bankura (19.53 per cent) and Birbhum (11.31 per cent).

The district-wise distribution (Table 4.1) of the tribal population shows that Purulia has the highest share of scheduled tribes in its total population (18.79 per cent) followed by Bankura (10.55 per cent), Medinipur (7.99 percent) and Birbhum (7.39 per cent). The pattern of distribution gets further accentuated at the taluka/thana level.

Table 4.1
Districtwise Distribution of Scheduled
Tribe Population - 1981

Name of District	Total Population	Tribal population	Percentage of S.T. to total population	Percentage of S.T. to total population of the state
Birbhum	2,095,829	145,133	6.92	4.73
Bankura	2,374,815	250,590	10.55	8.16
Purulia	1,853,801	348,375	18.79	11.35
Medinipur	6,742,796	538,877	7.99	17.55

4.3 THANA LEVEL PATTERNS:

The extent of variation in the share of tribal population at the next aggregative unit, i.e. thana police station is very high and it reveals the tendency of clustering of tribal population more clearly (Table 4.2). The four districts have 87 police stations. The scheduled tribes account for more than 50 per cent of the total population in one police station (Bandaun) of Purulia district. In the next percentage range of 30 - 50 fall 6 thanas i.e. Manbazar, Balarampur, Santuri of Purulia district, Ranibandh of Bankura district and Binpur and Nayagram of Medinipur district. In as many as 17 thanas the proportion of Scheduled Tribes range between 20 per cent to 30 per cent.

Table 4.2

THANAWISE DISTRIBUTION OF TRIBAL POPULATION

Categories of percentage Share of Tribal Population	No. of police station	Percent- age of Police Station	Tribal po- pulation covered by Police Station	Percentage of Tribal Popula- tion to the total Tribal Population of the Region
Above 50%	1	1.14	29745	2.31
30% to 50%	6	6.82	246265	19.19
20% to 30%	17	19.34	484120	37.73
10% to 20%	16	18.18	272398	21.23
5% to 10%	14	15.90	155503	12.12
Below 5%	33	37.5	88825	6.92

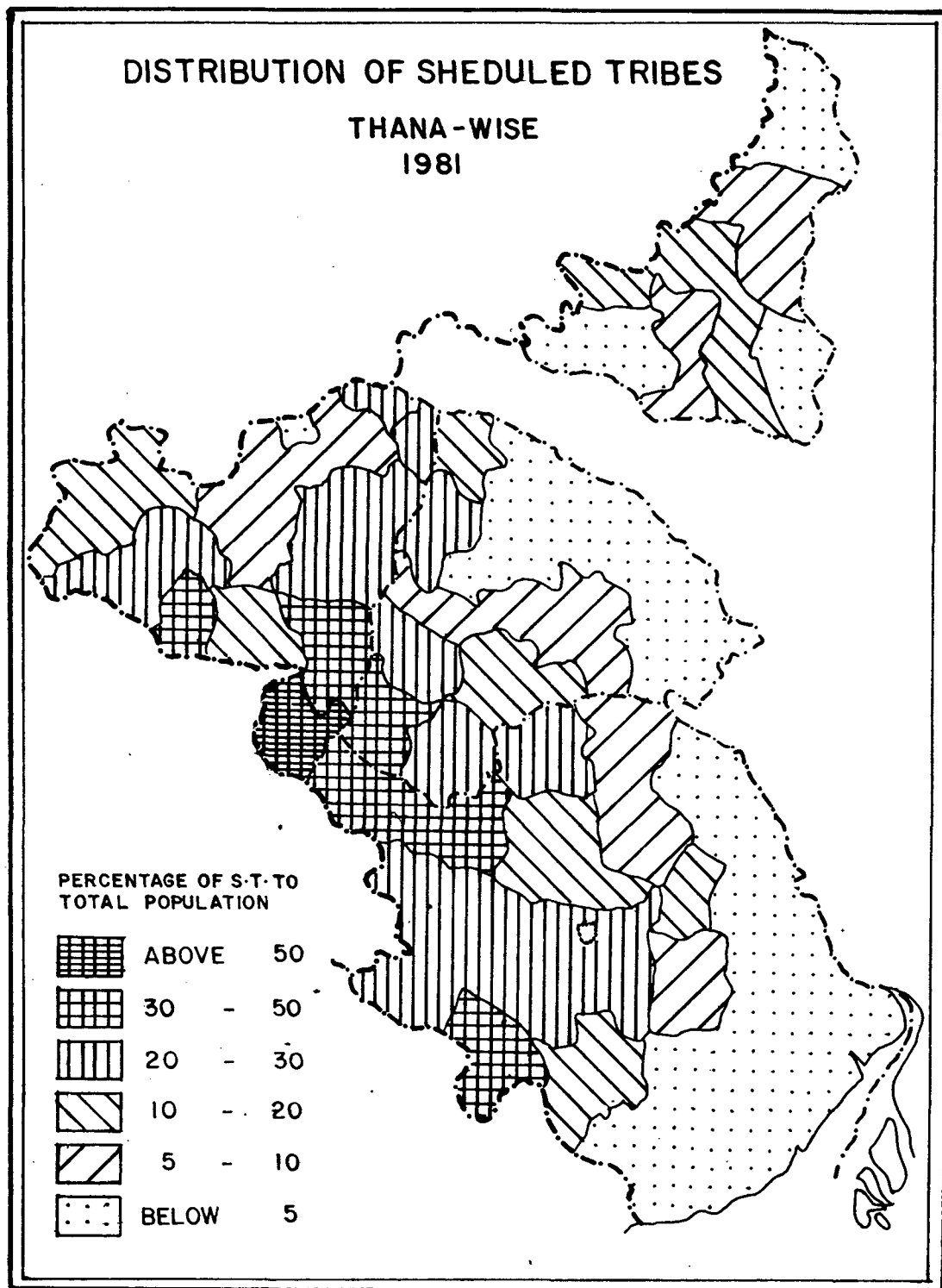


Fig-4.1

In all eight thanas are concentrated in Medinipur district which show a low concentration of tribal population at the thana level. The remaining 9 thanas are distributed in Purulia (6 thanas) and Bankura (3 thanas). The proportion of tribes in the total population ranges between 10 and 20 per cent in 16 police stations. These thanas are distributed in all the four districts almost in equal numbers. The tribal population accounts for a very low share of the total population in 14 thanas. These include 4 thanas of Birbhum, 3 in Purulia, 3 in Bankura and 4 in Medinipur. A very large number of thanas numbering 33 have very low concentration of scheduled tribes. Most of these lie in the plain areas of Medinipur and Bankura.

In the southern part of Purulia and Bankura, and north-western corner of Medinipur which is a part of the hilly and forest tract form the core area with a very high percentage (more than 30 per cent) of tribal population (Fig 4.1). This is skirted by next range of concentration with the scheduled tribes accounting for 20 per cent to 30 per cent of the total population. None of the police stations in Birbhum has tribal population exceeding 20 per cent. Most of the police stations with very low concentration of Scheduled Tribes in their total population (i.e. below 5 per cent) are situated in agriculturally favourable plain areas of Birbhum, eastern Bankura and eastern Medinipur. The

police station with marginal proportion of tribal population are mostly situated in the Central part of this region, forming a narrow belt, extended in north-south direction.

The percentage of tribal population to the total tribal population at thana level lends further evidence of the pattern of clustering of tribal population. Table shows that over a fifth (21.5 per cent) of the tribal population is concentrated in only about 8 per cent of the police station. Added to it is another 37.73 per cent of tribes in only 19.34 per cent of the police stations. On the other hand 37.5 per cent of the police stations supports only 6.92 per cent of the tribal population. About a fifth of tribal population is concentrated only in a few police stations while their share is insignificant in a very large number of police stations.

4.4 VILLAGE LEVEL PATTERN

As many as 9,919 villages or 53.07 per cent out of the total 18,689 inhabited villages of the region have scheduled tribes within their population (Table 4.3). These villages are distributed in these four districts as follows: in Bankura, 1,769 or 17.99 per cent villages, 927 or 9.42 per cent villages in Birbhum, 1,842 or 18.73 per cent villages in Purulia and 5,381 or 51.40 per cent villages are situated in Medinipur.

Table 4.3

Frequency Distribution of Villages With Different Category of Percentage Share of Tribal Population

Percentage Categories of Tribal share in the Total Population.	Bankura		Birbhum		Purulia		Medinipur		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
100%	184	10.40 (5.19)	44	4.74 (1.97)	171	9.27 (6.97)	553	10.28 (5.28)	958	9.65 (5.13)
Above 80%	350	19.78 (9.88)	84	7.06 (3.77)	375	20.35 (15.29)	912	16.95 (8.71)	1721	17.35 (9.21)
50 - 80%	224	12.66 (6.33)	66	4.11 (2.96)	235	12.75 (9.58)	614	11.41 (5.86)	1139	11.48 (6.09)
20% - 50%	414	23.40 (11.69)	243	26.20 (10.90)	432	23.45 (17.62)	1390	25.83 (13.28)	2479	24.99 (13.26)
10% - 20%	249	14.09 (7.03)	173	18.70 (7.76)	293	15.40 (11.95)	819	15.22 (7.82)	1534	15.46 (8.21)
5% - 10%	206	11.64 (5.82)	122	13.66 (5.47)	217	11.78 (8.85)	572	10.63 (5.46)	1117	11.26 (5.98)
Below 5%	326	10.42 (9.21)	239	25.78 (10.72)	290	15.74 (11.83)	1074	19.96 (10.26)	1929	19.44 (10.32)
Nil	1771	50.00	1302	58.41	610	24.90	5087	48.59	8770	46.92
Total No. of Village with Scheduled tribe population	1769	50.00	927	41.59	1842	75.76	5381	51.40	9919	53.07
No. of inhabited villages	3540	-	2229	-	2452	-	10468	-	18689	

Note: The percentage figures in parenthesis refer to the share of villages in particular category to the total inhabited villages

The distribution of tribal population at the village level in the four districts show interesting patterns of exclusivity in their pattern of concentration (Table 4.3). As much as 46.92 per cent of the inhabited villages in the study area have no tribal population at all. Such villages account for about three-fifths (58.41 per cent) of all inhabited villages in Birbhum and about a half of all villages in Bankura and Medinipur (i.e. 50 and 48.59 per cent) respectively. Exclusively non-tribal villages are fewer- only a fourth (24.9 per cent) of all the inhabited villages in Purulia.

Exclusively tribal villages, on the other hand, are fewer, i.e. only 5.13 per cent of all inhabited villages. The districtwise distribution of the proportion of fully tribal villages is as follows: Purulia, 6.97 per cent; Bankura, 5.19 per cent; Medinipur, 5.28 per cent and Birbhum, 1.97 per cent only. The pattern of exclusivity in the distribution of tribal- non-tribal population emerges very clearly when analysed at the village level but remains concealed at the district or thana level analysis.

Apart from these two sets of villages which are either exclusively tribal or non-tribal, a very large number of villages have varying proportion of both tribal and non-tribal population indicating complex picture of overlap and

interpenetration. Purulia district has the largest proportion of villages i.e. 68.13 per cent, which support both tribes and non-tribes. Such villages account for 56.44 per cent, 45.13 per cent and 44.81 per cent of all the inhabited villages in Birbhum, Medinipur and Bankura districts respectively.

It is evident from table 4.3 that the villages where the tribes are numerically preponderant (i.e. over 50 per cent) account for 15.30 per cent of all villages in the study area. In about a quarter of all villages (24.87 per cent) in Purulia the percentage of tribal population exceeds 50 per cent. The Scheduled Tribes are in a majority in 16.21 per cent villages in Bankura, 14.57 per cent villages in Medinipur and 6.73 per cent villages in Birbhum. The tribal population constitutes a very significant proportion of the total population (20 to 50 per cent) in as much as 13.26 per cent villages. These villages account for 17.62 per cent of all villages in Purulia, 13.28 per cent in Medinipur, 11.69 per cent in Bankura and 10.9 per cent in Birbhum.

SPATIAL PATTERNS:

Spatial distribution of villages with varying proportions of tribal population brings out interesting geographical patterns (Fig 4.2 to Fig 4.9).

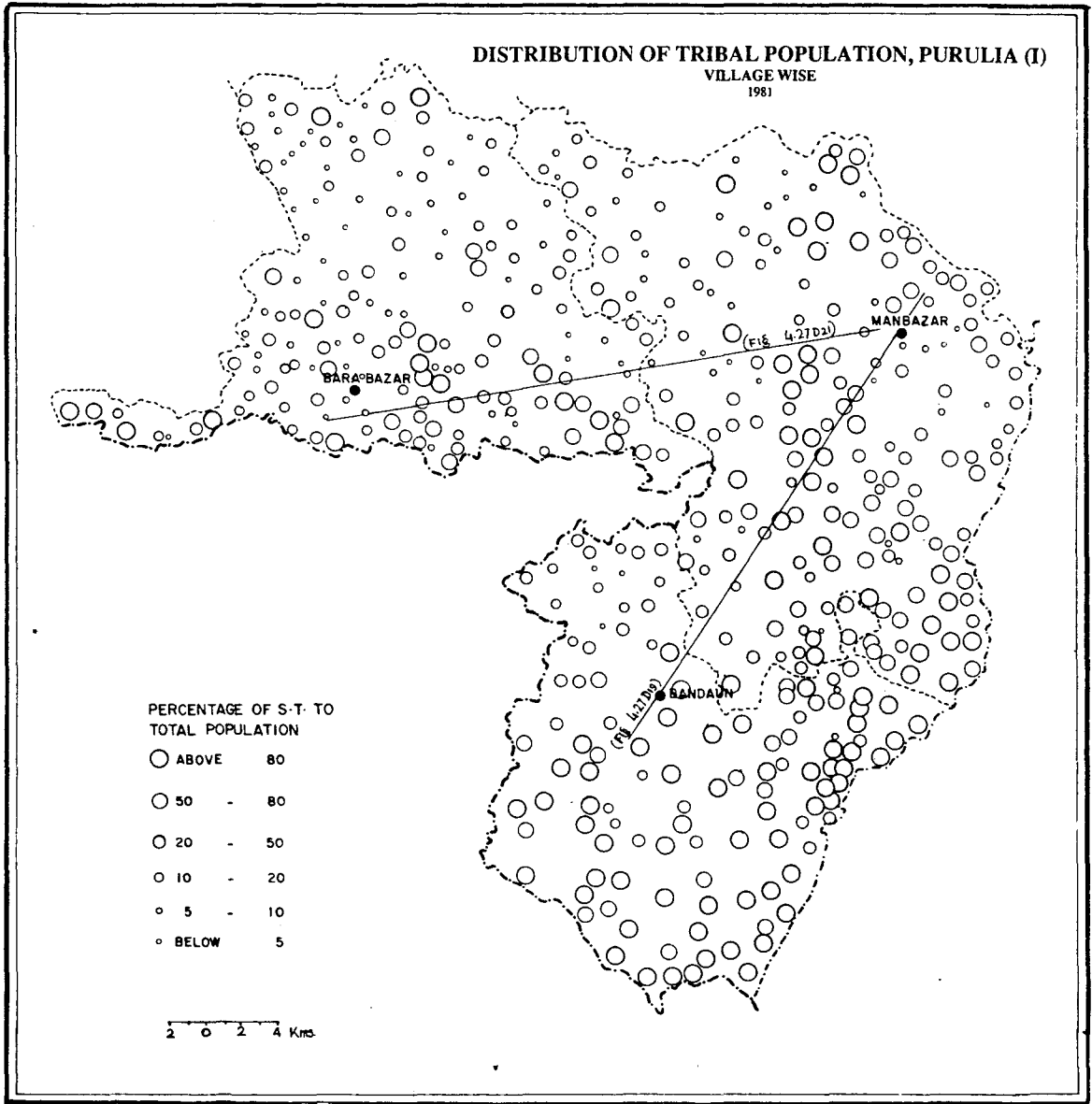


Fig. 4.2

DISTRIBUTION OF TRIBAL POPULATION, PURULIA (II)
VILLAGE WISE
 1981

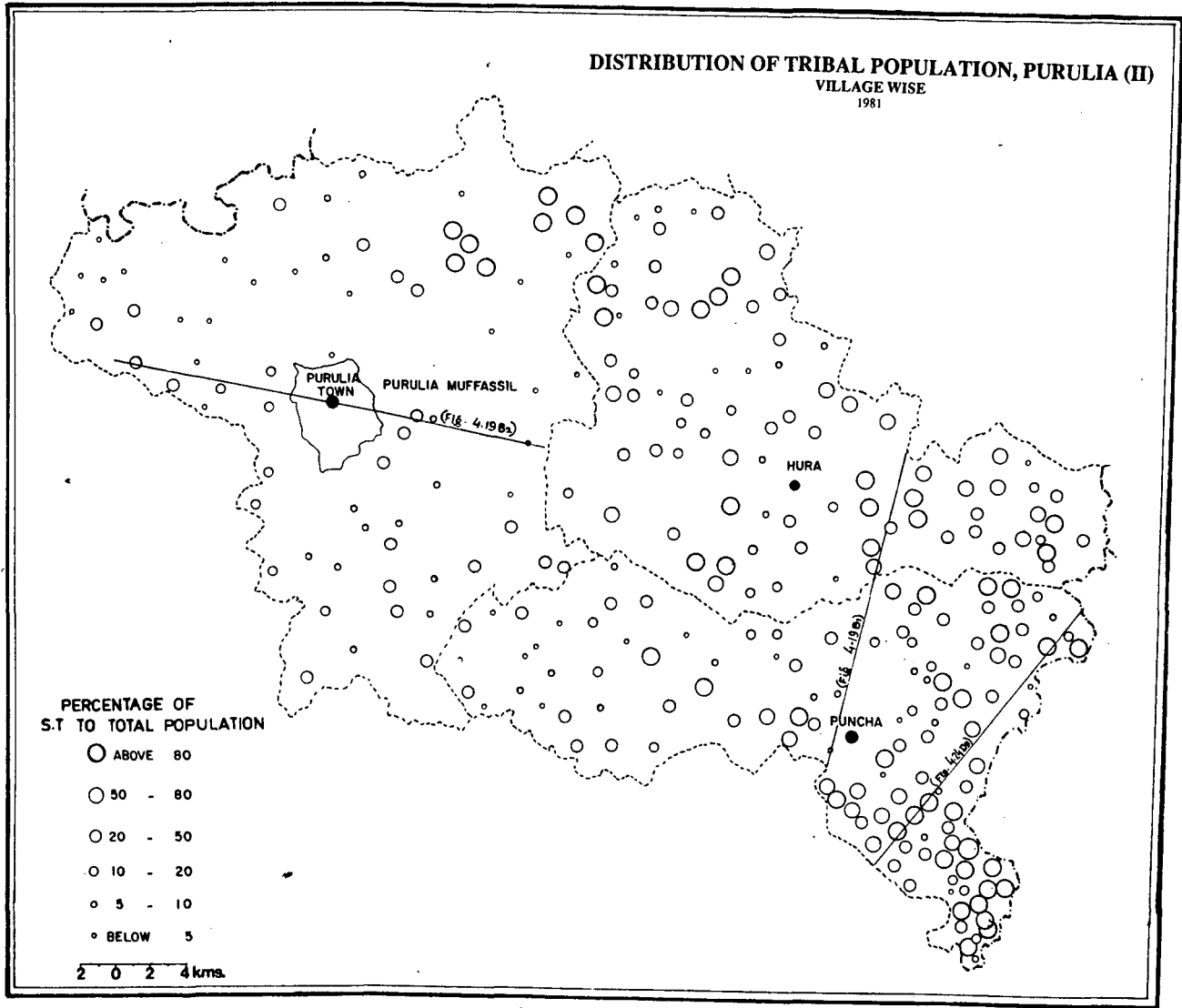


Fig-4.3

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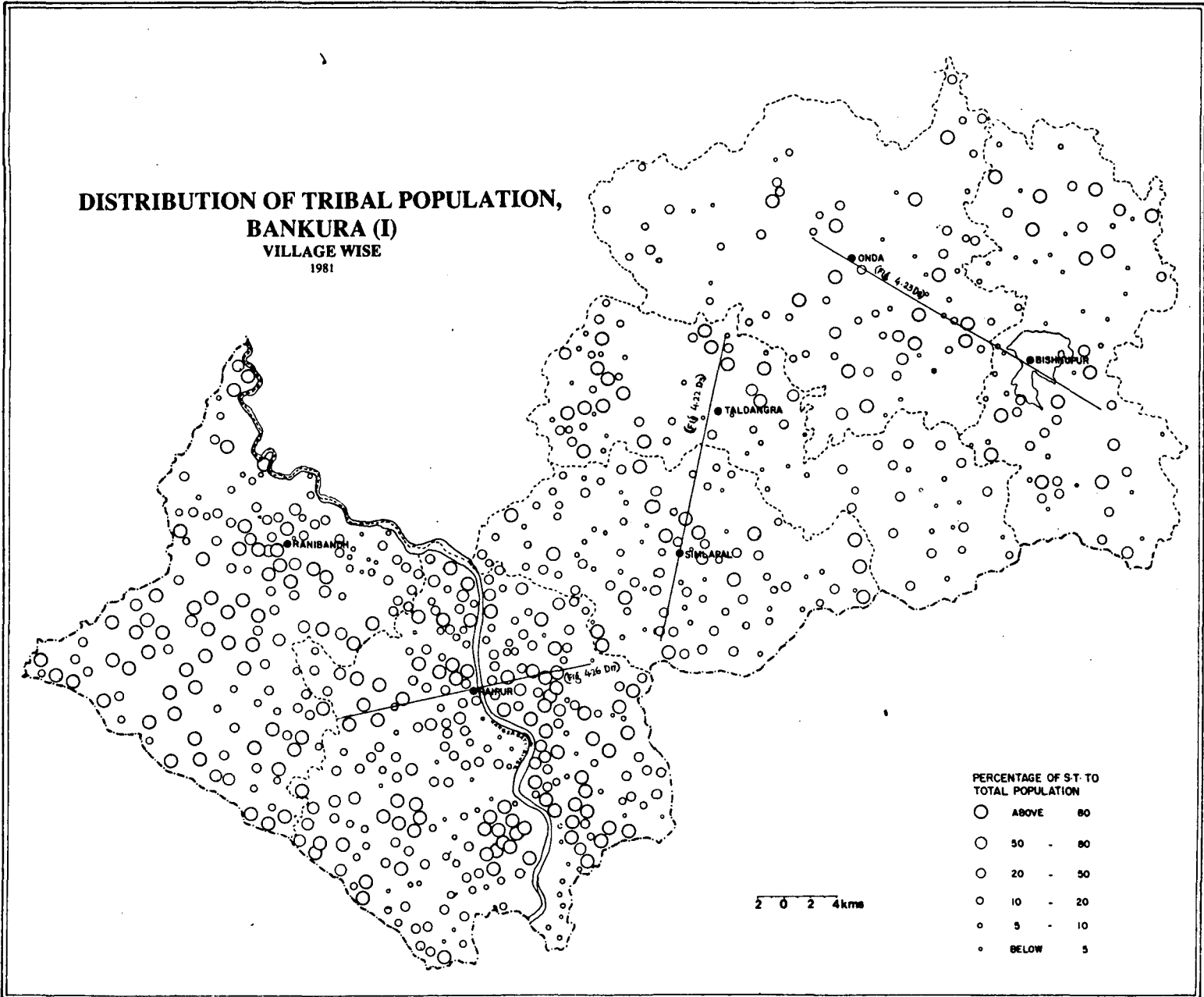


Fig. 4.4

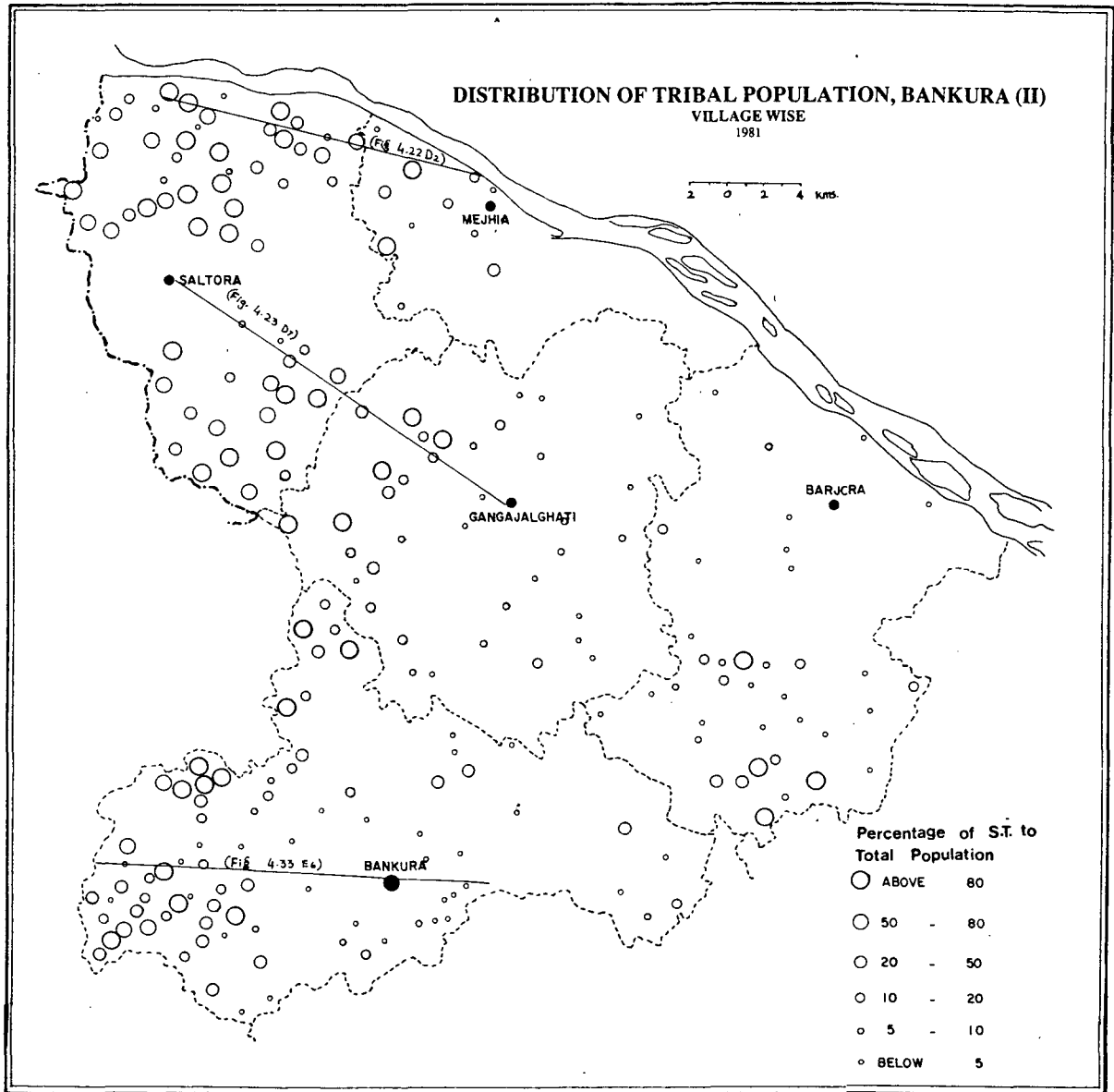


Fig. 4-5

In Purulia (Fig 4.2 and Fig 4.3) the northern parts show a highly dispersed distribution of villages with very high concentration of tribal population. Excepting a few, most of the villages in Purulia Muffasail thana are dominantly non-tribal. In the remaining two thanas (Hura and Pancha) the dominantly non-tribal villages are interspersed with dominantly tribal villages. In southern Purulia, however, Bandaun and Manbazar thanas have a very high concentration of dominantly tribal villages while the dominantly non-tribal villages are few. Barabazar thana, on the other hand has both dominantly tribal and dominantly non-tribal villages mixed over space.

Distribution of villages with varying tribal proportion in Northern Bankura shows clusters of villages with high tribal concentration in western Bankura and north-western Saltora thanas (Fig 4.5). Interestingly, the villages around the thana headquarters are dominantly non-tribal. At least two broad patterns are visible in southern Bankura (4.4). In Raipur and Ranibandh thanas, there is a large concentration of dominantly tribal villages. On the other hand, the remaining four thanas show a mixed pattern over space. The dominantly tribal villages are very close to dominantly non-tribal villages.

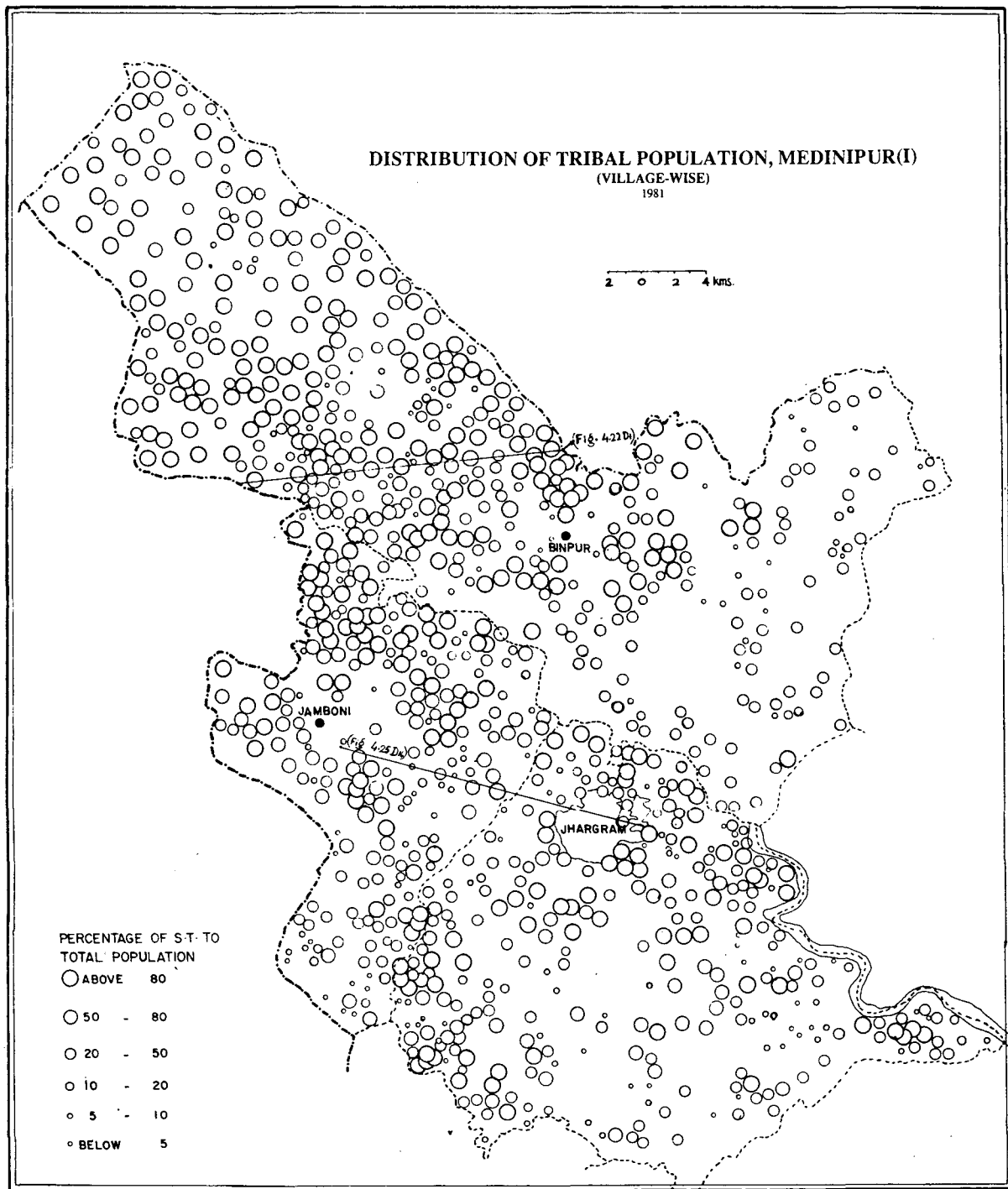


Fig. 4.6

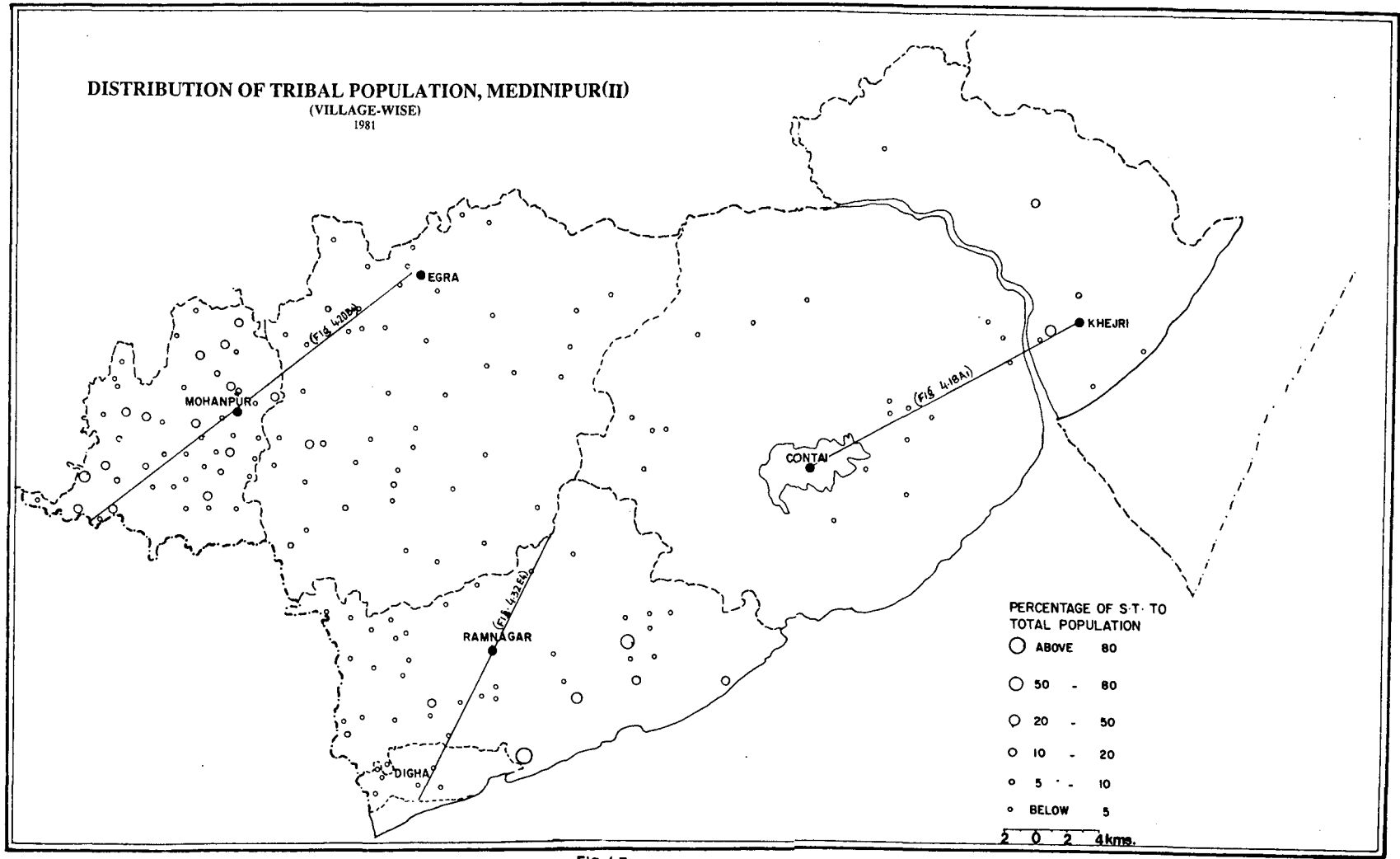


Fig. 4.7

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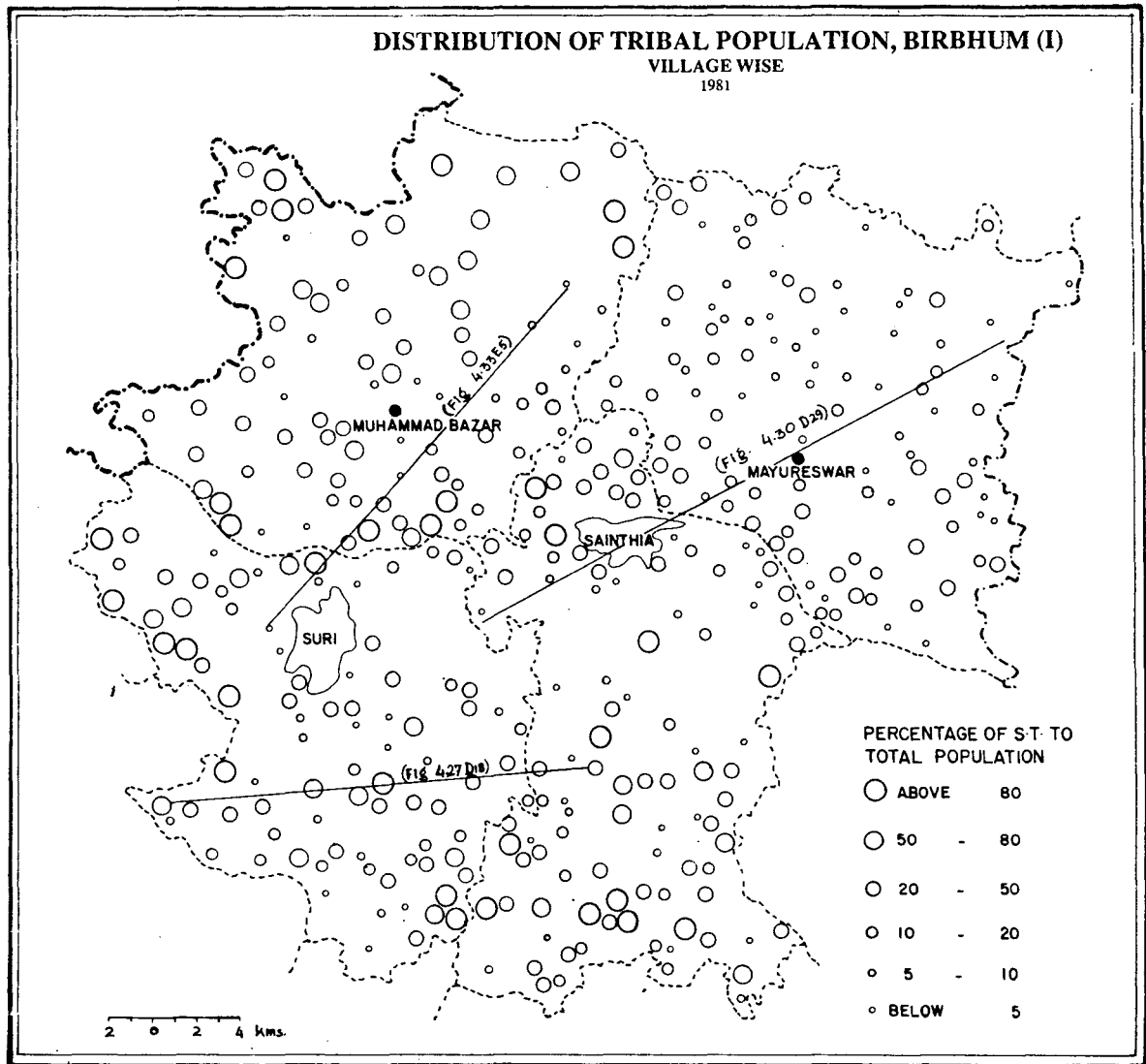


Fig. 4-B.

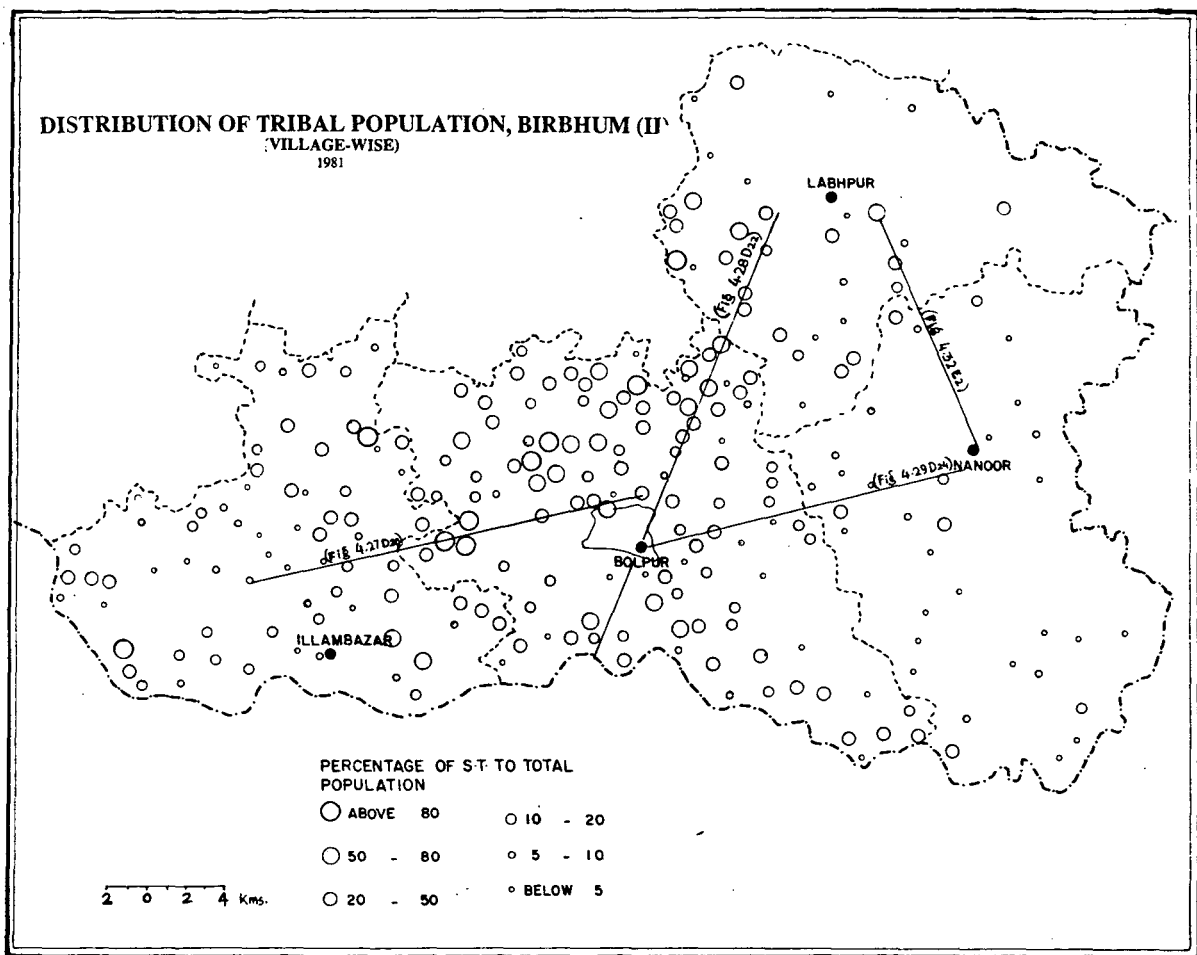


Fig. 4.9

Northern Medinipur generally shows a large concentration of dominantly tribal villages, particularly in western Binpur and Jamboni police stations. Large scale penetration of non-tribal elements is evident in eastern Binpur and Jhargram (Fig 4.6). The coastal area however shows a dominantly non-tribal character. The proportion of tribes is very low and villages having some tribal population are widely dispersed (Fig 4.7).'

In Birbhum district (Fig 4.8 and Fig 4.9) the villages with tribal population are widely dispersed over space. Generally speaking, the dominantly tribal villages are few and are in close proximity to the large number of villages with dominantly non-tribal population.

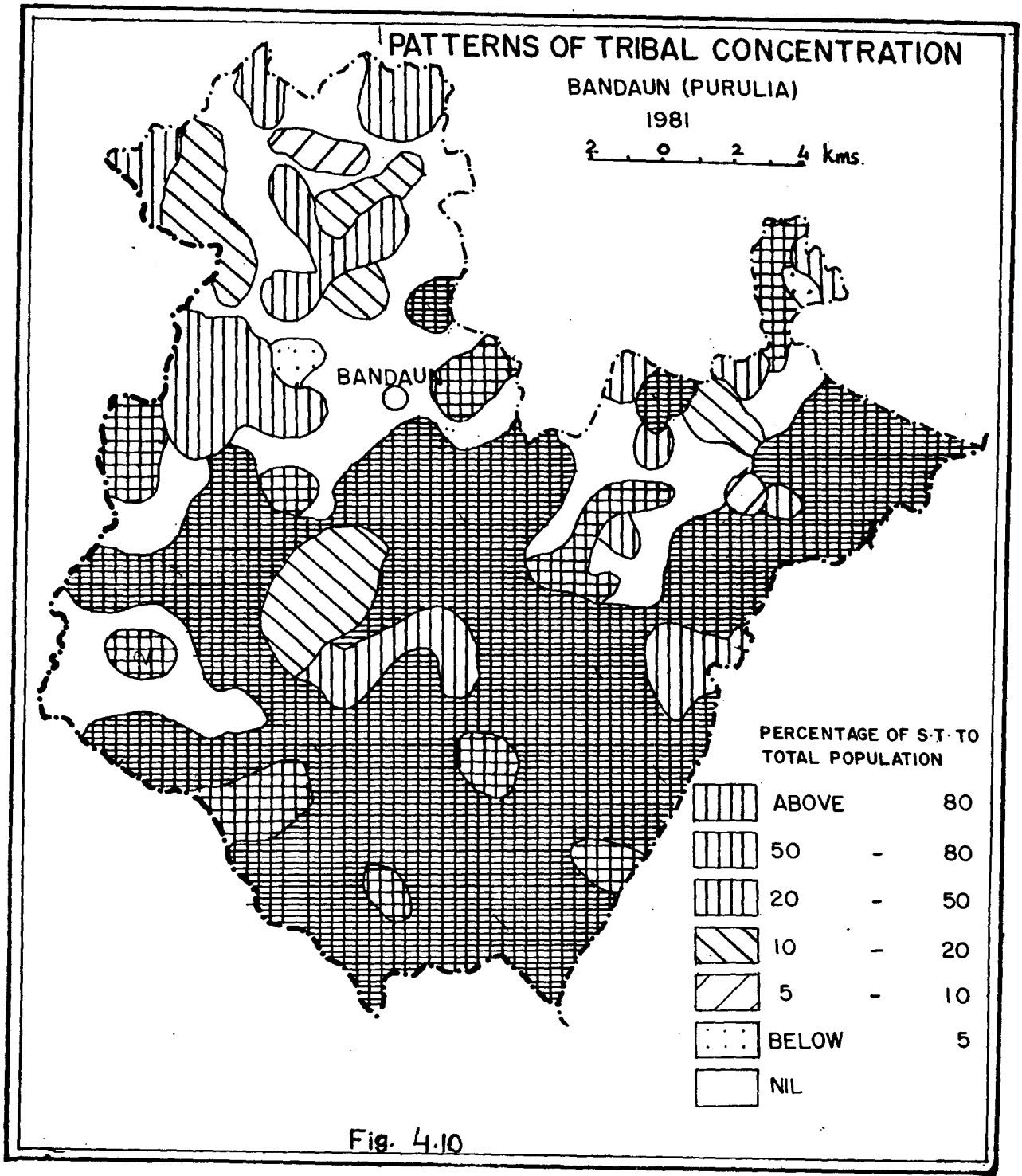
A series of choropleth maps showing the spatial patterns of spatial distribution in selected police stations using village-level data brings out more clearly the nature of transition between the tribal and the non-tribal segments of population. The complex picture of exclusivity, overlap or penetration is revealed when the data is represented at the village level. At least two police stations - one having the highest tribal concentration and the other having the lowest-have been selected from each of the four districts forming the study area for a detailed analysis.

From Purulia district, two police stations have been chosen on the basis of their percentage share of tribal population. Bandaun is situated on the southern part of Purulia with the highest percentage share of Scheduled Tribe population. Though Santaldih has the lowest percentage share of scheduled tribe population in the district, but the thana of Para has also been included due to the very small size of the former.

4.41.1 Bandaun

The nature of transition in the distribution of tribes and non-tribes is clearly visible in this thana. The entire southern part has a very heavy concentration of tribal population with a share as high as 80 per cent or more (Fig 4.10). A few pockets of villages with lower percentage of tribal population can be seen in this zone indicating limited penetration of non-tribal elements into this tribal homeland. The northern boundary of this tribal homeland is a clearly demarcated one wherein the gradual merging of the tribal territory into the non-tribal territory is missing.

The north eastern corner which is largely dominated by non-tribal population has a few pockets of tribal concentration ranging between 10 per cent to 20 per cent and 20 per cent to 50 per cent.



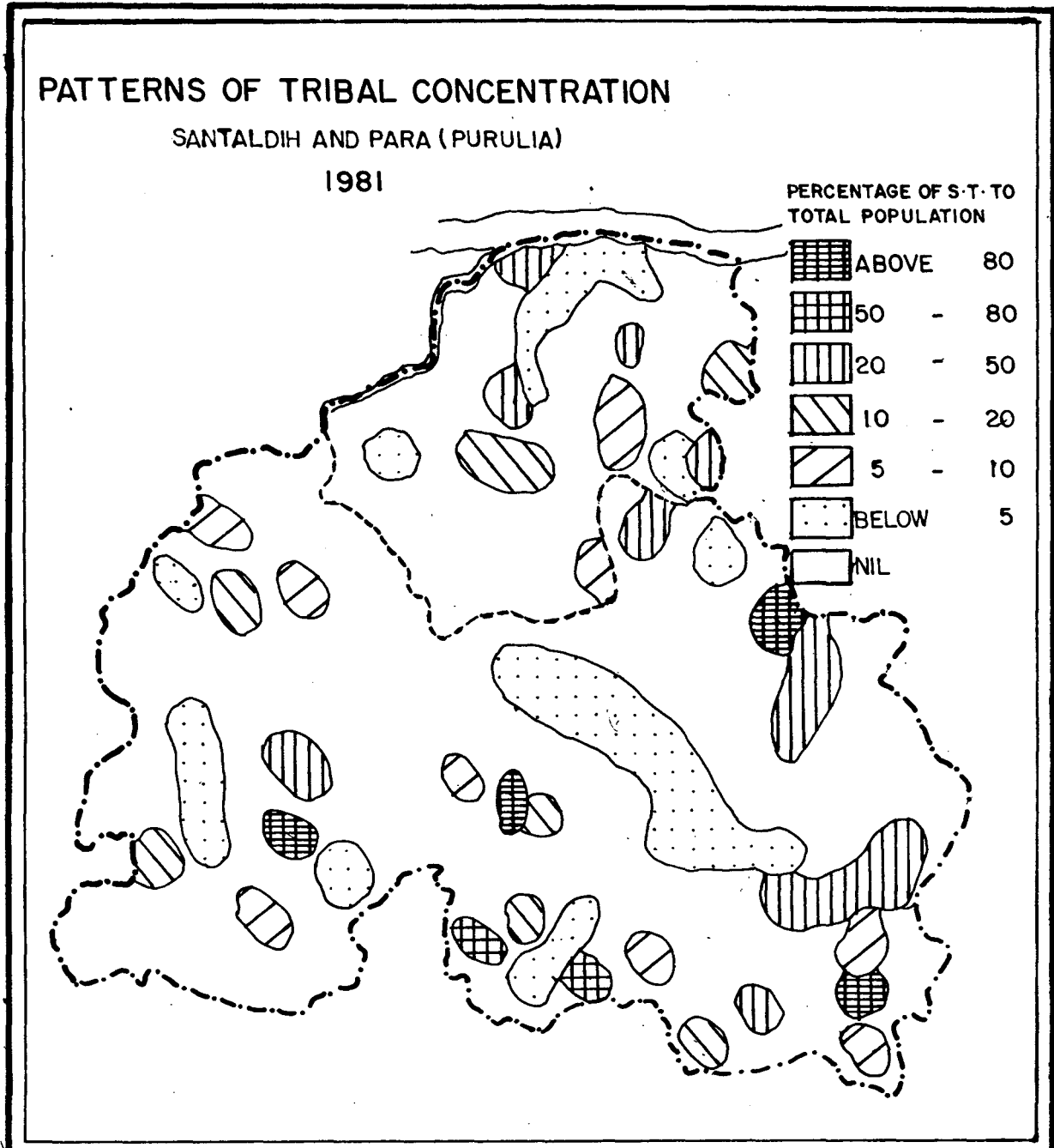


Fig. 4.11

4.41.2 Para and Santaldih

In Para and Santaldih most of the villages are predominantly non-tribal. In Santaldih there are a few pockets of isolated villages with varying proportion of tribal population. A large cluster of villages with below 5 per cent tribal population is existing in the northern part of Santaldih (Fig 4.11).

In Para, near the thana head quarter the villages with below 5 per cent of tribal population form a comparatively large pocket, followed by the region of villages with above 80 per cent and three isolated patches of village with 50 per cent to 80 per cent can be seen in this police station.

4.42 Bankura

From Bankura, Ranibandh with the highest percentage of tribal population (49.23 per cent) and Indas with the lowest proportion of tribal population (1.42 per cent) have been selected.

4.42.1 Ranibandh

In this police station, the tribes are found to be living in 44.23 per cent of all inhabited villages. At least two large contiguous zones having villages with extremely high concentration of Scheduled Tribes can be identified (Fig 4.12). Apart from these, some pockets of

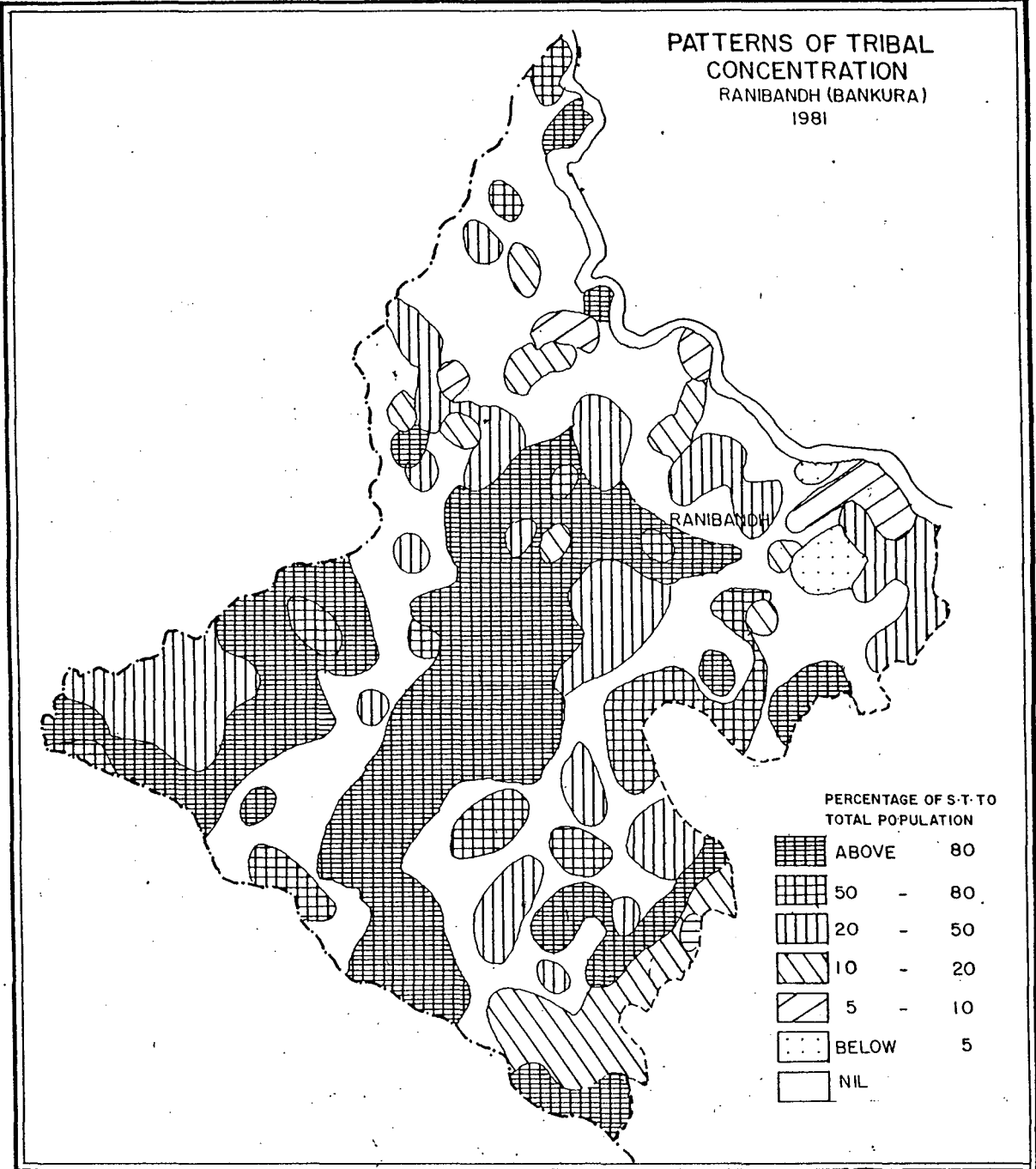


Fig. 4.12

PATTERNS OF TRIBAL CONCENTRATION

INDAS (BANKURA)

1981

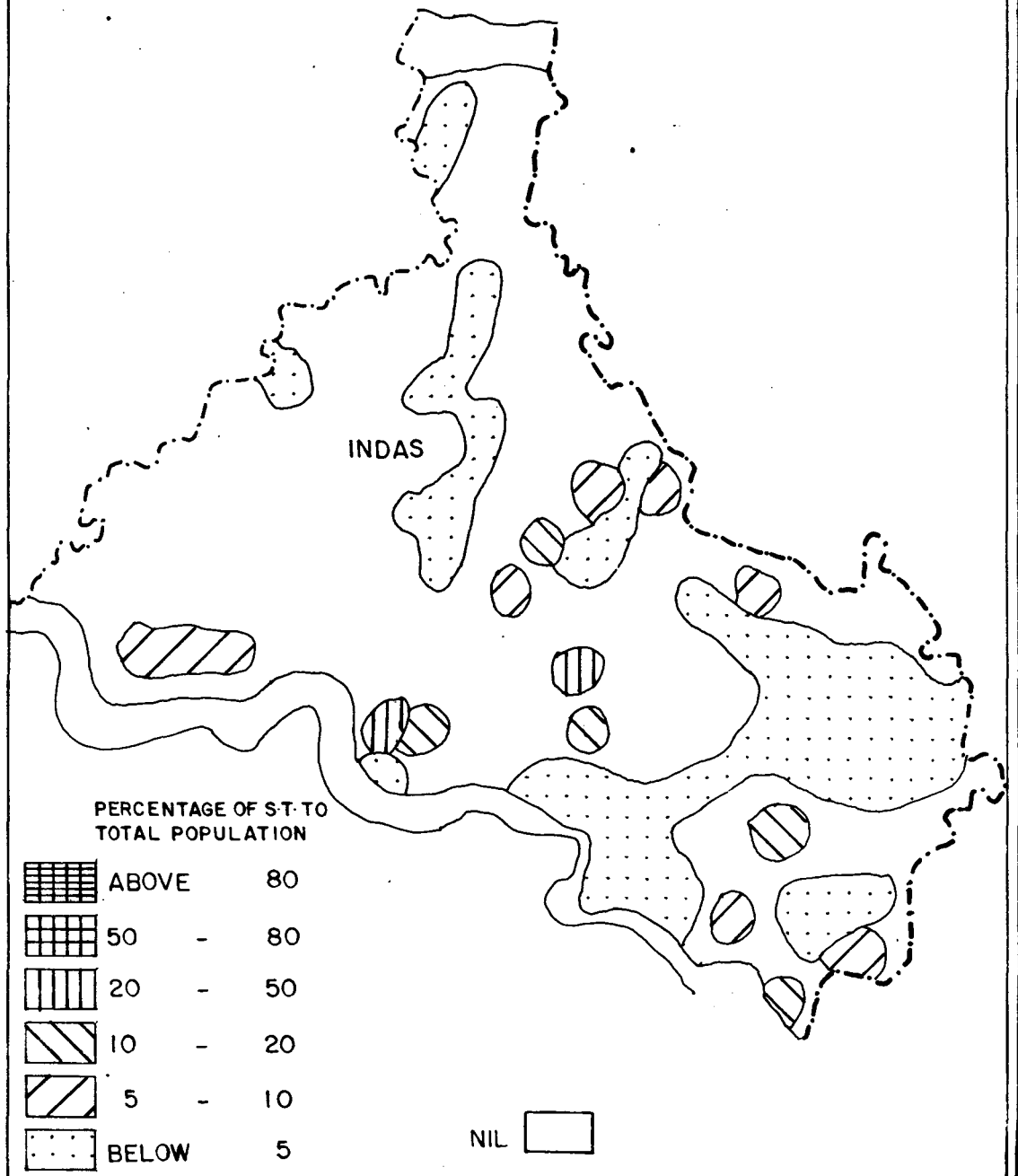


Fig. 4-13.

very high concentration of tribal population are distributed all over. Interestingly, these two contiguous zones of very high concentration of tribal population are separated by a zone of non-tribal concentration. It is quite likely that this tribal core has been subject to non-tribal penetration which has resulted in fragmenting the core into two parts separated by a corridor of non-tribal dominance. In the extreme north, small pockets of villages with high and extremely high proportion of tribes are found in close spatial proximity to villages with low and very low concentration.

In the north and north-eastern part, along the Kangsabati river the areas of tribal concentration are few and in most cases found isolated in the midst of non-tribal concentration.

In the eastern part of this police station, the villages with 50 per cent to 80 per cent of tribal population form a very small continuous zone, surrounded by small pockets of villages with above 80 per cent of tribal population.

In the south-eastern corner of the police station, two small contiguous zones of villages with 10 per cent to 20 per cent of tribal population are immediately adjacent to a pockets having tribal population over 80 per cent and a zone

of exclusively non-tribal dominance. The spatial transition from a low to high concentration is missing as the pockets of very high concentration of tribal population co-exist with pockets with dominantly non-tribal population. Away from the tribal core, on the periphery of the thana, the non-tribal penetration seems to be of a very high order and the tribes are, in most cases, reduced to a minority.

4.42.2 Indas

Unlike Ranibandh the Indas thana (having lowest percentage share of tribal population) has a few pockets of villages with 5 to 20 per cent tribal population distributed all over the eastern and central part (Fig 4.3). In the northern and middle part small patches of villages with 0-20 per cent are existing. Along the river in southern part and south-eastern corner small pockets of villages with low to moderate proportion of scheduled tribe population are found.

This thana is dominated by non-tribes and villages with very little tribal population can be found widely dispersed. The tribal population in this thana is largely inter-mixed with the non-tribal elements.

4.43 **Medinipur**

In Medinipur district, Nayagram police station, with the highest percentage share of tribal population (i.e. thirty eight per cent) and Panskura with a low proportion of

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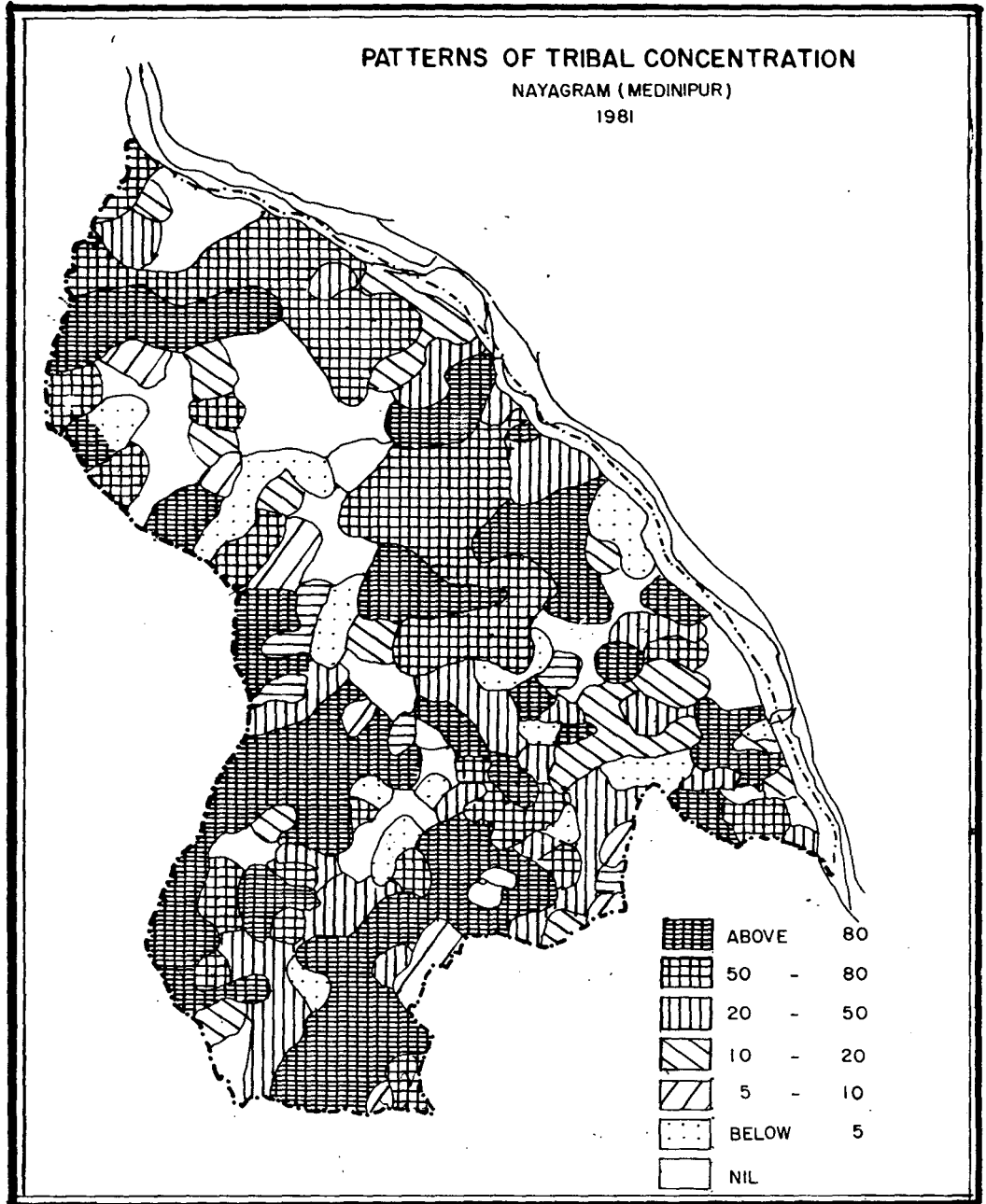


FIG. 4.14.

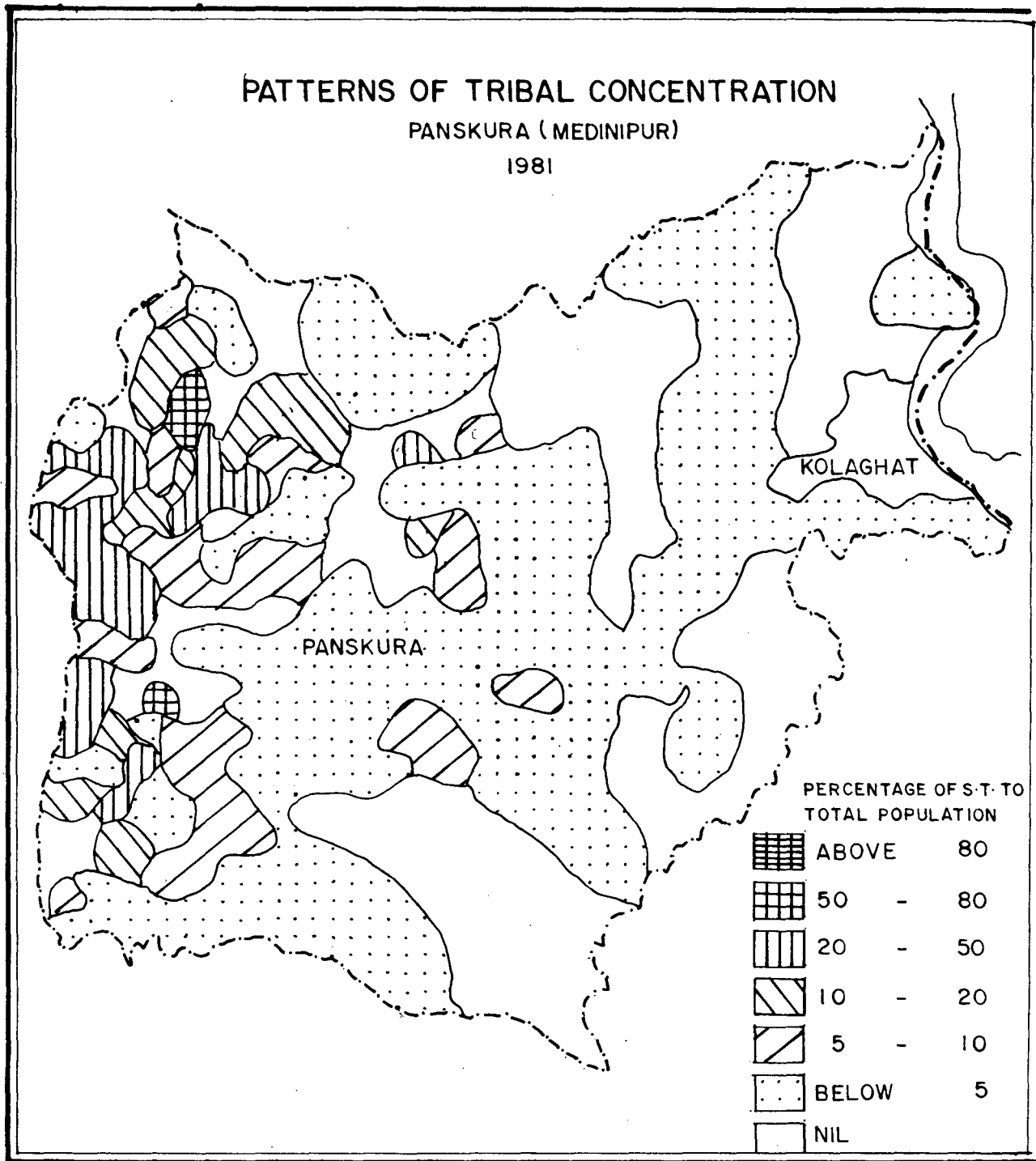


Fig. 4.15

tribal population have been selected. Although Contai has the lowest percentage of tribal population, it has not been considered as there are extremely few village with tribal population.

4.43.1 Nayagram

A perusal of the fig 4.14 indicates a highly complex pattern of distribution of Scheduled Tribe population. It is evident that the villages with above 80 per cent tribal population are forming many discrete pockets of varying size, distributed all over the police station. Among these, two contiguous zones are situated in the south eastern and south western part. In northern, central and eastern part small pockets are existing. The village with 50 to 80 per cent of tribal population form two large zones in northern and central part of this thana while small pockets with same proportion of tribal population are distributed in western, eastern and southern part. The villages with 20 per cent to 50 per cent tribal population, are forming a large zone in southern part while other parts they are forming some small pockets.

Most of the small pockets with 10 per cent to 20 per cent of the tribal population are existing in eastern and central part of this police station. There are very few pockets having villages with 5 per cent to 10 per cent and

below 5 per cent tribal population.

4.43.2 Panskura

In Panskura, most of the villages have a low concentration (below 5 per cent) of tribal population. The pattern of distribution shows a very gradual change in the proportion of tribal population from the east to west (Fig 4.17). The share increases imperceptibly towards the west. In southeastern and northern part, many villages are fully inhabited by non-tribals. These areas are located near Kolaghat town, which is also a small industrial and business centre. This zone, comprised of villages with below 5 per cent tribal population, includes another town which is the thana headquarter of Panskura. In western part of this thana, the villages with above 20 per cent scheduled tribe population are forming some small pockets. These pockets are however, surrounded by the villages with tribal population ranging between 5 per cent to 10 per cent and 10 per cent to 20 per cent of the total population.

4.44 Birbhum

In Birbhum, Muhammad Bazar thana, having the highest percentage share of Scheduled Tribe population and Nanoor with the lowest percentage share of tribal population have been selected for indepth study of the nature of transition in the distribution of tribes and non-tribes over space.

PATTERNS OF TRIBAL CONCENTRATION

MUHAMMAD BAZAR (BIRBHUM)

1981

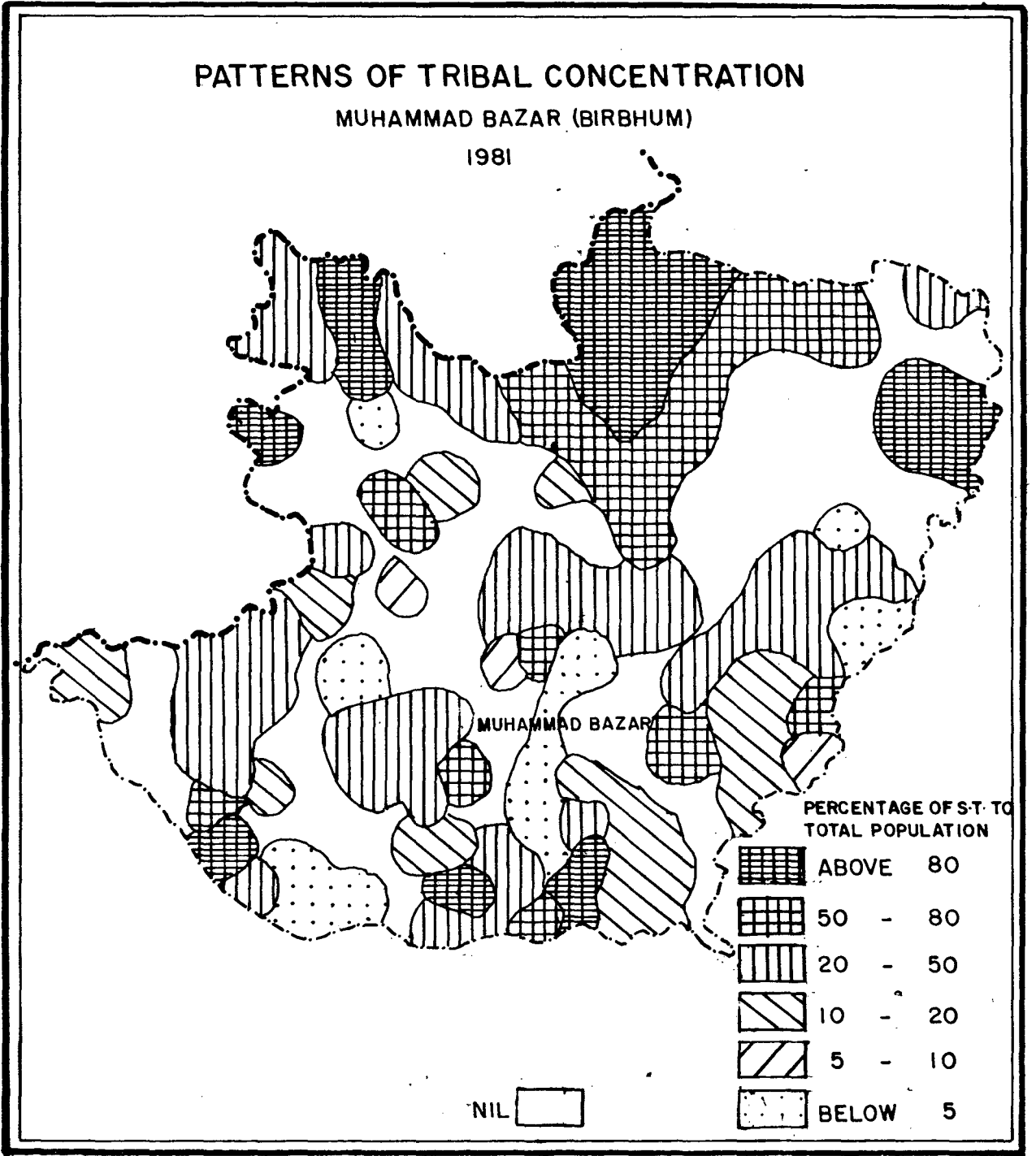


Fig. 4.16

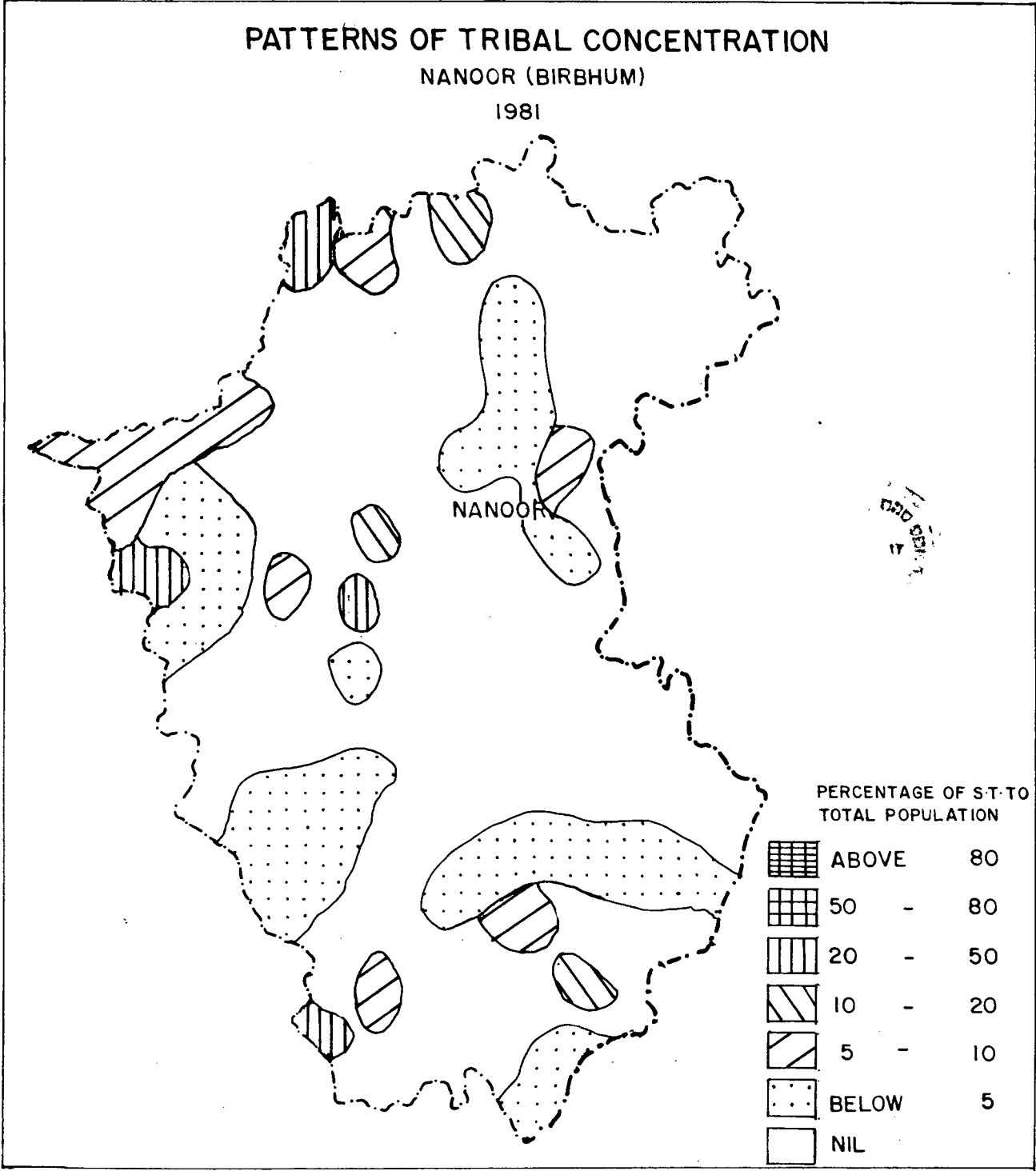


Fig. 4.17

4.44.1 Muhammad Bazar

In northern and central part, some small continuous zones with very high tribal concentration are present. One is in the northern part villages with 50 per cent to 80 per cent tribal population form a large contiguous zone followed by the zone with villages above 80 per cent (Fig 4.16). The next to the zone of 50-80 per cent another zone has been formed by the villages with 20-50 per cent tribal population. There are a few pockets existing with below 5 per cent of tribal population distributed in the northern, southern, eastern and central part of this thana.

In the eastern part there are some large pockets of villages with different proportion of tribal population while in western and southern part very small pockets with different percentage share of tribal population are found side by side. Since the extent of non-tribal penetration in Birbhum is relatively higher than other three districts in Mohammad Bazar too, one can see the tribal territories are broken and the nature of transition too complex to allow easy generalization.

4.44.2 Nanoor

The Nanoor thana in the eastern part of Birbhum district has the lowest percentage of tribal population. It

is evident from the fig 4.17 that the villages with negligible tribal proportion (below 5 per cent) form four discrete zones in this thana. Villages with a little larger proportion of tribal population (5-20 per cent) are distributed all over the thana. Most of these pockets are in the border of the thana and away from the thana head-quarter. In general, the areas with insignificant tribal concentration are in isolated pockets indicating gradual transition.

4.5 VILLAGE TRAVERSES:

One of the commonest ways of the nature of transition in space between the tribal and non-tribal segments of population is to examine the variation in the distribution of tribal population over a number of village traverses drawn with the help of profiles in which the horizontal axis represents the distance and the vertical axis shows the percentage of tribal population. The resultant profiles provide very good clues to the nature of tribal-non-tribal boundaries. In order to get a clearer picture of the nature of transistion, a very large number of traverses, numbering 52, were drawn taking into account various locational characteristics.

On the basis of the structure of profiles bases on village traverses the following typology is identified.:

- Type - I : Tribal proportion declining abruptly.
- Type - II : Tribal proportion declining gradually.
- Type - III: Tribal proportion remaining regular for over some distance
- Type - IV : Proportion of tribal population fluctuating rapidly in an irregular manner, and
- Type - V : Mixed or pattern.

The traverses which show abrupt changes in the proportion of tribal population usually have a low share of tribal population for the most part. But it suddenly rises leaving no room for a gradual transition. Such a profile indicates some kind of an exclusivity in the nature of tribal-non-tribal distribution over space. In sharp contrast, a set profiles show a very gradual change in the proportion of tribal population over the cross-section without abrupt changes in the proportion. This typology represents a situation in which the exclusivity is replaced by a continuum in the distribution of tribes and non-tribes over space. A third set of traverses can be identified in which the proportion of tribal population remains high and stable for a considerable distance indicating a clustering of tribal dominated villages with little or no tribal penetration. A fourth type of structure is evident from a number of traverses with an 'irregular' pattern of change in the proportion of tribal population. These profiles are characterised by abrupt changes in the share of tribal

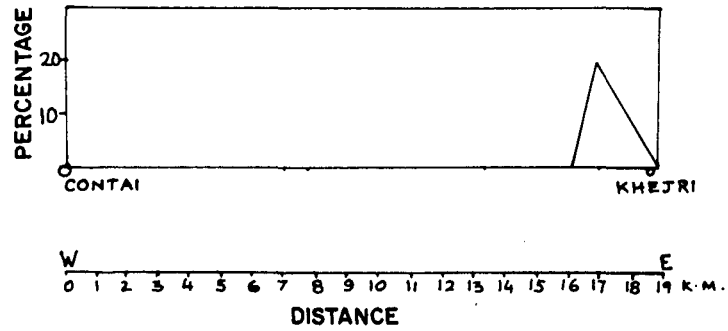
population alternately throughout the cross-section but not confirming to any regularity. They provide clues to a complex pattern of overlap and penetration. A last type has been identified which is actually a mix of all other types.

It is imperative at this stage to discuss in detail the variations in the traverses belonging to each type.

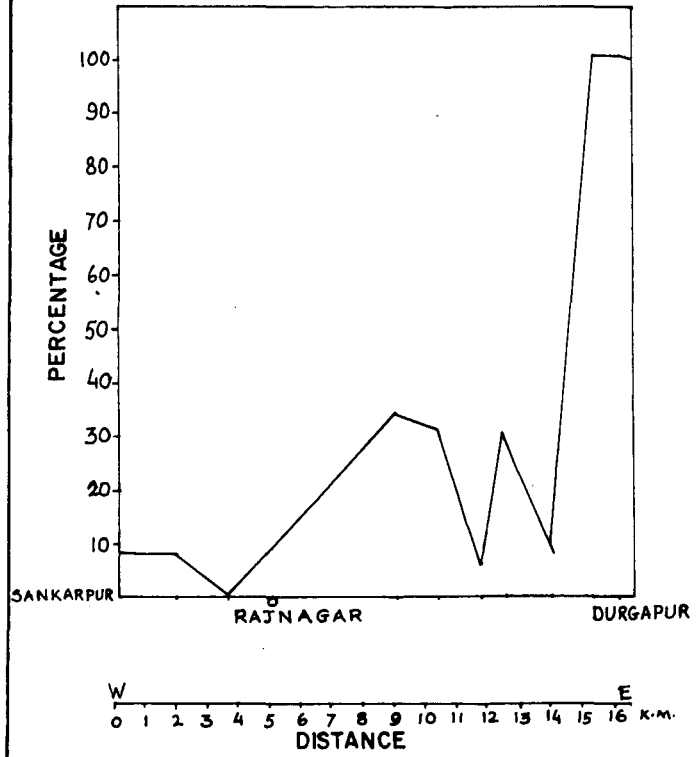
Type - I: There are very few traverses which showed an abruptly declining or rising share of tribal population. Only three traverses belong to this type. Two of them belonged to Birbhum district, one each in Nalhati and Rajnagar thana and the remaining from Khejri coastal thana of Medinipur. The first traverse (Fig.4.18 A1) runs across villages having very little tribal population in an essentially coastal area. The second traverse runs along the Rajnagar thana headquarters and the third traverse (fig 4.18 A3) runs across the plain areas of Birbhum and passes through the Nalhate thana head-quarters. It is interesting to note that evidences of mutual exclusivity in the distribution of tribes and the non-tribes comes from those districts which, in general, have relatively low concentration of tribal population.

The fig.4.18 A3 is a classical example of abruptly declining proportion of tribal population. It is clear that the share of the tribal population west of Nalhati police

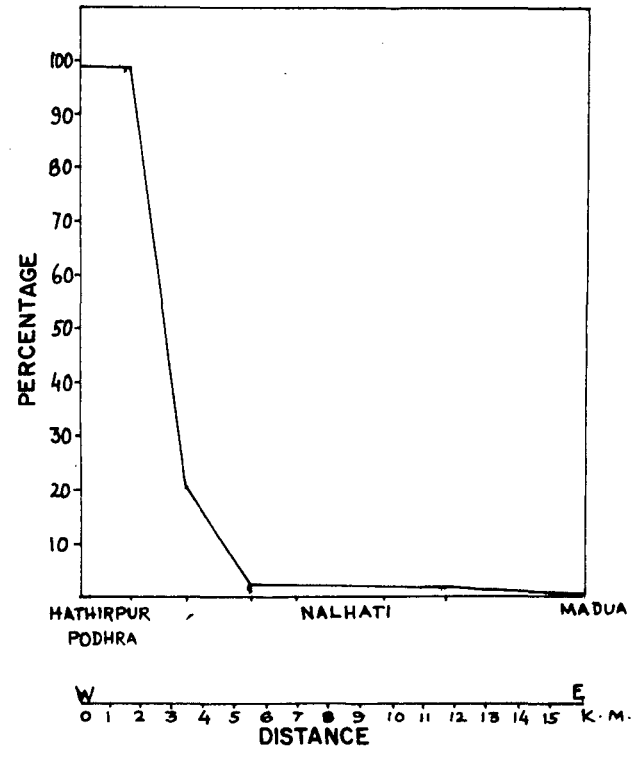
A1 VILLAGE TRAVERSES



A2



A3



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Fig : 4.18

station is as high as 18 per cent and above. It remains so only for about 5 kms and then falls abruptly like a cliff along the sea. The point dividing the area of tribal concentration and non-tribal concentration is well demarcated at about 5.5 kms from the western most point of the cross section.

It is clear from the fig.4.18 A2 which shows a traverse across the Rajnagar thana across the thana headquarters that out of a total of 16.9 kms. for 14 kms. length a relatively low proportion of tribal population continues, their share remaining below 30 per cent. However, there is a sudden change after 14 kms and the proportion of tribal population rises abruptly to as high as 100 per cent. The lowest concentration of the tribal population can be seen at the thana headquarters where the percentage drops to the minimum i.e. below 10 per cent. The change undoubtedly is extremely abrupt with the villages around the thana headquarters recording a very negligible proportion of tribal population and the highest concentration taking place much away from it.

Fig.4.18 A1 represents Medinipur district, the profile runs through the coastal villages in Contai and Khejri thanas. In Contai most of the villages have negligible tribal population. Most interestingly, there is abrupt rise

in the share of tribal population near the Khejri police station, although the highest share hardly exceeds 20 per cent. In any case, the structure closely resembles a small island with an abrupt rise of a hill from the ocean water.

Type - II:

Fig.4.19 B1, fig.4.19 B2, fig.4.19 B3, fig.4.19 B4, fig.4.20 B5, fig.4.20 B6, fig.4.20 B7 and fig.20 B8 are identified as gradual type. The profile in fig. 4.19 B1 runs through the villages of Hura and Puncha police stations of Purulia district, including two police station headquarters. The traverse shown in fig.4.20 B5 connects the villages of Nandigram, Haldia and Durgachak police station, situated in coastal area of Medinipur. Fig.4.20 B8 connects the villages on a line connecting Ghatal and Chandra Kona thana of eastern Medinipur which also includes two towns of Kharar and Chandrakona. The Traverse drawn in the fig.4.20 B6 runs along the villages, situated between Mohanpur and Egra police station of coastal Medinipur. This also includes two police station headquarters. The next cross section (fig.4. 20 B7) passes through the villages of Tamluk and Panskura police station of Medinipur including two important towns i.e. Tamluk and Panskura. The profile in fig. 4.19 B2 runs across the villages of Purulia mufassil, the Purulia town bring at the middle of the

VILLAGE TRAVERSES

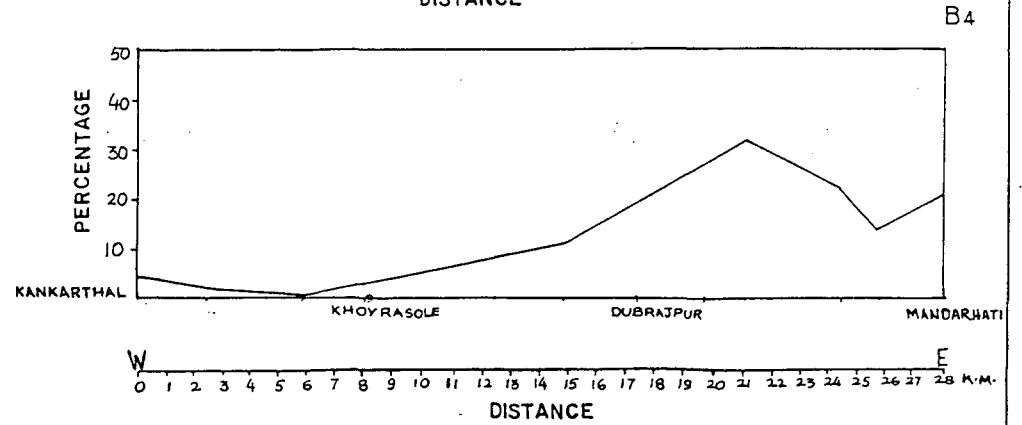
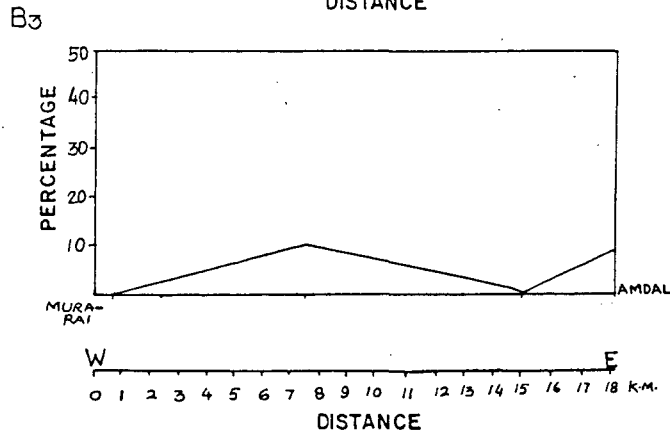
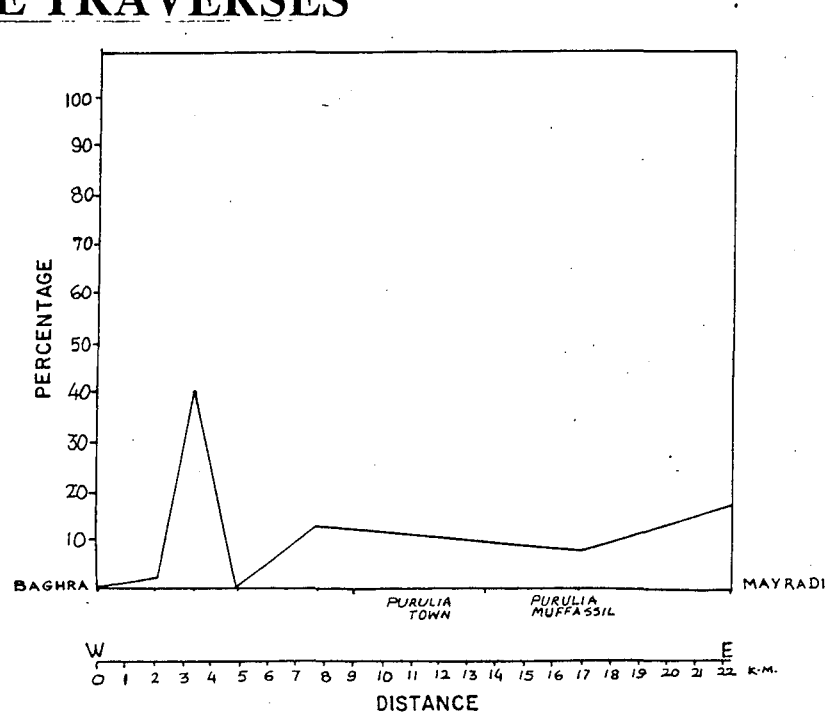
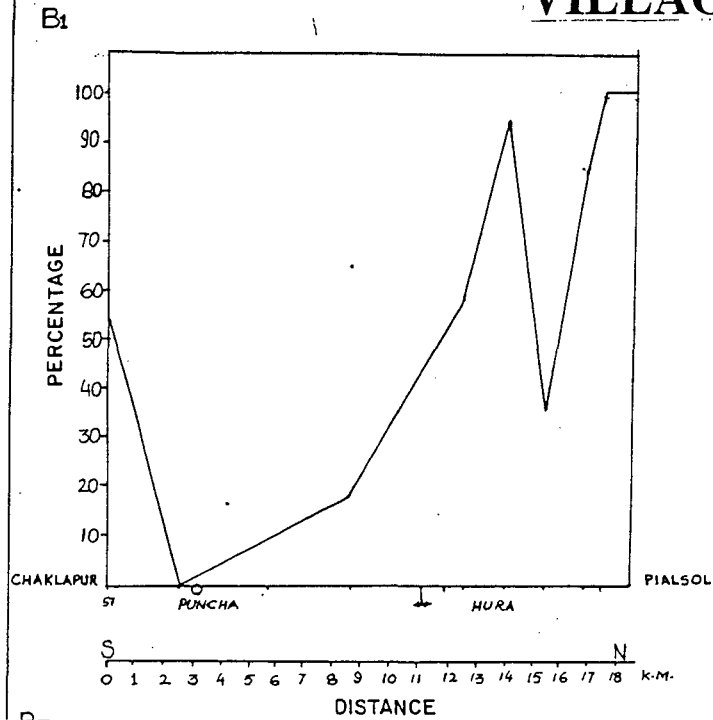


Fig: 4.19

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traverse. The next profile (fig. 4.19 B4) runs through Khoyrasole and Dubrajpur police station of Birbhum district crossing the police station headquarters of Khoyrasole and Dubrajpur town too. The last profile of this series, shown by fig. 4.19 B3 connects the villages of Muraroi thana of Birbhum district.

Fig.4.19 B1 represents the profile showing the tribal-non-tribal boundary in a few villages of Puncha and Hura police station of Purulia district. The villages are situated in the plateau fringe area of Purulia. The traverse begins from a village with above 50 per cent of tribal population and gradually declines over a distance of 2.5 kms to reach a share as low as 0.24 per cent. The proximity of the village to the Puncha thana headquarters probably explains its dominantly non-tribal character. As the distance from the thana headquarters increases, the proportion of tribal population too registers a gradual increase until it attains a share as high as 50 per cent at a distance of 12 kms and about 95 per cent at a distance of 14 kms. In the remaining four kilometers, however, there is an abrupt fall to 35 per cent of tribal population only to rise as high as 100 per cent near the Hura police station.

Another example can be cited with the help of fig.4.19B4. This profile runs across the villages of Khayrasole and Dubrajpur police stations and including the

VILLAGE TRAVERSES

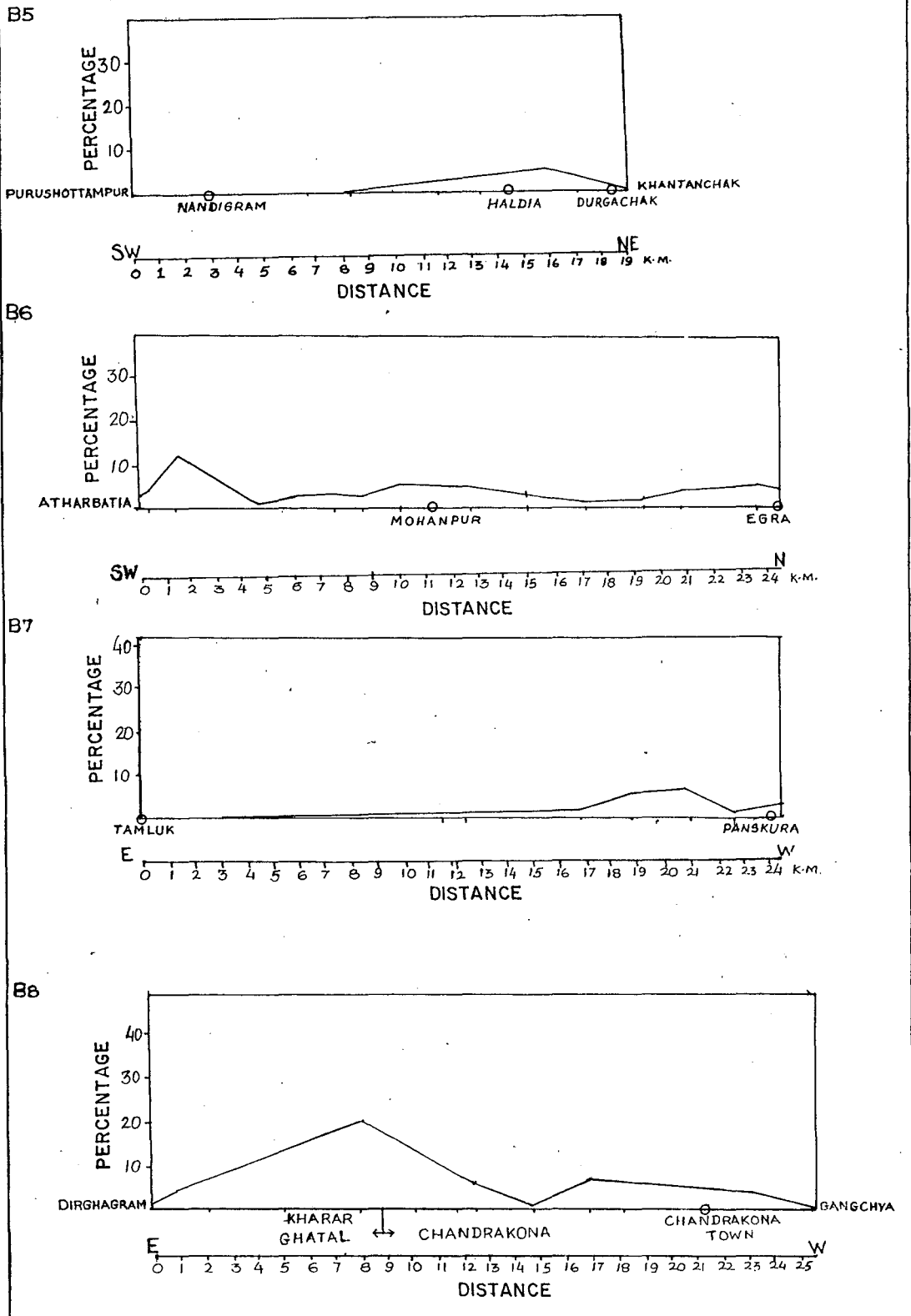


Fig: 4-20

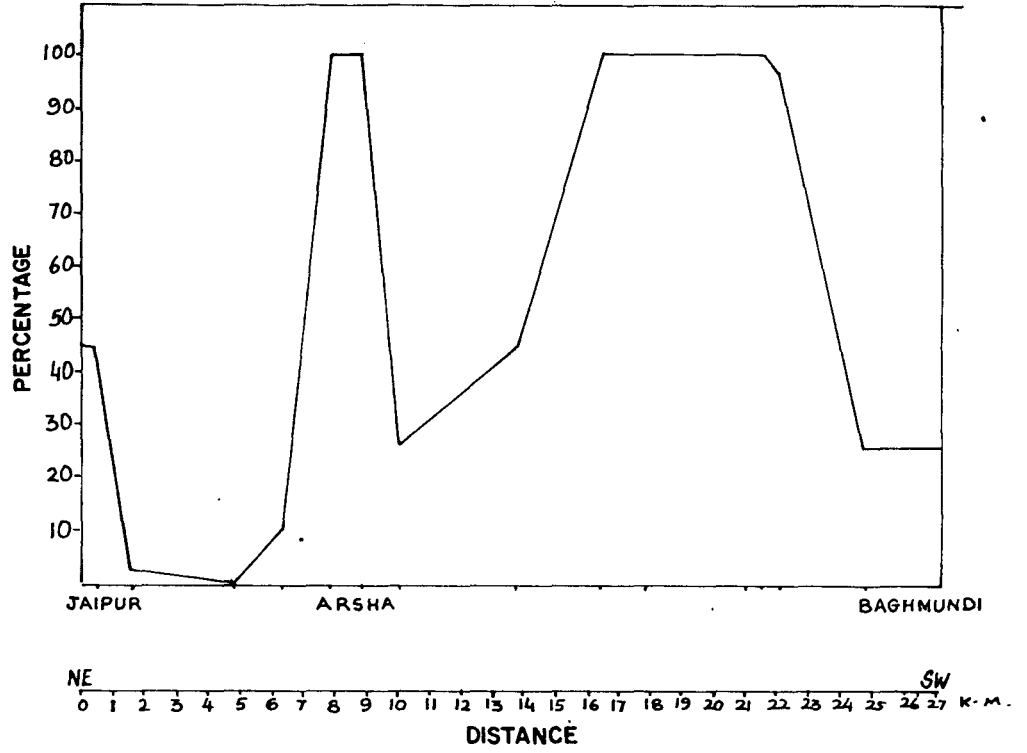
headquarters of two police stations. In this traverse from the starting point upto a distance of 14 kms the share of tribal population rises imperceptibly and at the 15th km it attains a share slightly more than 10 per cent. After crossing Dubrajpur police station the percentage share of tribal population of the villages increases a little more than 30 per cent and remains nearly 20 per cent at the end of the cross section line. In this profile, it is evident that the percentage share of tribal population is increasing gradually from western part to eastern part.

Type - III:

Only two traverses are included in the regular type of profiles i.e. fig.4.21 C1 and fig.4.21 C2. Both of these two cross section lines belong to Purulia district. Fig.4.21 C2 runs through Balarampur, Bagmundi and Arsha thana while in fig.4.21 C1 cross section line joins Jaypur, Arsha and Bagmundi thana. The area through which these two profiles are passing is situated in the undulating plateau area having substantial forest cover. The percentage share of tribal population of the villages remains stable for a considerable stretch of distance. Since there is no sharp fluctuation in the proportion of tribal population the profile shows the continuity without any abrupt rise and fall.

VILLAGE TRAVERSES

C₁



C₂

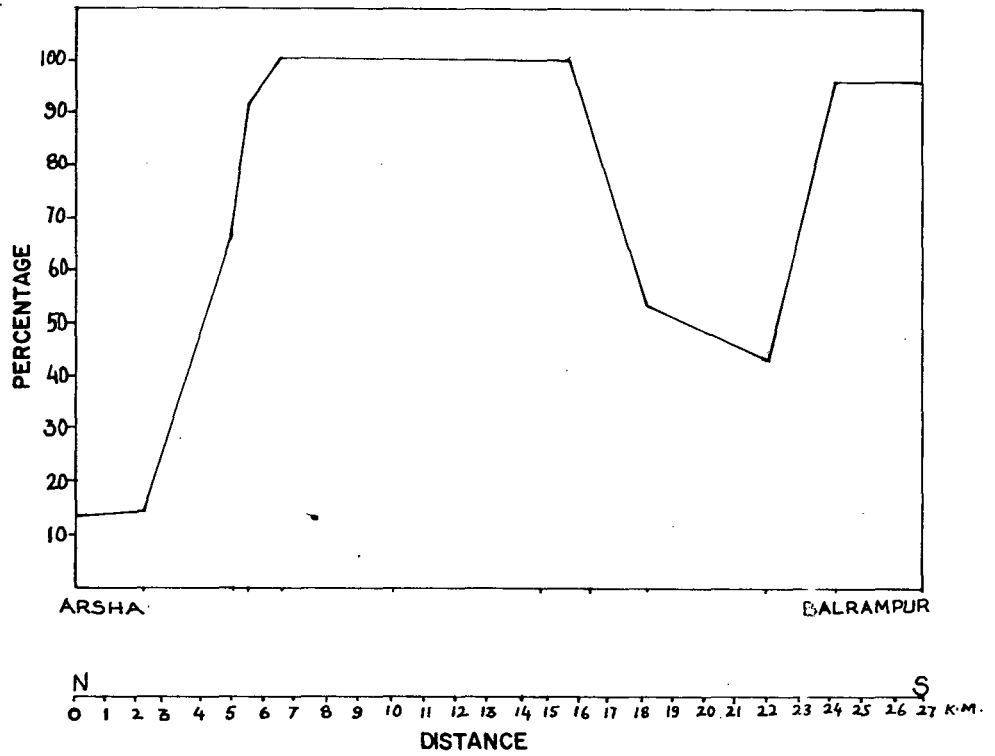


Fig. 4.21

In fig.4.21 C2, cross section starts from Arsha where the share of tribal population remains slightly above 10 per cent up to a distance of two kms from the starting point. Then the share suddenly increases to nearly 60 to 90 per cent after 5.5 kilometers and remains more or less stable thereafter. There is only one break which occurs after 19th km wherein the tribal share drops to around 40 per cent. Again it rises up to 95 per cent after crossing 22nd km from the starting point. Near Arsha police station headquarter the percentage share of tribal population is as low as 15 per cent of the total population. As the distance increases from the Arsha police station headquarters the share of tribal population too increases sharply. The share of tribal population remains high near the Balarampur thana headquarters and in all the villages situated in the part of Baghmundi police station.

In fig.4.21 C1, the profile is extended from Joypur police station to Baghmundi thana through Arsha police station. It is evident that, the profile starts with villages having low proportion of tribal population. In this profile the stability or regularity of the profile is broken at three points, indicating overlap. After a distance of 6.5 kms the share rises precipitously to as high as 100 per cent. However, the villages between 9.5 kms to 14.5 kms have a relatively low proportion of tribal

population, i.e. fully tribal villages are found in succession till the 23rd km and then there is a sharp decline in the tribal share between 23rd and 27th km.

Type - IV:

The largest number of village traverses (i.e. 33 out of 52) show highly irregular shape of the percentage profiles. The cross-sectional morphology is characterised by several breaks in the continuity and abrupt changes in the share of tribal population alternatively with sharp increase or decrease. It is interesting to note that the tribal population registers sharp decline in its proportion whenever the cross section intersects with any town, administrative headquarters, river valley and the plain areas. On the other hand the peaks in the profiles occur at villages located in the forested and pleateau area. Since a very large number of traverses fall in this category, an attempt has been made to further classify them on the basis of the overall share of tribal population in the village across the cross section. Thus three sub-types have been identified as follows:-

- i) High irregular traverses; wherein the overall concentration of tribal population remains very high i.e. above 80 per cent.

- ii) Medium irregular traverses; wherein, the overall share

of tribal population is not very high, i.e. often below 50 per cent.

iii) Low irregular traverses; wherein, the villages across the line have low proportion of scheduled tribe population i.e. often below 20 per cent.

Considering the difficulty involved in taking each of the individual traverses included in this type, it was thought sufficient to choose only a few most representative traverses for detailed description.

High Irregular Type

In as many as 21 traverses, the profiles show an irregular pattern, though the proportion of Scheduled Tribes remains generally high. Of these, 5 traverses are from Medinipur district, 6 from Purulia district, 2 from Birbhum and 8 from Bankura. Most of these cross sections are located in the plateau and forested tracts while a few are from the coastal plain and undulating plain areas.

In these traverses the irregularity of curve shows a highly broken morphology of tribal/non-tribal boundary. This is evident from the spatial co-existence of dominantly tribal villages in close proximity with dominantly non-tribal villages and the pattern is repeated over a considerable distance.

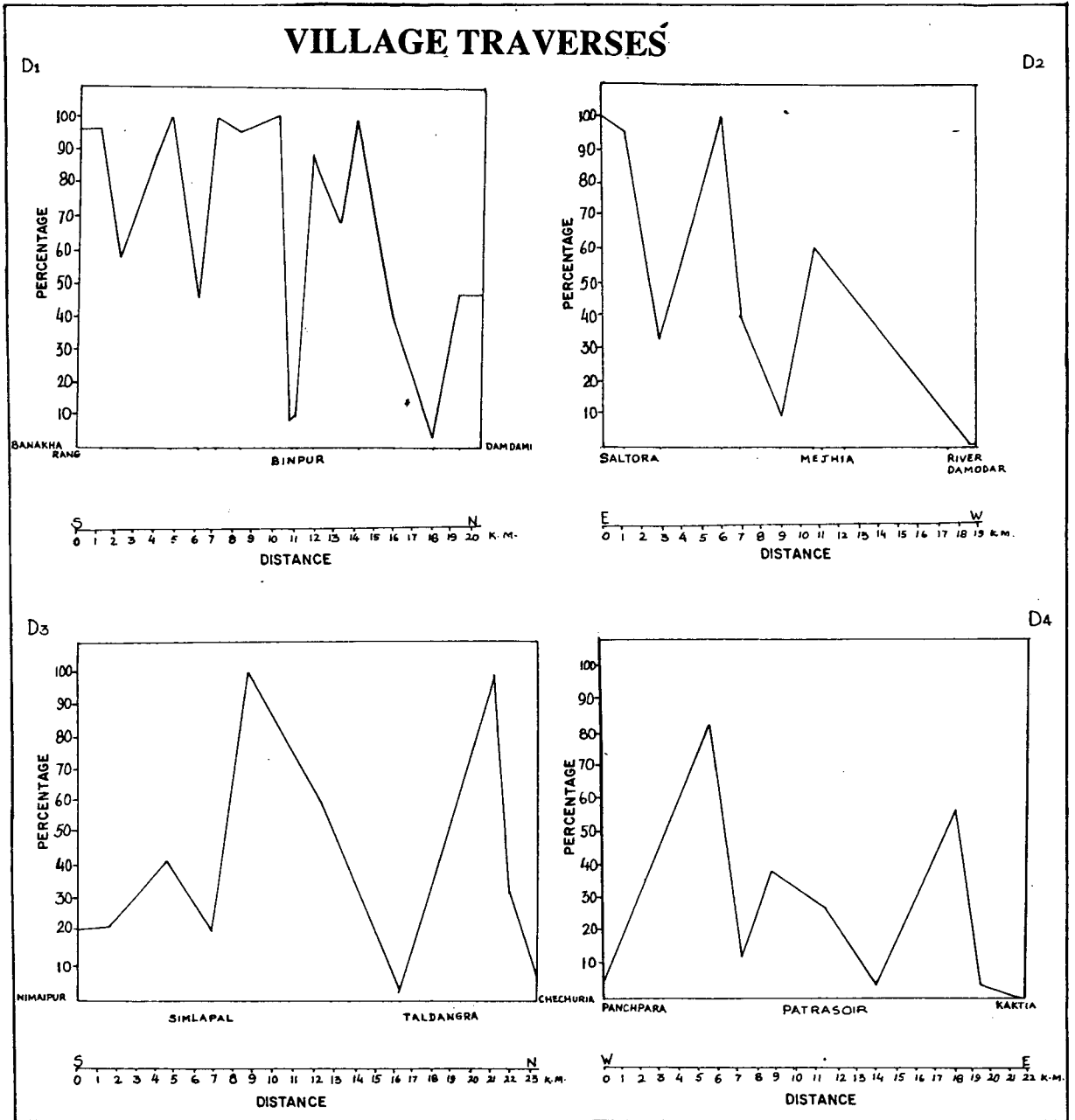


Fig: 4.22

Fig.4.25 D15 for example, shows the profile which passes through two important towns of Medinipur i.e., Kharagpur and Medinipur largely exposed to external forces. At the beginning of the traverse the percentage share of tribal population is slightly over 20 per cent. Within one km., however, it goes upto as high as 100 per cent only to declining trend to a meagre 29 per cent after 1.5 kms. The decline continues for another 2.5 kms. until the share of tribal population comes close to 4 per cent. Thereafter it registers sharp increase and the dominantly non-tribal character is replaced by an exclusive concentration of dominantly tribal villages between 5 and 6 kms. The presence of Kharagpur town transforms the situation in the nearby villages which are nearly devoid of any tribal population and then it gradually rises in proportion between 13th and 14th km. distance. Around the river near Medinipur town the tribal proportion again dips to about 3 per cent. With the increase of distance from Medinipur, towards the northern border of Medinipur police station, the share of tribal population increases gradually. At the eastern end of the line, the villages are exclusively tribal. It may be easily concluded that near the main town of Kharagpur and Medinipur the non-tribal concentration is quite significant while away from the town the presence of tribal dominated villages is the most common feature.

VILLAGE TRAVERSES

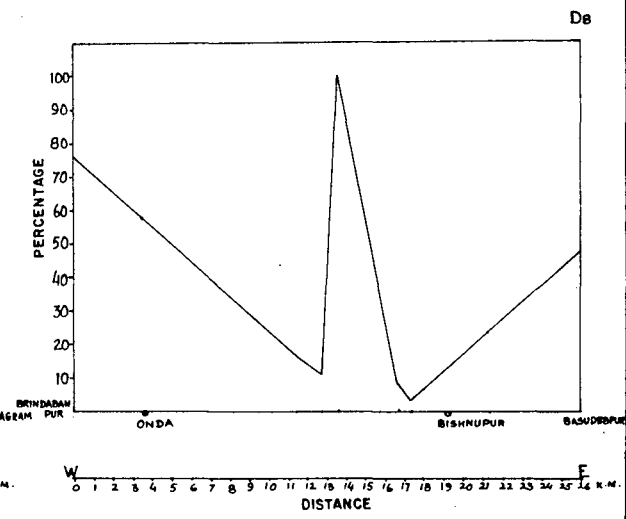
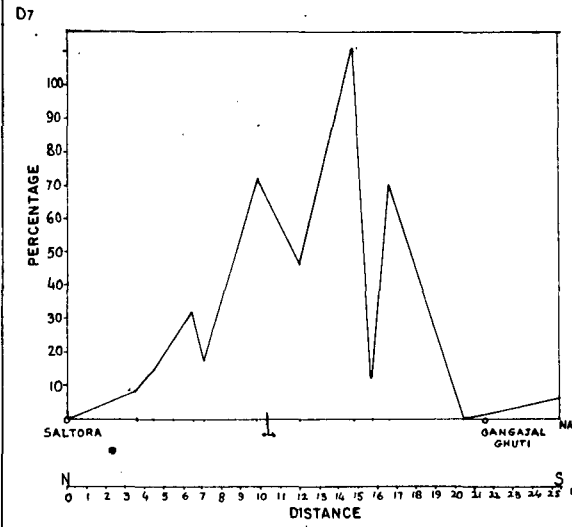
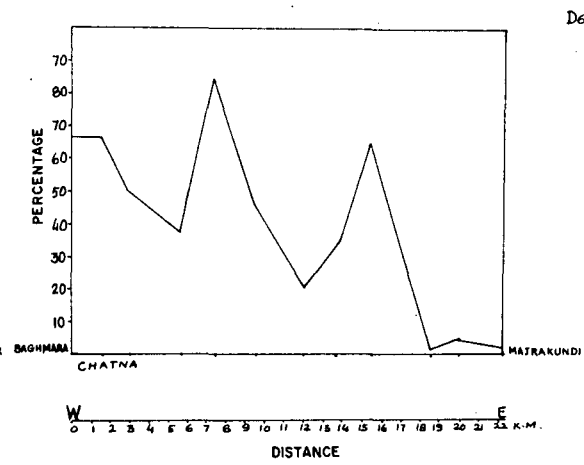
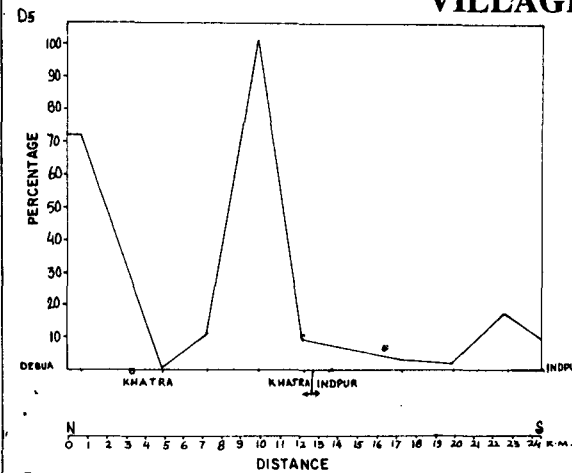


Fig: 4.23

b3f

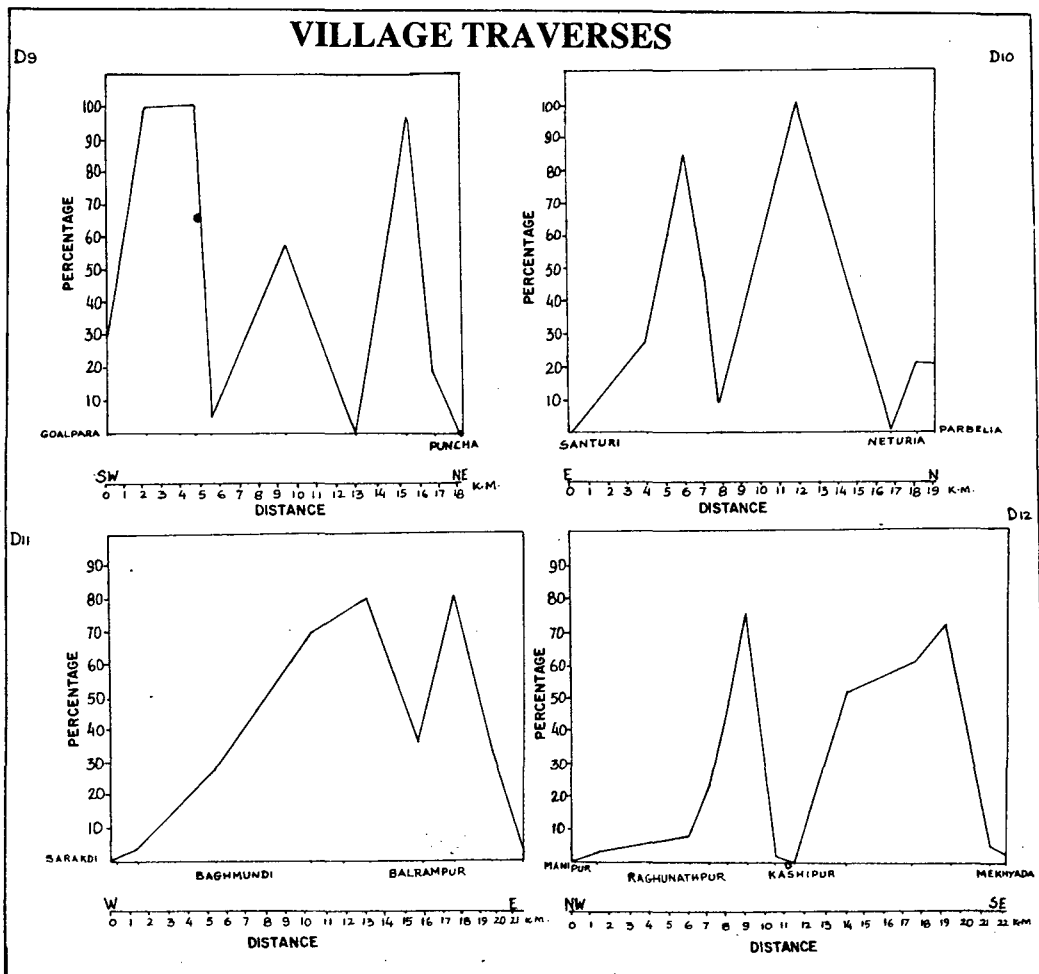


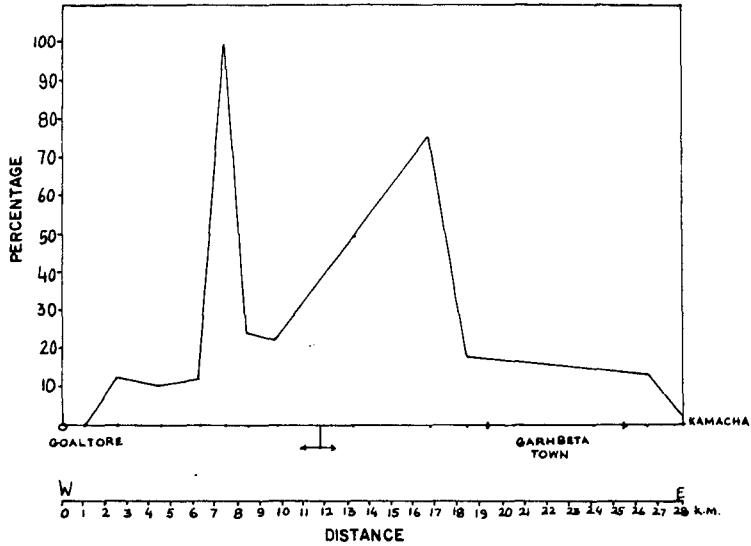
Fig: 4.24

In Fig.4.22 D1, to take another example, the cross-section runs through the tribal dominated villages of Binpuñ, situated in the forested and hilly area. In this cross section, the proportion of tribal segment fluctuates rapidly between 40 per cent and 100 per cent in the first 10 kilometers. However, between 10th and 11th km. the existence of two dominantly non-tribal villages (the scheduled tribe share being around 10 per cent only) marks a sharp break in the continuity. Thereafter the share again rises to as high as 80 per cent to 100 per cent up to 14th km. But the second break occurs after 18th km. again as tribal population accounts for only 4 per cent of the population at this distance. But soon it rises abruptly as evident from a tribal share of 45 per cent at the end of this 20.5 km long traverse. It is clear from this type that the non-tribal penetration into this otherwise tribal-dominated region has taken place at a few selective points resulting in a highly irregular transition in tribal/non-tribal boundary.

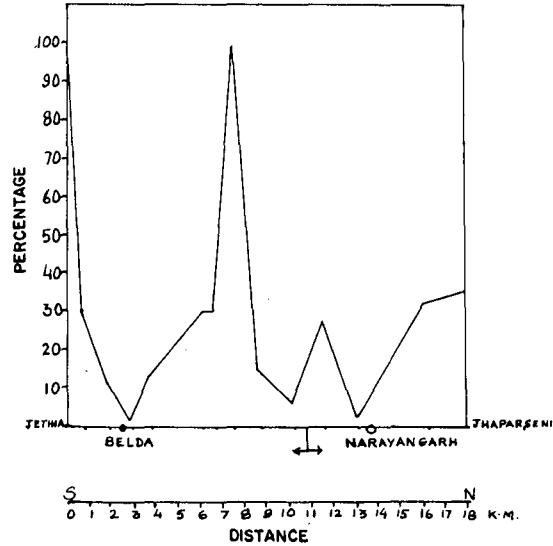
The profile extended from Bandaun thana head-quarter to Man Bazar police station headquarter of Purulia district (fig.4.27 D19) has four villages in the Man Bazar police station with over 70 per cent tribal population. Though Bandaun police station has the highest percentage share of tribal population but the villages around police station

VILLAGE TRAVERSES

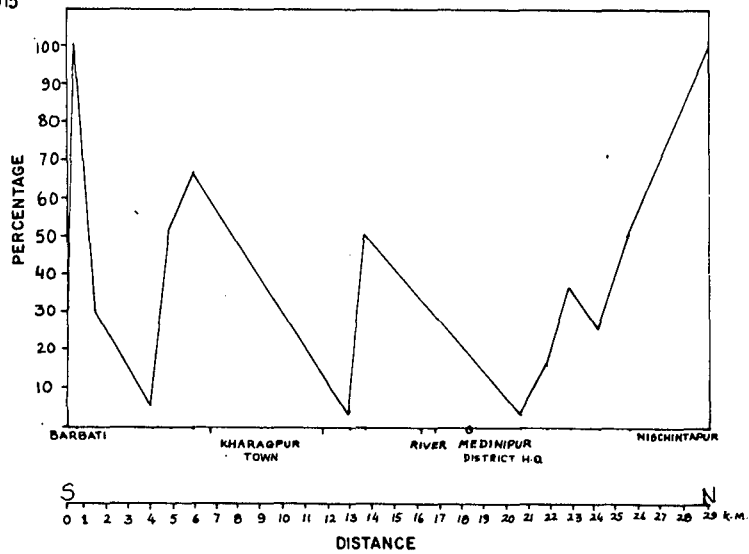
D13



D14



D15



D16

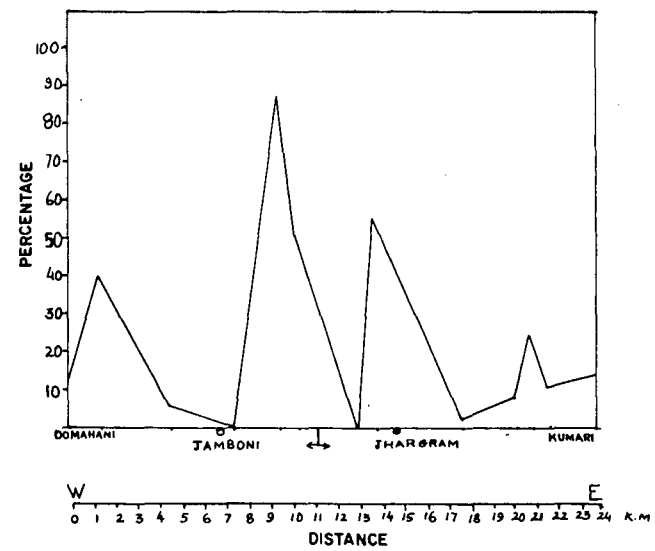


Fig: 4.25

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headquarter show a low level of tribal concentration i.e., ranging between 9 and 40 per cent. Between 12 kms to 17 kms distance in Man Bazar police station, the tribal share in the total population rises to as high as 96 per cent and in a few cases touches 100 per cent mark. However, as in the other examples, the non-tribal character predominates around the thana headquarter where the tribal share declines to 2.45 per cent and marginally increases to 11 per cent only at the end of the traverse. It is clear that there exists a negative relationship between the existence of urban and semi-urban centres and the concentration of the tribal population. Thus it is easy to find a positive association between increasing distance from the towns and the concentration of tribal population.

Fig.4.27 D20 shows the traverse across Bolpur and Illanbazar police station of Birbhum district. In Illambazar, the villages are having very low proportion of tribal population upto 10th kms distance from the starting point. Thereafter for a very long stretch (10th to 14th km) the dominance of tribal population continues with a few villages being fully tribal. The remaining distance between 15 and 21 kms is marked by low overall tribal concentration in the villages but there are important differences with quick rise and fall in the share of the tribal segment.

Fig.4.26 D17 depicts a cross-section in Raipur thana

VILLAGE TRAVERSES

D17

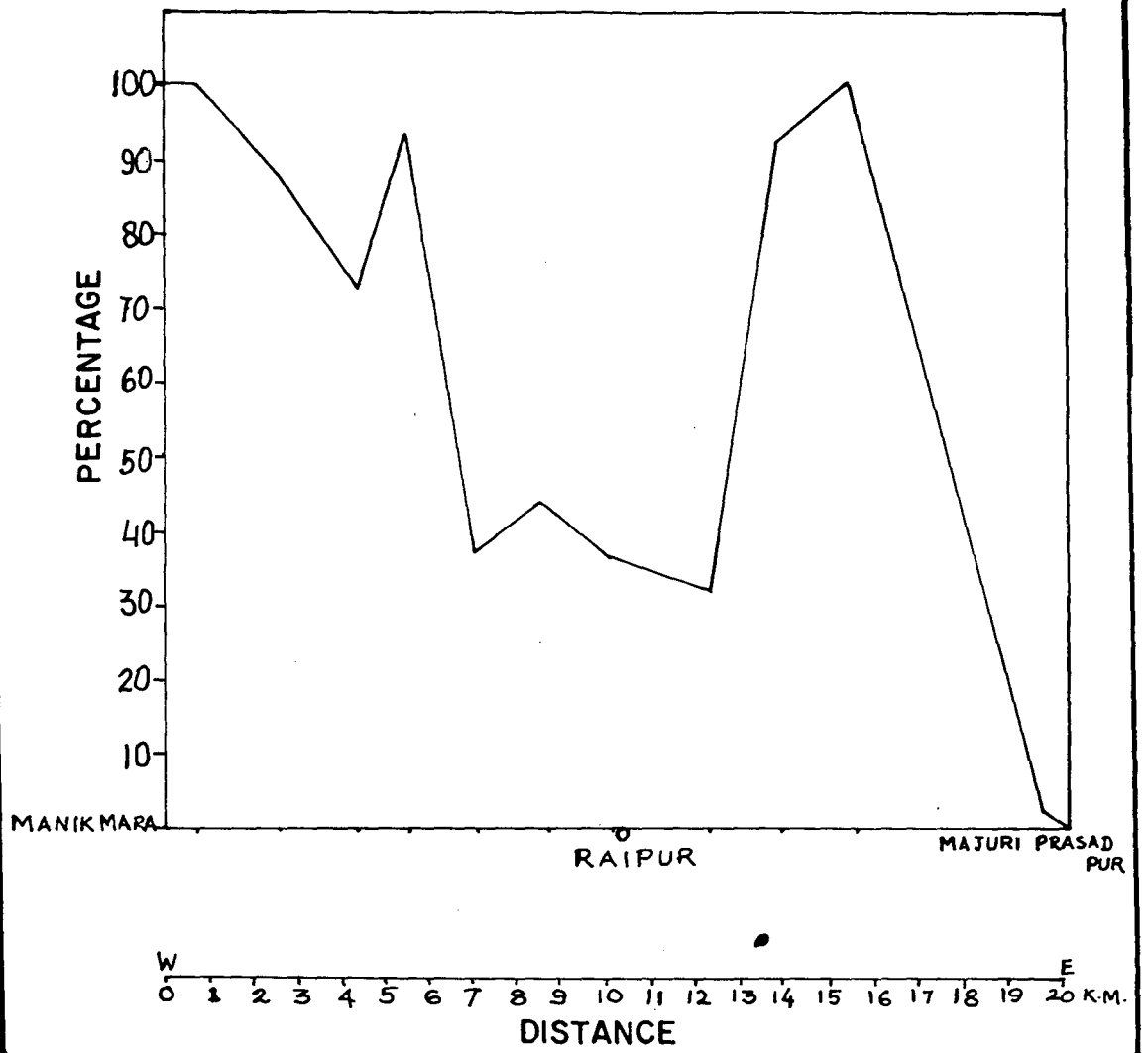


Fig : 4.26

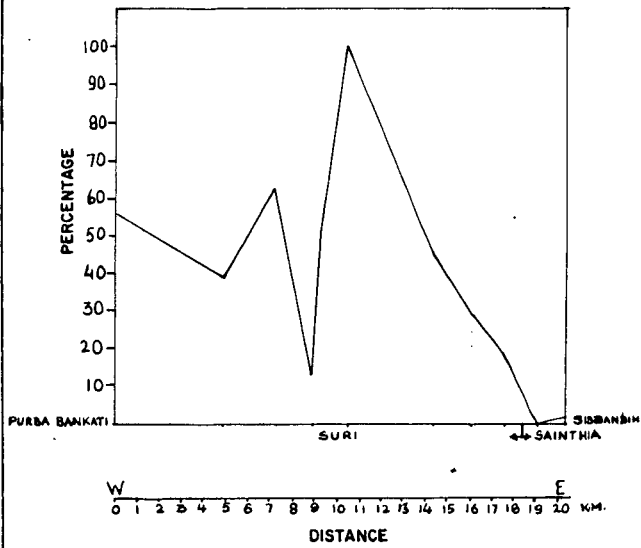
extending through a predominantly tribal area across Kangsabati river. In this example, the Raipur thana headquarter which is situated just besides the river records a proportion of tribal population ranging between 30 per cent to 46 per cent in the distance between 7 km to 13 km. Away from the Raipur thana headquarter however, the share of tribal population increases to over 90 per cent and remains consistently high between 70 per cent to 100 per cent tribal population, the former being located at 0.5 km. distance and later at 16th km. distance from the starting point.

Medium Irregular traverses are indicated by 5 profiles connecting selected villages from these four districts. All these are characterized by several ups and downs and discontinuities. In this type, three traverses are from Birbhum and two from Medinipur (Fig 4.28 D22 to Fig 4.30 D29).

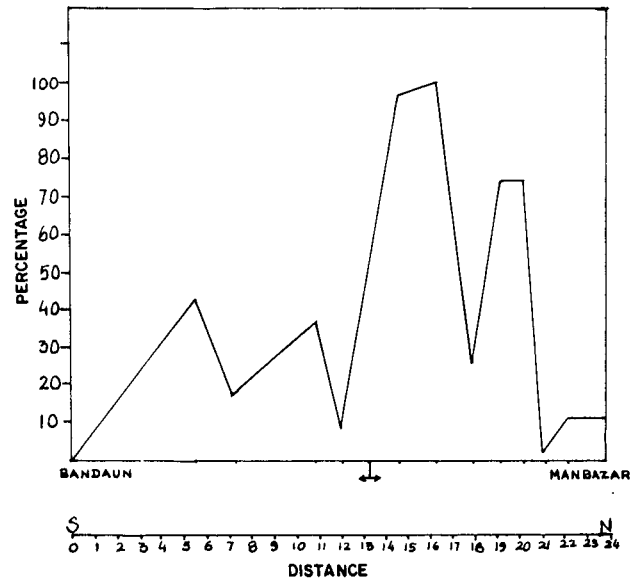
Fig. 4.28 D23 represents one of the irregular type with medium concentration of tribal population. This profile connects the villages of Rampurhat police station of Birbhum including the thana headquarter. The traverse starts with dominantly tribal village but ends with a dominantly nontribal village. In between, the profile has follow the same prototype feature of irregular type of traverses, but the height remains below 70 per cent. Only two villages are

VILLAGE TRAVERSES

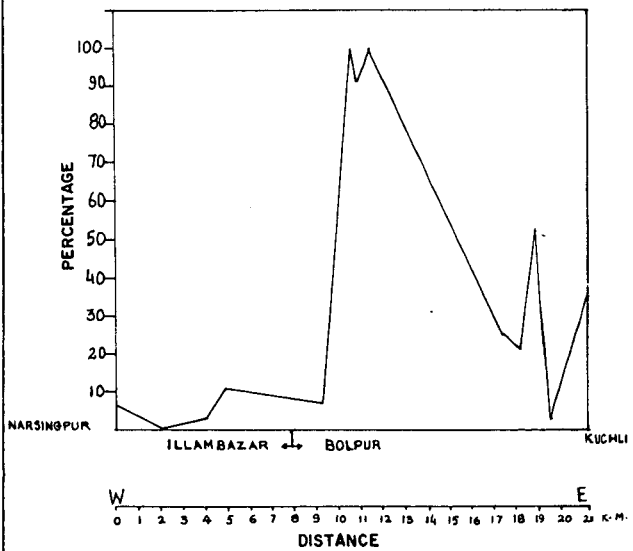
D18



D19



D20



D21

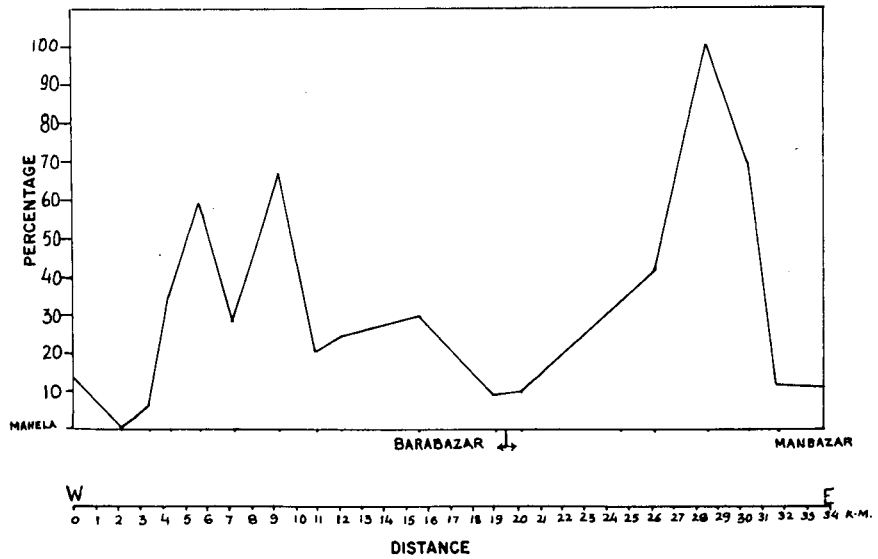
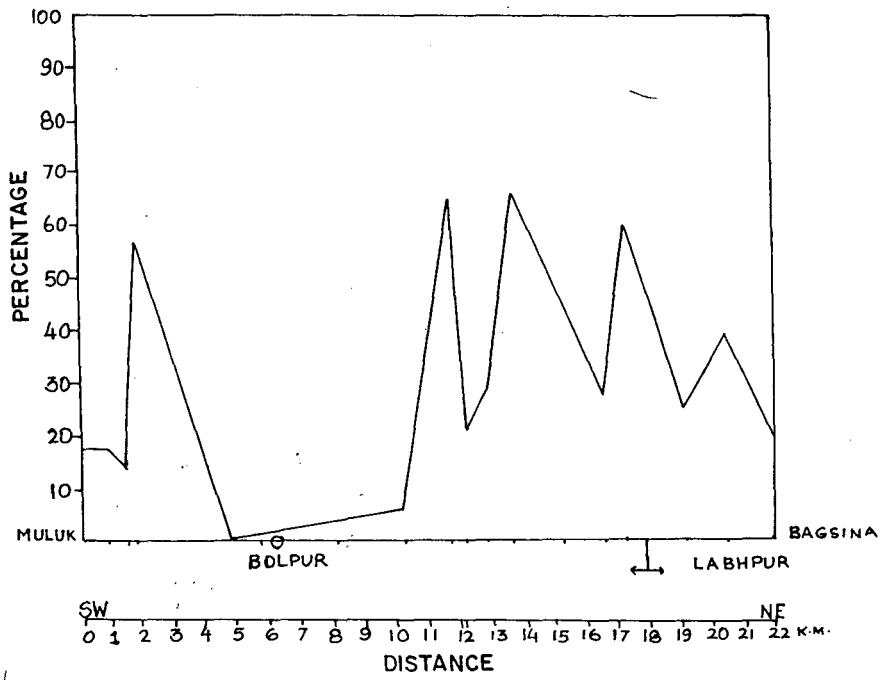


Fig: 4.27

VILLAGE TRAVERSES

D22



D23

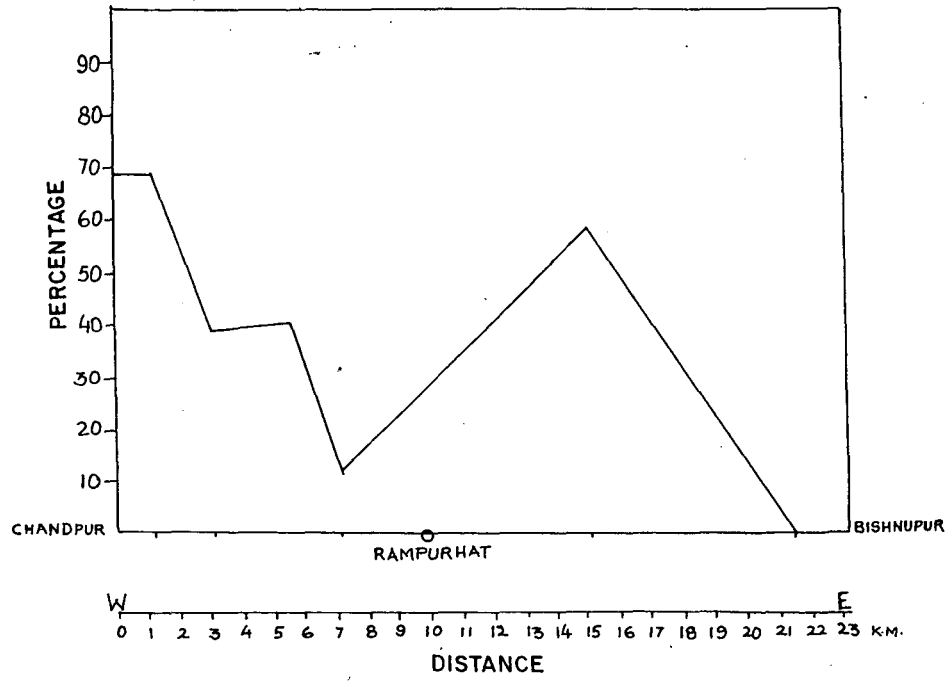
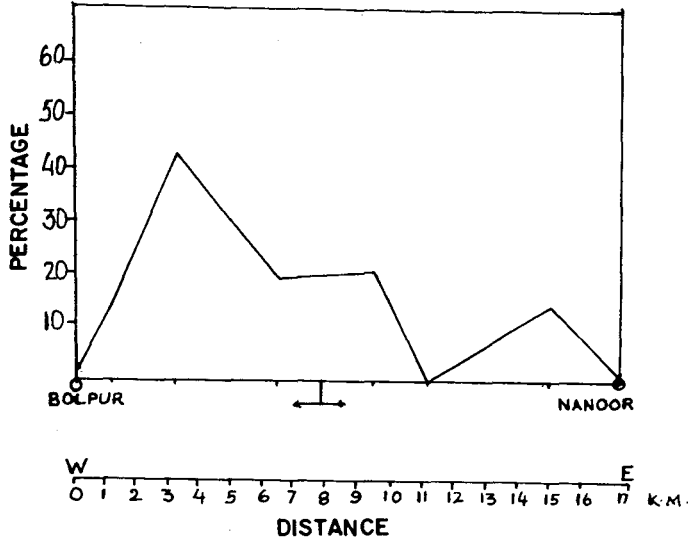


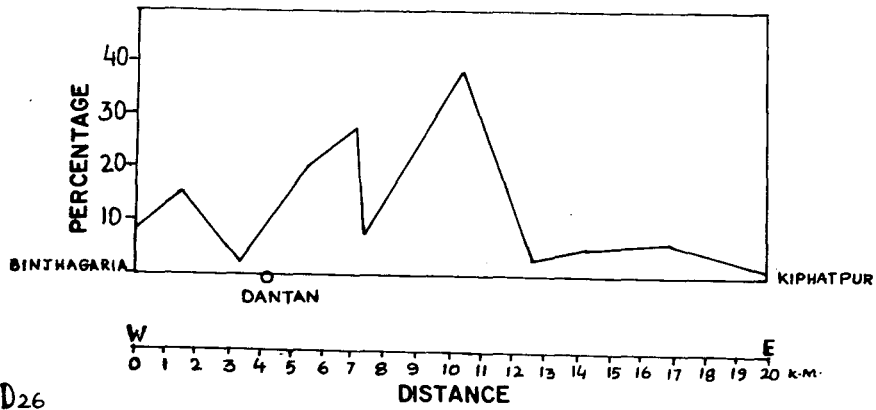
Fig: 428

VILLAGE TRAVERSES

D24



D25



D26

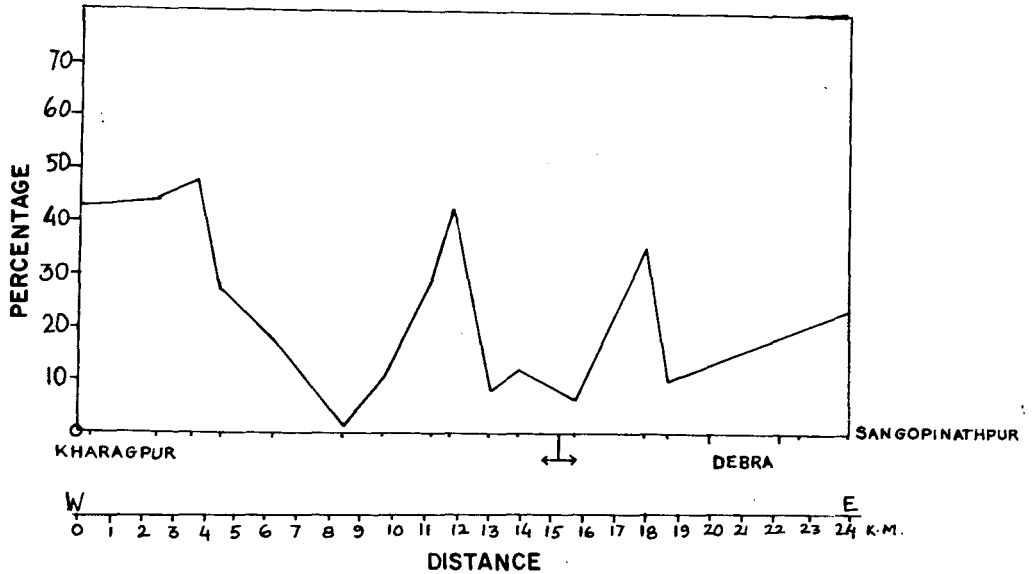


Fig : 4.29

having more than 50 per cent of tribal population, one at the starting point and another at the 15th km. There are two sharp falls one at a distance of 2.8 km and another at the 7th km. It is evident that there is a sharp fall in the share of tribal population near Rampurhat thana headquarter and the proportion increases away from it.

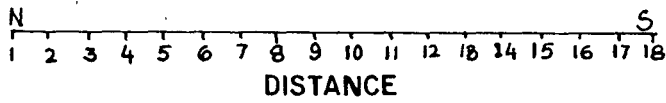
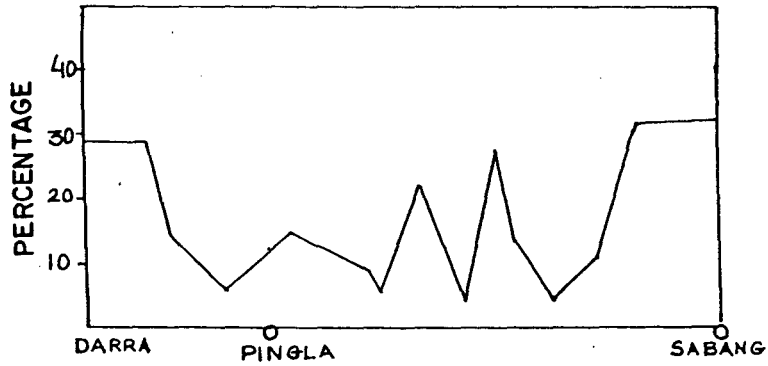
Fig.4.29 D25 runs across the villages of Dantan police station including thana headquarter where the percentage share of tribal population is less than 40 per cent and after a distance of 12.5 km it drops to about 5 per cent. There is no change in the share upto the boundary of Dantan and Belda Thana.

Low Irregular Traverse - As many as 7 traverses are under low irregular type (Fig 4.30 D27 to Fig 4.31 D33). These traverses happen to be located in areas dominated by non-tribal segment of population with only a few villages having a significant concentration of tribal population. Most of these traverses run through the villages of eastern Bankura and coastal thanas of Medinipur. These are mainly agricultural regions which have traditionally been occupied by non-tribal elements. However, a few pockets with significant tribal concentration presents an irregular morphology of the tribal-non-tribal boundary.

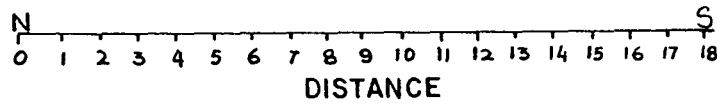
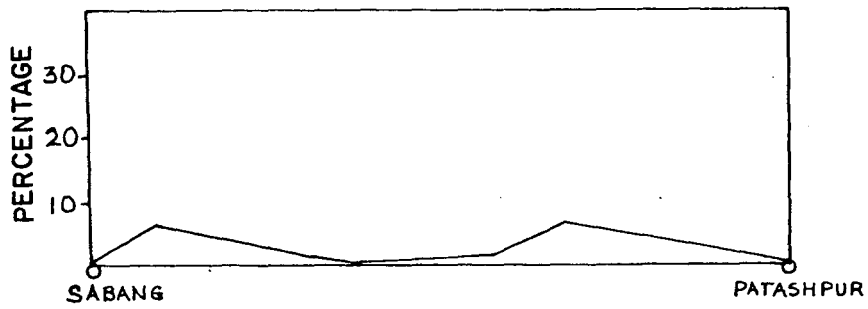
Fig.4.31 - D30 connects Kotalpur and Indpur thana

VILLAGE TRAVERSES

D27



D28



D29

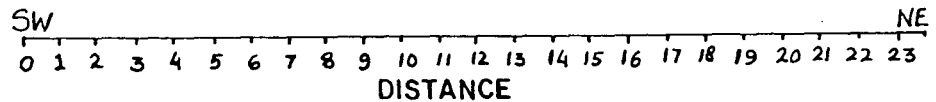
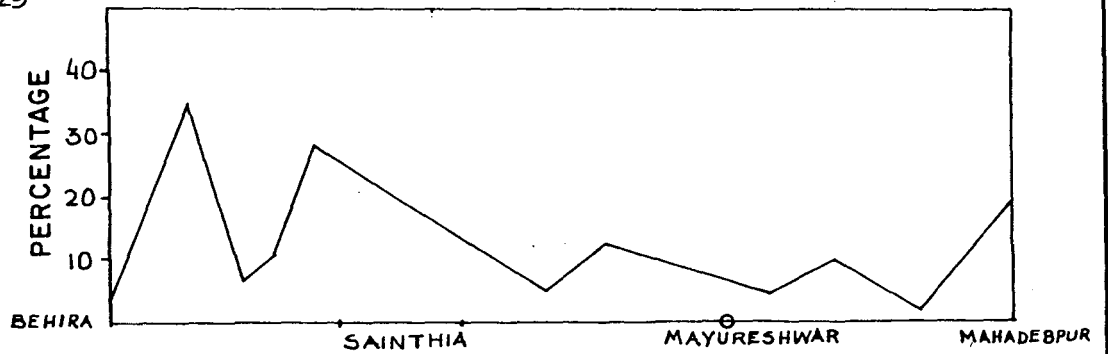
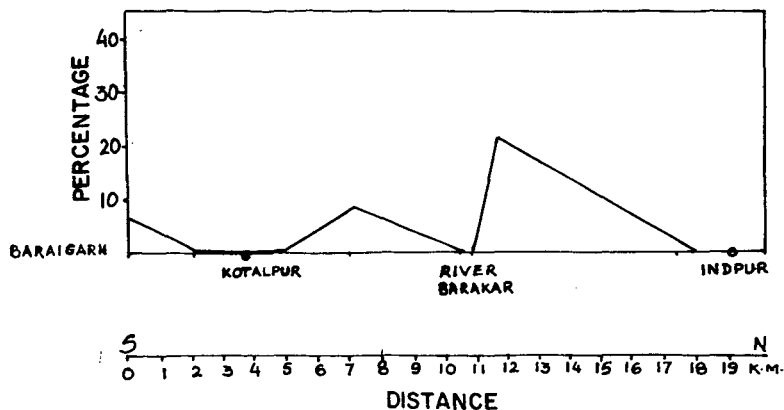


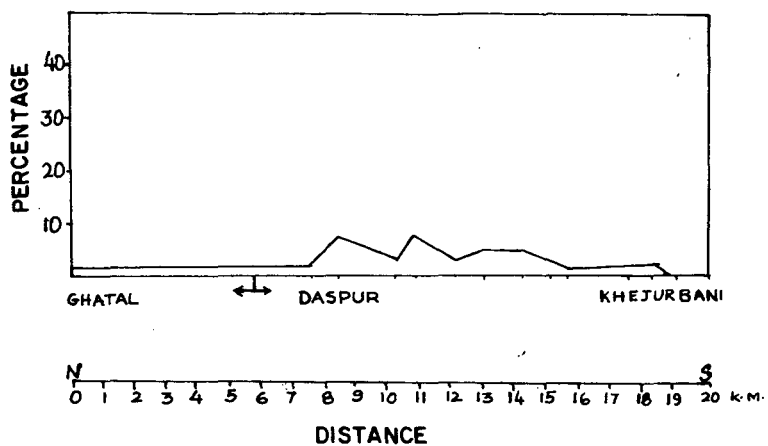
Fig : 4.30

VILLAGE TRAVERSES

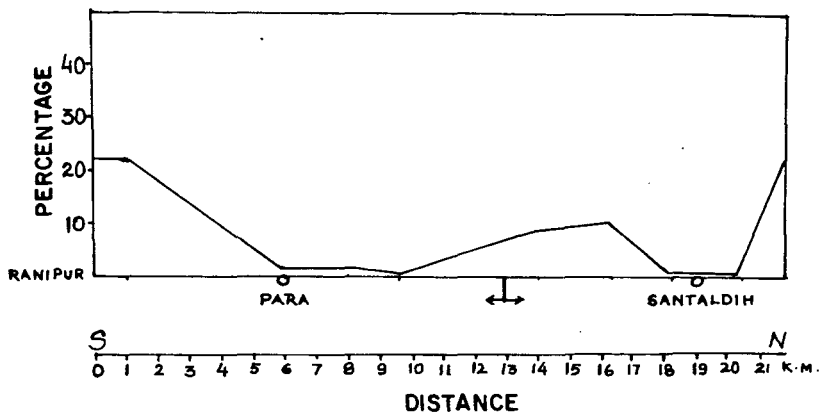
D30



D31



D32



D33

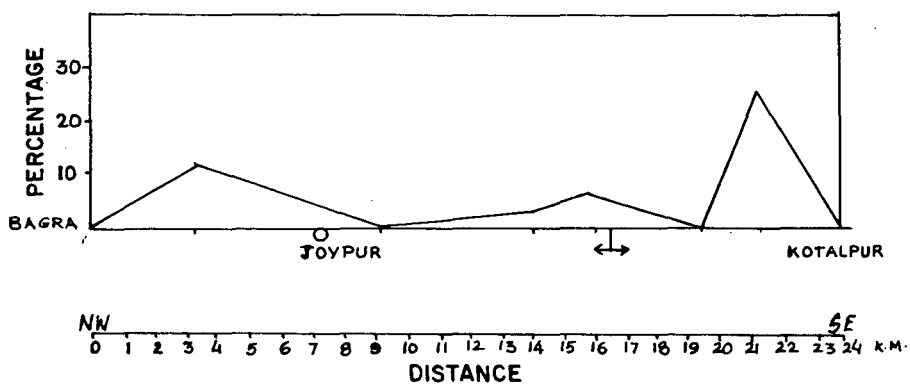


Fig: 4.31

headquarters across Barakar river. It is evident that throughout the traverse only one village has a little over a fifth of total population categorised as scheduled tribe population. In most other villages their share is negligible, i.e., below 1 per cent. These are situated near the Kotalpur and Indpur thana headquarter. Near the Barakar river there is a discontinuity. It started from a non-tribal village (having below 1 per cent share of tribal population) and reaches to the village with a little more than 20 per cent tribal population at the distance of 12th km. from the starting point. At the end of this 20 km. long cross section, the percentage share of scheduled tribe population is as low as 0.16 per cent only.

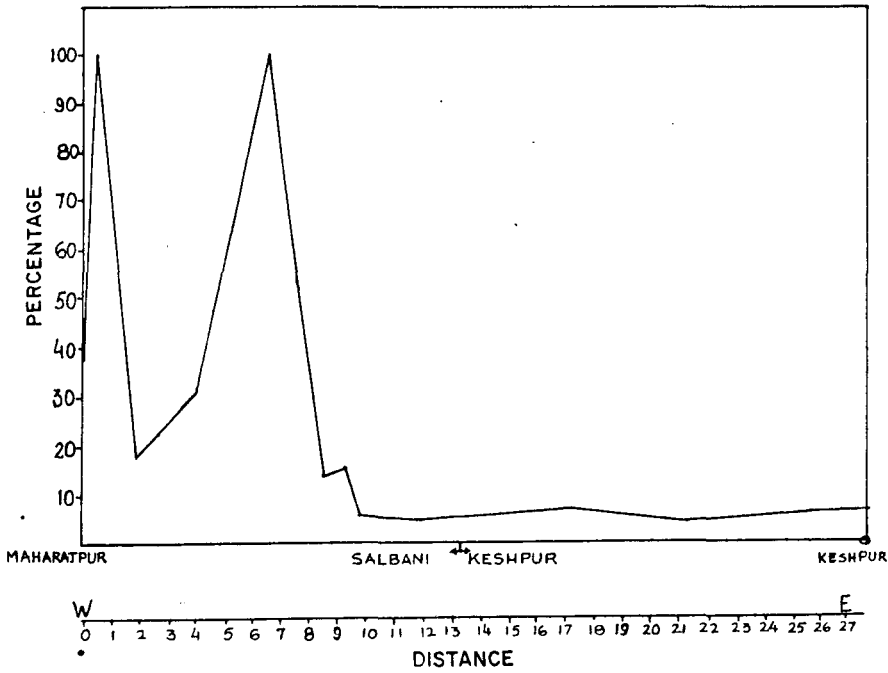
Type - V

This type includes those traverses which do not belong to any one of the above four types, or in other words have some characteristic features of all the four types. As many as 6 traverses are classified as mixed type. These profiles include figures 4.32 and 4.33).

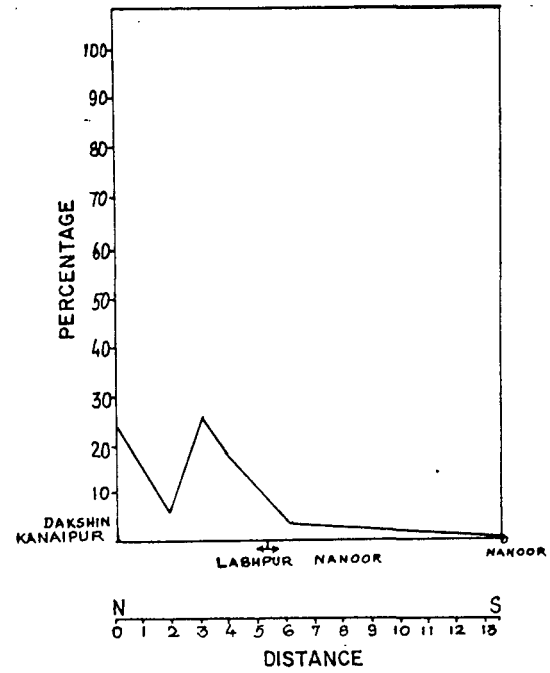
Fig 4.33 E5 may be taken as a representative of this category of traverses for a detailed analysis. This particular traverse starts with a non-tribal village of Suri police station and reaches to 9 per cent at a distance of 3 kms. Thereafter, the percentage share of tribal population

VILLAGE TRAVERSES

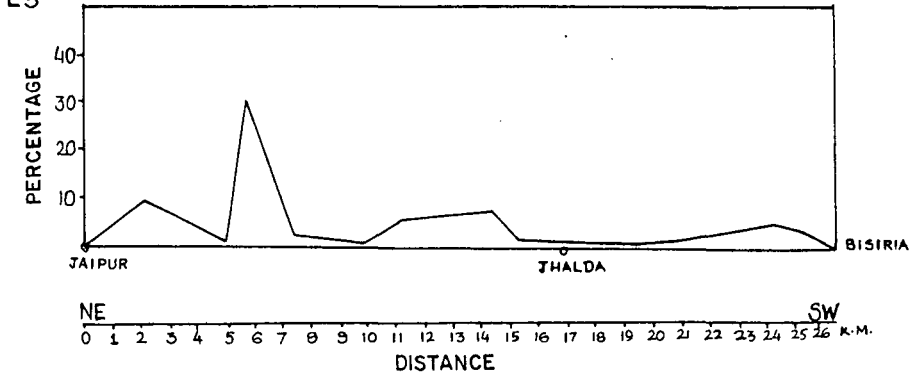
E1



E2



E3



E4

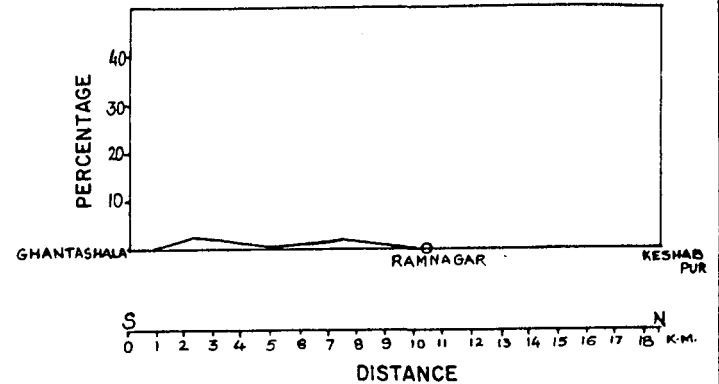


Fig : 4.32

153

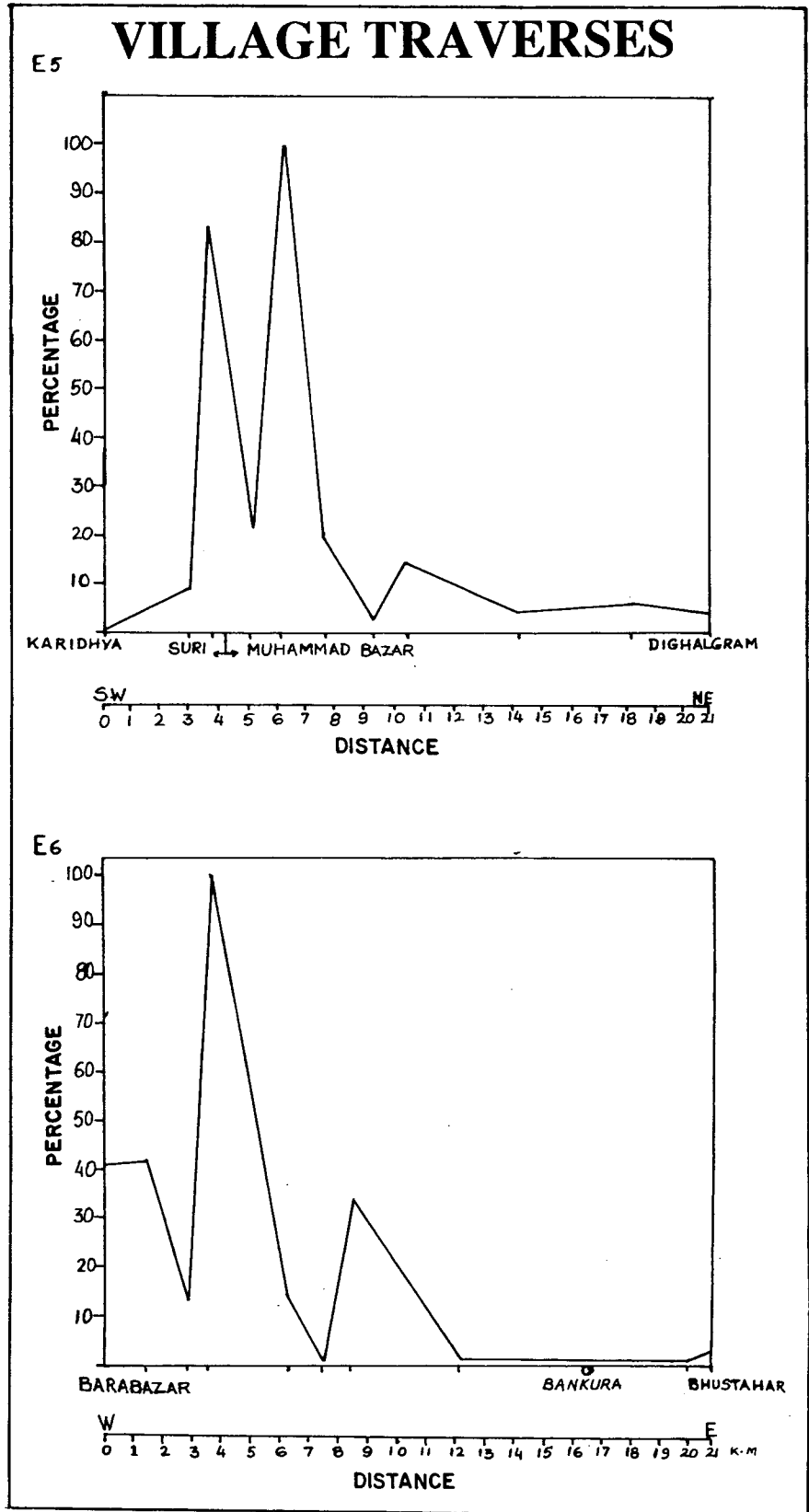


Fig 4.33

rises abruptly, reaching to 83 per cent. Upto 9 km of distance the traverse is experiencing four villages having 20 per cent, 100 per cent, 20 per cent and only 2 per cent scheduled tribe population because of which two more breaks occur at the distance of 5 km and 9km. Since the villages are situated side by side with extremely high and very low tribal population the traverse is having sharp rise and fall with very little gap between them. After 10 kms the villages have only about 5 per cent of the tribal population. Here the traverse is taking the shape of gradual change. Within first 10 kms the characteristics of irregular type can be seen. Other profiles of this series have more or less similar features.

A SUMMARY OF CONCLUSIONS

5.1 In this dissertation a modest attempt has been made to understand the pattern of spatial distribution of Scheduled Tribes in the selected districts of West Bengal using village level data as the basis for the identification of the spatial pattern of distribution. The dissertation explores the idea whether tribes remain clustered in isolated pockets or the traditional tribal habitat has been penetrated by peasant communities who have outnumbered the tribes. The spatial pattern will thus reveal the real nature of the boundary, if any, between the clusters of tribal settlement and those of the general population.

The objective of the exercise was to understand the nature of spatial distribution of tribes and non-tribes at micro level as aggregative pictures at macro-level conceals the intricacies of tribal/non-tribal interaction existing at sub-regional and local levels. It must be admitted, however, that the present exercise was only limited to the examination of distributional aspect and did not examine the nature of interaction per se. Nevertheless, the morphology of tribal/non-tribal boundary, identified in the course of analysis

would enormously help geographical understanding of the diverse nature of interactions between the tribes and the non-tribes in the overall context of changing socio-economic parameters of the society in India today.

5.2 The study was conducted in a cluster of four districts, Purulia, Bankura, Medinipur and Birbhum, all in West Bengal. These districts have the highest concentration of Scheduled Tribes in the population i.e. 18.79 per cent, 10.55 per cent, 7.99 per cent and 6.92 per cent respectively. The significance of selecting these districts lies in the fact that they are located on the eastern margin of the mid-Indian tribal belt which traditionally has been the homeland of tribes. The study area also has a heterogenous ecological milieu, including plateau, marginal plain and coastal areas having different potential for agricultural pursuits. The region has also received differential impact of developmental processes leading to redistribution of population. A glimpse at the history of this region indicates substantial outmigration of tribes and immigration of non-tribal elements into the region. This has modified the nature of population composition and disturbed the original pattern of distribution of tribal population.

- 5.3 The distribution of tribes depends on the physiographic characteristics as well as economic base of this region. According to the physiographic variations, this region is divided into four subdivisions, e.g. Plateau proper, Plateau fringe, marginal plain and coastal plain. The region is characterised by rugged terrain, as a part of chotanagpur plateau and vindhyan hills in the west, covering Purulia, Western Bankura, Western Birbhum and large part of Western and Central Medinipur. Some parts of these districts are covered by dense forest while some other areas have a barren surface and uncultivated land. This region is drained by a number of rivers some of which are mainly rainfed. These rivers become dry and drought is a regular phenomenon in every year while during monsoon all these rivers with their tributaries cause dangerous floods.
- 5.4 The economic life of the people centres around agriculture. The region has a substantial area under forest particularly in Purulia and Bankura and northern Medinipur. Industrial development has not been spectacular. Only one large industrial establishment is located at Haldia in Medinipur district. Other smaller establishments are found in Bishnupur and Bankura, famous for silk industry and terra cota and other cottage industries.

Except Kharagpur and Medinipur, there are no large towns in these districts. The level of urbanization is rather low. However, there are many small urban centres, mainly of administrative nature, such as district and thana headquarters.

5.5 Against this background, the distribution of scheduled Tribes at the level of various units reveals interesting patterns. At the district level, the Scheduled tribes accounted for less than 20 percent of the total population. This share may be highly negligible from numerical point of view. However, the analysis at thana and village levels shows a high degree of clustering and concentration of Scheduled Tribes.

In at least one thana the Scheduled Tribes are in majority and they account for a share ranging between 20 per cent and 50 per cent in over one-fourth of all police stations. On the other hand, they have a negligible share in about a third of all police stations. Moreover, about 60 per cent of the Scheduled Tribes live in those 24 police stations where their proportion in the population exceeds 20 per cent. These facts reveal the nature of concentration of tribal population in a few police stations particularly

in the tracts which are hilly and forested. The police stations in the plain areas, including coastal areas, generally plain, account for a very negligible proportion of tribal population.

The analysis at the village level is perhaps most revealing, reflecting a fairly high degree of concentration. Even in police stations where the tribes account for a marginal share of the population, there are villages having a very large segment of tribal population. Many villages are exclusively tribal in their composition, accounting for nearly 10 per cent of all villages. Around 17 per cent of the villages are overwhelmingly tribal while tribes are a dominant segment in another 36.5 per cent villages. On the other hand, there is a vast number of villages which do not have any tribal population. This leads to the conclusion that at lower units of analysis, the distribution of scheduled tribes shows a high degree of concentration and clustering.

An attempt to identify regions of tribal concentration in sample police-stations using village level data showed highly fragmented picture with pockets of very high concentration surrounded by non-tribal villages. However, clusters of villages with a very high

proportion of tribal population were also found, particularly in police stations having the highest concentration of tribal population. These patterns clearly established the fact that villages around towns had low share of tribal population. Villages in the forested tracts and plateau areas generally showed a higher concentration of tribal population. Thus a negative relationship between tribal concentration and urban centres and a positive association between proportion of tribes and terrain as well as area under forest were well-established.

5.6 The morphology of tribal/non-tribal boundary was examined with the help of a number of village traverses selected on the basis of different locational characteristics. The analysis showed that the morphology assumes diverse patterns .

In most cases, the pattern is transitional in nature and dichotomous relationship is largely absent. Considering the bewildering variety of the morphology existing in the forms, an attempt was made to classify them and five broad types were identified.

- Type I : Tribal proportion declining abruptly
- Type II : Tribal proportion declining gradually
- Type III : Tribal proportion remaining regular over some distance

- Type IV : Proportion of tribal population fluctuating in an irregular manner, and
- Type V : Mixed or unclassified.

In the largest number of traverses the tribal proportion was found to be fluctuating in an irregular manner followed by traverses which showed gradual and abrupt changes in the proportion of tribal population. In most cases, therefore, the morphology of tribal non-tribal boundary showed overlap and penetration. Only in a few cases, most of these in the dominantly non-tribal areas, there exists some kind of a mutual exclusivity over space between tribes and non-tribes. What seems to be mutual exclusivity at the aggregative level, no more holds true at the village level. The processes of change have affected the tribals forcing them migrate out of their areas of concentration as well as attracting non-tribal elements into dominantly tribal areas. The village traverses also confirm the observation that the share of tribal population dropped significantly in villages near the towns and in plain areas.

The findings in the study may not be adequate to conclude anything regarding the situation of tribal/non-tribal interaction. However, it is hoped, that this may be an input to more intensive study in

this direction. The study merely looked at one of the dimensions of the problem in social geography. It will be worthwhile to examine many of the issues, raised by this dissertation through systematic field work.

APPENDIX - (i)

Police Stations covered in the study Area:

<u>BIRBHUM</u>	<u>Location Code</u>
MURARO I	1
NALHATI	2
RAMPURHAT	3
MAYURESWAR	4
MUHAMMAD BAZAR	5
RAJNAGAR	6
SURI	7
SAINTHIA	8
LABHPUR	9
NANOR	10
BOLPUR	11
ILLAMBAZAR	12
DUBRAJPUR	13
KHAYRASOLE	14
<u>PURULIA</u>	
NETURIA	15
SANTURI	16
RAGHUNATHPUR	17
SANTALDIH	18
PARA	19
KASHIPUR	20
HURA	21

PURULIAMUFFASIL	22
ARSHA	23
JHALDA	24
JAIPUR	25
BAGHMUNDI	26
BALARAMPUR	27
BARABAZAR	28
PUNCHA	29
MANBAZAR	30
BANDHUN	31
<u>BANKURA</u>	
SALTORA	32
MEJHIA	33
GANGAJALGHATI	34
BARJORA	35
SONAMUKHI	36
PATRASAIR	37
INDAS	38
KOTALPUR	39
JAYPUR	40
BISHNUPUR	41
BANKURA	42
CHATNA	43
INDPUR	44
ONDA	45

TALDANGRA	46
SIMLAPAL	47
RAIPUR	48
KHATRA	49
RANIBANDH	50
<u>MEDINIPUR</u>	
BINPUR	51
GOALTORE	52
GARHBETA	53
CHANDRAKONA	54
GHATAL	55
DASPUR	56
PANSKURA	57
TAMLUK	58
MAHISADAL	59
SUTAHATA	60
DURGACHAL	61
HALDIA	62
NANDIGRAM	63
KHEJRI	64
CONTAI	65
RAMNAGAR	66
DIGHA	67
EGRA	68
MOHANPUR	69

PATASHPUR	70
BHAGWANPUR	71
MOYNA	72
SABANG	73
PINGLA	74
DEBRA	75
KESHPUR	76
SALBANI	77
JHARGRAM	78
JAMBANI	79
GOIBALLAVPUR	80
NAYAGRAM	81
SANKRAIL	81
KESHIARI	83
DANDAN	84
BELDA	85
NARAYANGARH	86
KHARAGPUR	87
MEDINIPUR	88

SELECT BIBLIOGRAPHY

BOOKS

1. Bailey, F.G. 1960 Tribe, Caste and Nation
Bombay, Oxford University Press
2. Beteille, A 1974 Six Essays in Comparative Sociology
Oxford University Press,
London, New York.
3. Bhowmik, P.K. 1963 The Lodhas of West Bengal
Calcutta.
4. Bhowmik, P.K. 1976 Socio Cultural Profile of Frontier Bengal Calcutta.
5. Bhowmik, P.K. 1980 Some Aspects of Indian Anthropology.
Subernarekha Pub., Calcutta.
6. Bose, N.K. 1972 Anthropology and Some Indian Problems
Institute of Social Research &
Applied Anthropology
Calcutta University, Calcutta.
7. Bose N.K. 1973 Some Indian Tribes
National Book Trust, India,
New Delhi.
8. Bose, P.K. 1985 Class and Class Relations Among Tribals of Bengal
Ajanta Publications, Delhi.
9. Bose, S.C. 1968 Geography of West Bengal.
National Book Trust, India
New Delhi.
10. Chatterjee, A.B. 1970 West Bengal
Gupta A and
Mukhopadhyay P. A publication of the
Geographical Institute,
Presidency College, Calcutta
FARMA B.L. Pub.
11. Chatterjee, S.K. 1974 Kirate Janakriti
Asiatic Society, Calcutta.

12. Chattopadhyay, Kanta Devi 1978 Tribalism in India
Vikas Pub.Pvt.Ltd., New Delhi.
13. Chattopadhyay.K.P.1970 The Ancient Indian Culture, Contacts and Migration
Calcutta.Firma K.L.Mukhopadhyay
14. Choudhary, B(ed) Tribal Development in India
New Delhi.
15. Chandhary, M. 1977 Tribes in Ancient India
Calcutta.
16. Dalton, E.JT 1872 Descriptive Anthropology of Bengal
Calcutta Suptd.Govt.Printing.
17. Dubey, S.C. 1977 Tribal Heritage of India Vol I
Indian Institute of Advanced Studies, Vikas Publishing House Pvt.Ltd.
18. Dutta, S.C. 1984 Wild Tribe. Delhi.
19. Ghosh, Sachindra Lal 1976 West Bengal
New Delhi.
20. Ghurye, G.S. 1943 The Aborigins So Called and Their Future
Gokhale Institute of Politics & Economics.
Poona.
21. Ghurye, G.S. 1959 The Scheduled Tribes
Popular Book Depot, Bombay.
22. Jha, J.C. 1964 The Kol Insurrection of Chhotanagpur
Calcutta.
23. Kattakayan,J.J. 1983 Social Structure and Change Among the Tribals
D.K.Publications, Delhi.
24. Kosombi, D.D. 1975 An Introduction to the study of Indian History
Popular Prakashan, Bombay.

25. Kosambi, D.D. 1983 Myth and Reality - Studies in the Formation of Indian Culture
Popular Prakashan, Bombay.
26. Kothari, K.L. 1985 Tribal Social Change in India
Himanshu Publications, New Delhi.
27. Mandal, B.B. and Sachidananda 1985 Industrialisation and Social Disorganisation
Concept Publication, New Delhi.
28. Mandalbum, D.G. 1970 Society in India,
Popular Prakashan, Bombay.
29. Mazumdar, R.C. et. al. 1970 An Advance History of India
(3rd Edition), London.
30. Mishra, B.P. 1976 Socio-Economic Adjustment of Tribals.
P.P.H., New Delhi
31. Mishra, K.C. 1987 Tribes in Mahabharata: A Socio Cultural Study
National Publishing House,
New Delhi
32. Patel, M.L. 1974 Changing Land Problems of Tribal India,
P.P.H., Bhopal.
33. Pathy, J. 1984 Tribal Peasantry - Dynamics & Development
Inter India Publications,
New Delhi
34. Otsnd, Martin , 1965 The Santhals - A Tribe in Search of a Great Tradition,
Detroit Wayne University Press.
35. Raza, Moonis; Ahmad, A. et.al. 1990 An Atlas of Tribal India,
Concept, New Delhi, 1990.
36. Risley, H.H. 1891 Tribes and Castes of Bengal - Ethnographic Glossary
Firma K.L. Mukhopadhyay,
Calcutta
37. Risley, H.H. 1915 People of India
London.

37. Schwatzberg, J.E. 1978 Historical Atlas of South Asia
The university of Chicago Press
Chicago & London.
38. Sen, A.K. 1971 West Bengal-An Analytical Study
Oxford & BH Publishing Co.,
Calcutta.
39. Singh, Chib Sukhdev 1980 This Beautiful India-West Bengal
Light and Life Publishers'
New Delhi.
40. Sinha, Surajit and Sharma B.D. 1977 primitive tribes
Ministry of Home Affairs, N.Delhi
41. Spati, O.H. 1954 India & Pakistan- A regional & General Geography. London
42. Subba Rao, B. 1958 The Personality of India. Pre & Proto Historic Foundation of India and Pakistan.
M.S. University, Archeology
Series No-3.
43. Vidyarthi, L.P. 1970 Socio Cultural Implications of Industrialisation in India. A case Study of Tribal Bihar:
Council of Social and Cultural
Research, Ranchi.
44. Vidyarthi, L.P. 1978 Rise of Anthropology in India.
Concept Publishing Company,
Delhi.
45. Vidyarthi, L.P. and Rai, B.K. 1973 The Tribal Culture of India
Concept Publishing Company,
Delhi.

ARTICLES

1. Adhikary, A.K. 1984 "Hunters and Gatherers in India a Preliminary Appraisal of Their Structure and Transformation" Journal of the Indian Anthropological Society, Vol. 19 No.1 March. pp. 8-16.
2. Ahmad, A. 1984 "Regional Development Process and Redistribution of Tribal Population in Mid India" in Kosinski, L.A. and Elahi, K.M. (ed.) Population Redistribution & Development in South Asia.
3. A. Ahmad 1985 "Regional Development Policy and Redistribution of Tribal Population in India. UGC Workshop in Research Methods in Regional and Urban Planning, Centre for the study of Regional Development, J.N.U., New Delhi.
4. Apte, B.P. 1971 "Need for a Change in Emphasis of Village Studies in Tribal Areas" in P.C. Goswami (ed) Socio Economic Research in Tribal Areas, Seminar Paper, Jorhat.
5. Basu, Partha 1984 "Laterites of Medinipur" Geographical Review of India March, Vol. 46, No.1, pp.57-62.
6. Betal, Himanshu 1989 "Impact of Socio-Economic Facilities on the Distribution of Population in Medinipur District" Geographical Review of India, March, Vol. 46, No. 1, pp. 75-81.
7. Bhowmik, P.K. 1953 "Tribal Situation in West Bengal" Indian Anthropologist, June, Vol. 5, No. 1, pp. 1-20.
8. Bose, N.K. 1953 "The Hindu Method of Tribal Absorption" in N.K. Bose (ed) Cultural Anthropology and Other Essays. Indian Associated Publishing Company Ltd.
9. Bose, P.K. 1978 "Proletarianization of Agricultural Labourers: A Sociological Study of Some Villages in Bengal. Indian Journal of Labour Economics, Vol.20, No. 4a.

9. Cambell, J. 1866 "Ethnology of India" Journal of Asiatic Society of Bengal. Vol 35, Supplementary number Part-2 pp 1-152
10. Chaudhuri, K.K. & Chakraborty, S.M. 1974 "Tribe Caste Interactions in a Bengal Village" Indian Anthropologist. December Vol 4 No 1
11. Dand, A.K. 1988 "Tribes in India" Man in India, Dec., Vol. 68 No. 4 pp-313-334.
12. Dass Nityananda 1972 "National Projects and Displacement of Tribals" in K.S. Singh (ed) Tribal Situation in India, Indian Institute of Advanced Studies, Simla.
13. Das, A.K., Roy Choudhary, B. & Radha, M.K. 1966 "The Malpaharia of West Bengal" Bulletin of the Tribal Cultural Research Institute Tribal Welfare Department, Govt. of West Bengal. Calcutta.
14. De Barun 1990 "West Bengal: A Geographical Introduction" Economic and Political Weekly Vol XXV Nos 18-19 May 5-12. pp-995-1000.
15. Desai, A.R. 1969 "Tribes in Transition in A.R. Desai (ed) Rural Sociology in India, Popular Prakashan, Bombay. p-22.
16. Desai, A.R. 1977 "Tribes in Transition" in R. Thapar (ed), Tribes Caste Religion, Macmillan, Delhi.
17. Goswami, A.K. & Das, A.L. 1984 "Impact of Landscape on Soils- A case Study of Bankura district (West Bengal)" Geographical Review of India. Calcutta Vol-46. pp-51-57
18. Gupta, S.K. 1970 "Soils of West Bengal" in Chatterji, A.B. and Mukhopadhyay (ed) West Bengal, Firma K.L. Mukhopadhyay, Calcutta.
19. Hainemdor, C.U.F. "Tribal Problems in India" in Ramesh Thapar (ed) Tribe, Caste & Religion in India Macmillan India Ltd., Delhi.

20. Jaisawali, N.K. 1969 "Attitudes Towards Agricultural Developments Among Tribal and Non-Tribal People" in Man in India, July-Sept, pp-267-280.
21. Jay, Edward 1974 "A Comparison of Tribal and Peasant Villages in India" Journal of the Indian Anthropological Society Vol 9 No.1 p-39-69.
22. Jha, Vivekananda 1974 "From Tribes to Untouchables- the Cases of Nisadar" in R.S. Sharma and V.N. Jha (ed) Indian Society Historical Profings
23. Khittar, V.R.R. "Gold in the Territory Basin of West Bengal, Bihar and Orissa" in Indian Mining Journal Vol a No-8, pp-9-10.
24. Mishra, P. 1983 "The Village as Unit of Investigation", Social Scientist Vol 2, No.6 Pune.
25. Mitra, S. 1976 "Growing Distribution and Occupational Pattern of Tribal Population of India", Journal of the Indian Anthropological Society No-11, Vol-3, Nov., pp-137-150.
26. Nag, N.G. 1980 "Tribal Population, its Growth and Structure - A Review", Indian Anthropologist 10(1) June pp-1-20.
27. Omvedt, G 1980 "Once this land was ones-Agricultural Labourers and Adivasis in India" in Races Class. 21(3), Winter pp-239-250.
28. Pakrasi Kanti & Mukherjee Biswanath 1971 "The Santhals of West Bengal: Some Social & Demographic Characters", Man in India- Vol.51.
29. Ray, Nihar Ranjan 1972 "Introductory Address" in K.S. Singh (ed) Tribal Situation in India. Indian Institute of Advanced Studies. Simla.

30. Ray, P.C. 1975 "Socio Cultural Process of Psychological Adaptation of the Santhal" Anthropological Survey of India
31. Ray, Burman, B.K. 1972 "Tribal Demography: A preliminary Appraisal" in K.S. Singh (ed.) Tribal Situation in India, Indian Institute of Advanced Studies, Simla.
32. Ray Burman, B.K. 1983 "Transformation of Tribes and analogous Social Formations", Economic & Political Weekly, Vol. XVIII, No.27, pp.1172-1174.
33. Rao, Amiya 1986 "Cost of Development Projects- Women among the Willing Evacuees", Economic and Political Weekly, March 22, pp. 474-76.
34. Raza, Moonis, Ahmad, A., et.al. 1977 "The Tribal Population of India - Spatial Patterns of Clustering and Concentration", C.S.R.D. Occasional Paper No.5, J.N.U., New Delhi.
35. Sachidananda 1979 "Social Structure and Mobility Pattern - A Case Study of Tribal Women", Men in India, Vol.58, No.1
36. Sachidananda 1982 "Studies in Economic Anthropology in India" in K.S. Singh (ed.) Economies of the Tribe and Their Transformation, Concept Publishing Company, New Delhi
37. Singh, Bhupinder 1983 "Industrialisation in Tribal Areas in B.Singh & S.N. Mishra (ed) Tribal Area Development, Society for the Study of Regional Disparities, New Delhi.
38. Singh, B. 1982 "Towards a Policy for Tribal Development" in Man and Development 4(2) June, pp.126-137.
39. Singh, D.N. 1966 "Tribal Backlash against change", The Statesman, November 22.
40. Singh, K.S. 1982 "Transformation of Tribal Society Integration V. Assimilation" Economic and Political Weekly, Vol.XVIII.

40. Sinha, Surajit 1965 "Tribe, Caste & Tribe, Peasant Continuum in Central India", Man in India Vol.45, No.1, pp-57-82.
41. Sinha, Surajit 1981 "Tribes & Indian Civilization, Transformation Process in Modern India", Man in India Vol.61, No.2., June.
42. Srivastava, V.K. 1987 "Some Issues in the Anthropology of Development" Man in India Vol.67, No.4, December, pp-317-334.
43. Sengupta, S 1971 "Village Study as a Tool of Study in Tribal Areas" in P.C. Goswami (ed) Socio-Economic Research in Tribal Areas.
44. Vidyarthi, L.P. 1972 "Problems and Prospects of Tribal Development in India" Indian Anthropologist Vol.2.No.2.December 1972.pp.80-91.
45. Yorke, M 1974 "History and Anthropology- A new Model with examples from the Santhal Parganas" Indian Anthropologist Vol.4, No.1, December, 1974, pp:81-91.

GOVERNMENT PUBLICATIONS

- (1) Census of India, 1981, Series 23, part XIII-A, District Census Handbook, Birbhum district, West Bengal.
- (2) Census of India, 1981, Series 23, Part XIIIB, District Census Handbook, Birbhum district, West Bengal.
- (3) Census of India, 1981, Series 23, part XII A, District Census Handbook, Bankura District, West Bengal.
- (4) Census of India, 1981, Series 23, Part XIIIB, District Census Handbook, Bankura District, West Bengal.
- (5) Census of India, 1981, Series 23, Part XIII A, District Census Handbook, Purulia, district, West Bengal.
- (6) Census of India, 1981, Series 23, Part XIIIB, District Census Handbook, Purulia district, West Bengal.
- (7) Census of India, 1981, Series 23, Part XIII A, District Census Handbook, Medinipur district, West Bengal.
- (8) Census of India, 1981, Series 23, Part XIIIB, District Census Handbook, Medinipur district, West Bengal.
- (9) Government of West Bengal: Statistical Abstract 1976-77 (New Series Nos. 2-3)
- (10) Government of West Bengal: Economic Review. 1988-89.
- (11) Government of West Bengal: District Gazetters, Birbhum. 1979)
- (12) Government of West Bengal: District Gazetters, Bankura, 1982
- (13) Government of West Bengal: District Gazetters, Purula, 1985.

- (14) 12 years of Left Front Government of West Bengal,
Department of information and Cultural Affairs,
Government of West Bengal, 1989.