

PLATE 1. A panoramic view of Totopara village.

PLATES 2 & 3. Two springs (Dipti and Datingti) serving  
the Totopara village.



## 1 INTRODUCTION

Origin of man is rather recent in the history of organic evolution. Man evolved only about two million years ago. For a millenia he was but a predator in the food chain of the natural ecosystem and lived in harmony with the biotic and abiotic environment like other animals. Gradually man's unique attributes helped him to control, modify and design the course of life of other organisms as also the face of the earth according to his need and convenience. Gradually man's impact on the life support system increased to the extent that now natural ecosystem may be more appropriately described as human ecosystem.

Increasing growth rate of human population which is presently about 200,000 people per day necessitated increased power and various other resource utilization. These ultimately resulted in pollution and total 'ecological crisis.' Although Malthus voiced his concern in his book entitled 'An essay on population growth' as early as 1792, yet it went mostly unheeded until very recently. It may be pointed out at this juncture that as a result of this ecological crisis many small ethnic populations along with innumerable plant and animal species, not directly favoured by civilized man, were exposed to threat of extinction. Moreover, the culture and traditional ways of life of those small ethnic populations who managed to survive till today are experiencing gradual extinction as a result of impact with advanced cultures.

The conviction that humankind although superior to all other beings is yet only a part of the natural ecosystem and is also governed by the same laws as applicable to other organisms; gradually grew stronger. This concept led to the development of human ecology, now an important and busy discipline of ecology. Unlike other animals, culture as a determinant of behaviour played an important role in the adaptive mechanism among human populations (Laughlin, 1963; Oswalt, 1967). Different authors studied various aspects of human ecology. Some of the broad based studies are on: ecological stresses through appropriate physiological and biological means (Dill, 1964; Baker, 1971 and 1979) interrelationships among man, his culture and the ecosystem (Childe, 1952; Price, 1971; Franzle, 1966; Palmer, 1966); social and ecological impact of water resources (Bird, 1966; Zimmerman and Russel, 1967; Sterling, 1971; Biswas, 1974); environmental factors and settlement pattern (Jones, 1966; De Planhol, 1966; McCaskil, 1954; 1966); functional nature of social structure as an adaptive response to environmental pressure (Cohen, 1968; Vayda, 1969); effect of urbanization in the epidemiology of diseases (Cockburn, 1967; May, 1960); social stress and chronic diseases such as cardiovascular and diabetes (Dodge and Martin, 1970; Galle et al., 1972); Allelic frequency of Hb<sup>s</sup> and ABO genotypes in African and American negro populations (Allison, 1955; Livingstone, 1967).

Broad based studies, however, require extensive arrangement and facilities which are often hard to meet. Again in such studies

it is not usually possible to give proper attention to details of certain aspects. On the other hand, workers can venture to go at considerable depths when studying small human communities in their natural setting even with moderate facilities and arrangements. Eyre and Jones (1966) aptly called small human communities as analogous to the single ecotype. Small populations that is the populations of communities in which most people have lived prior to extensive urbanization, do not behave in the same way as large statistical aggregates. Such societies have had relatively stable or slowly changing material culture for exploiting their natural environment, and rather unstratified simple social system for governing relations between individuals or between groups.

Such social units be it hunter-gatherer, agricultural-gatherer, all are governed by the balance between the carrying capacity of their habitat and biotic potential. It has been estimated that the primitive societies i.e., the hunter-gatherers at best utilized about 30-40% of the available resources of their habitat (Birdsell, 1957; Lee and DeVore, 1968; Casteel, 1972; Folger, 1972). Micro-studies have contributed much in the understanding of various novel facets of human ecology particularly for those small ethnic communities which reside in remote areas in different parts of the world. Some of the notable contributions of the this type are: on Amerindian groups including Quechua Indians at high altitude (Salzano, 1972); indigenous population of the great basin region of North America (Steward, 1938); Native

people of central Brazil (Gross et al., 1979; Warner et al., 1979) in the American continents. In Africa on Pygmy hunters (Turnbull, 1972); Kung Bushman (Lee, 1969); Karimojong (Dyson-Hudson, 1966); Ojibwa (Bishop, 1974). In Australia, on Asmat Hunter-Gatherers (Van Arsdale, 1978). In Asia, Bataks of Philippine (Eder, 1978); Thai Cultivators in the tropics (Kunstadter, 1972). In India, on non-pastoral and pastoral nomads of Maharashtra (Malhotra and Gadgil, 1981; Gadgil and Malhotra, 1982); Malhotra et al., 1983); human and cattle population of West Bengal (Odend'hal, 1972, 1980); Schedule caste population at Mirpur (Mukhopadhyaya, 1981; Basu et al., 1980); High altitude sherpas and lepchas of Eastern Himalayas (Basu et al., 1979; Gupta & 1980); Santal and Birhor (Verma, 1977). These studies in general showed complex multidimensional interactions among climate, soil, agricultural practices, resource utilization, settlement pattern, population distribution, density, demographic characteristics and components of biological and social structure.

The Totos provide us with one such small demographically transitional group of about 720 people (1981-82) confined to a particular spot i.e., village Totopara whose social taboo is apparently strong enough to maintain identity of the race. In the precontact period this tribe was considered as a threatend one. The arguments in favour of selecting a small ethnic community such as the Totos were:

- i) their homeland at Totopara was relatively free from outside disturbance. ii) effective application of simple procedure

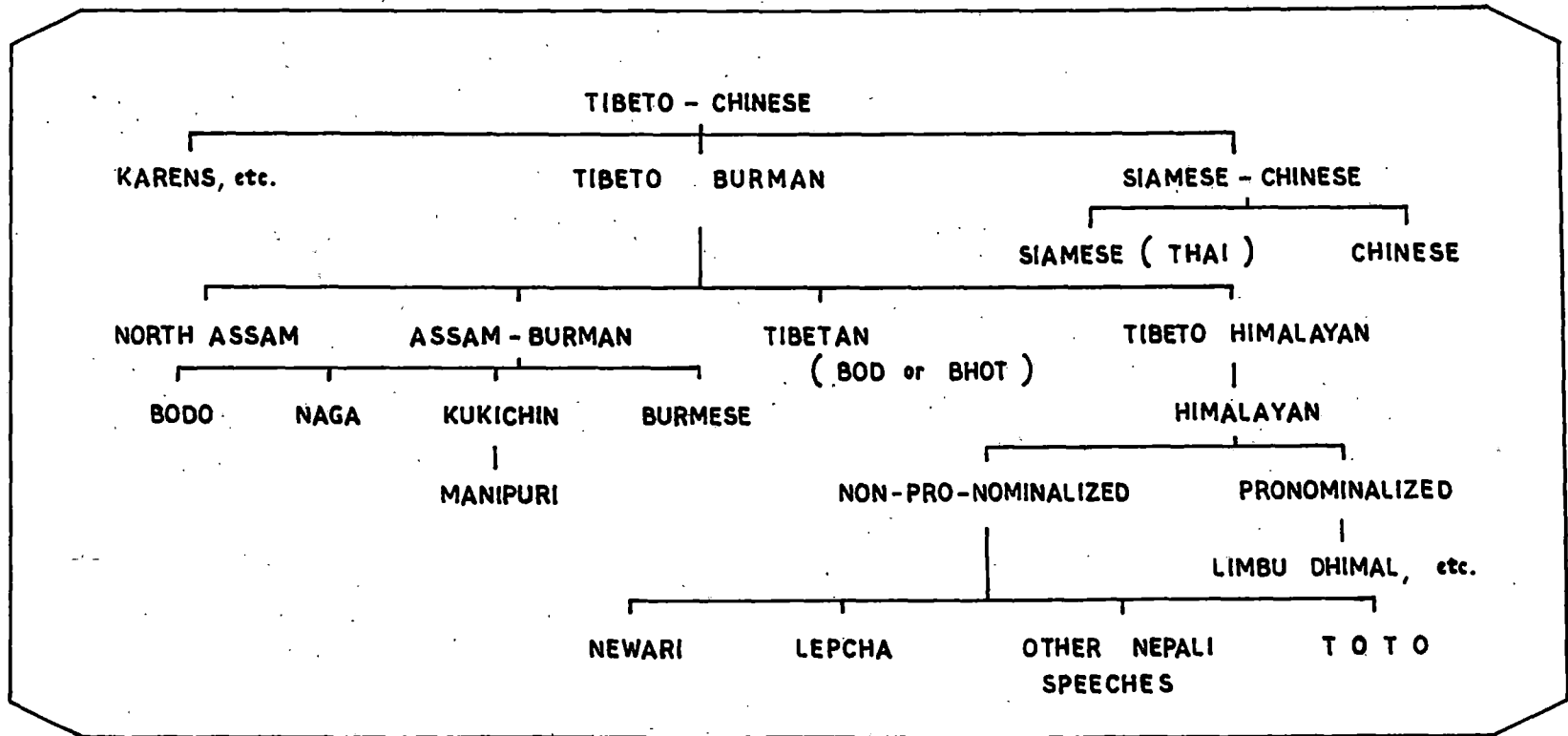


FIG. 1.1. ORIGIN AND RELATIONS OF TOTO SPEECH WITH OTHER SPEECHES,  
 ( SANYAL, 1973 )

were possible, iii) total count of population and direct observations were possible in most cases, iv) digital analysis of various socio-ecological aspects was possible due to their rather simple mode of life, v) response of any disturbance 'be it, social, environmental or any other became readily apparent.

### 1.1 About Totos

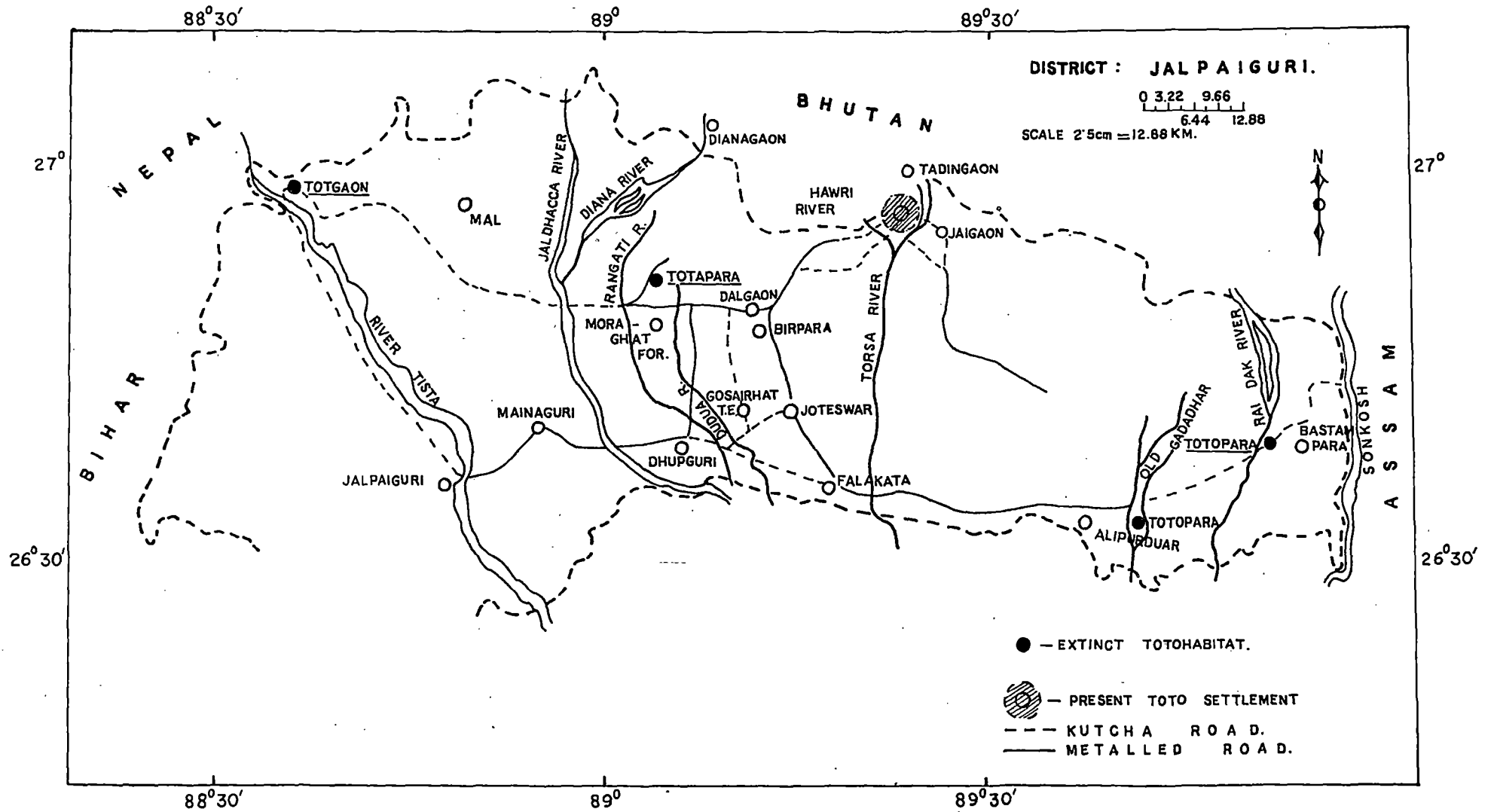
#### 1.1.1 Past and Present

The Totos have been considered as one of the six distinct underdeveloped tribes of West Bengal, their origin, however, is controversial. The morals, marriage, life, religious practices, language are different from the tribes living around them such as the Koch, Rajbanshi, Mech, Garo, Tephu, Panikoch, Bhutia etc. The Totos have no scripts on their own but linguistically they belong to sub-Himalayan group under Tibeto-Burman group Fig. 1.1 (Sanyal, 1973).

Physically the Totos have flat nose, broad and square cheeks, thick lips, small eyes with black iris and dark yellow to brown complexion. Gates (1962) studied physical measurements of twenty Totos and remarked that they were a distinct isolated tribe having some Mongoloid features.

There is no archeological evidence as to how long the Totos are inhabiting at the present Totopara, the only place where the Totos are known to exist to-day. The Totos are residing at the present habitat from the middle of the 18th century by driving out





**Fig. 1.2 MAP OF JALPAIGURI DISTRICT SHOWING PAST AND PRESENT TOTO SETTLEMENTS.**

the weaker Rabhas (an ethnic group) towards Assam. They moved to this area from the Western Doars probably because of fatal diseases, such as malaria, kala-azar, and to avoid unfriendly and more powerful Bhutias. Since then, they have been living in this area to lead their traditional way of life, away from the dominant cultures (Pemberton, 1836; Bose, 1865; Sunder, 1895; Grunning, 1911; Milligan, 1919; Sanyal, 1955, 1968, 1973). It is reported that in the past they used to live at Totapara, Totgaon, Totpara, and Totopara (not the present Totopara) under the P.S. Mal, Dhupguri and Alipurduar; totalling an area of not less than 5000 acres (Fig. 1.2). Considering the number of places and total area of the past Toto settlements in the Western Doars, it can be said that the Totos previously used to live in plains and that a large number of them died owing to diseases and war with other tribes. Only a small number of them could successfully migrate and establish themselves in the present habitat, a secluded area on the hills surrounded by rivers and mixed hardwood forest with little understory. Even a little more than a decade ago the Totos were hardly known to the outside world because of relative inaccessibility of their country, high up in the hilly forests bordered by the mighty Torsa and Howri river. Several survey reports on the Totos, however, are available from the notes of Sunder (1895), Milligan (1919). Grierson (1909) in his linguistic survey of India, first reported about the Toto dialect. Mitra (1952, 1953) also provided some information about the Totos in the local

newspaper and popular magazines. Account of their social and domestic life and language was first reported in details by Sanyal (1955). Sanyal's studies (1955, 1968, 1973), in conjunction with those of Roy-Burman (1957, 1964), Chakrabarti and Chattapadhyaya (1964) clearly indicated that the habits and customs of the Totos have significantly affected their demographic pattern at least in the recent past decades. The recent studies of Das (1969), Cultural Research Institute (1980), Debnath (1982, 1983) also provided useful sociological and demographic information.

The Totos have been effectively in contact with the outside world since 1951, when the Bharat Mahajati Mandali first opened a welfare centre and employed a welfare organiser cum teacher. Later, in 1967 the Lutheran World Service organisation established a permanent office and dispensary for their welfare and medical care at Totopara. In 1955, the welfare centre at Totopara was taken under direct control of the Government of West Bengal (Sinha and Pal, 1984). To sum up: the effects of the welfare organisations resulted in the following changes : i) increase in acceptability of outside welfare workers by the Totos, ii) improvement in agricultural practices, production, exchange and resource utilization iii) increase in the practice of hygienic habits and use of medical facilities when needed iv) increased interest in education and v) decreased tendency to follow traditional cultural practices. The institutional infrastructures and agencies serving the Totos since 1951 is shown in Table 1.1.

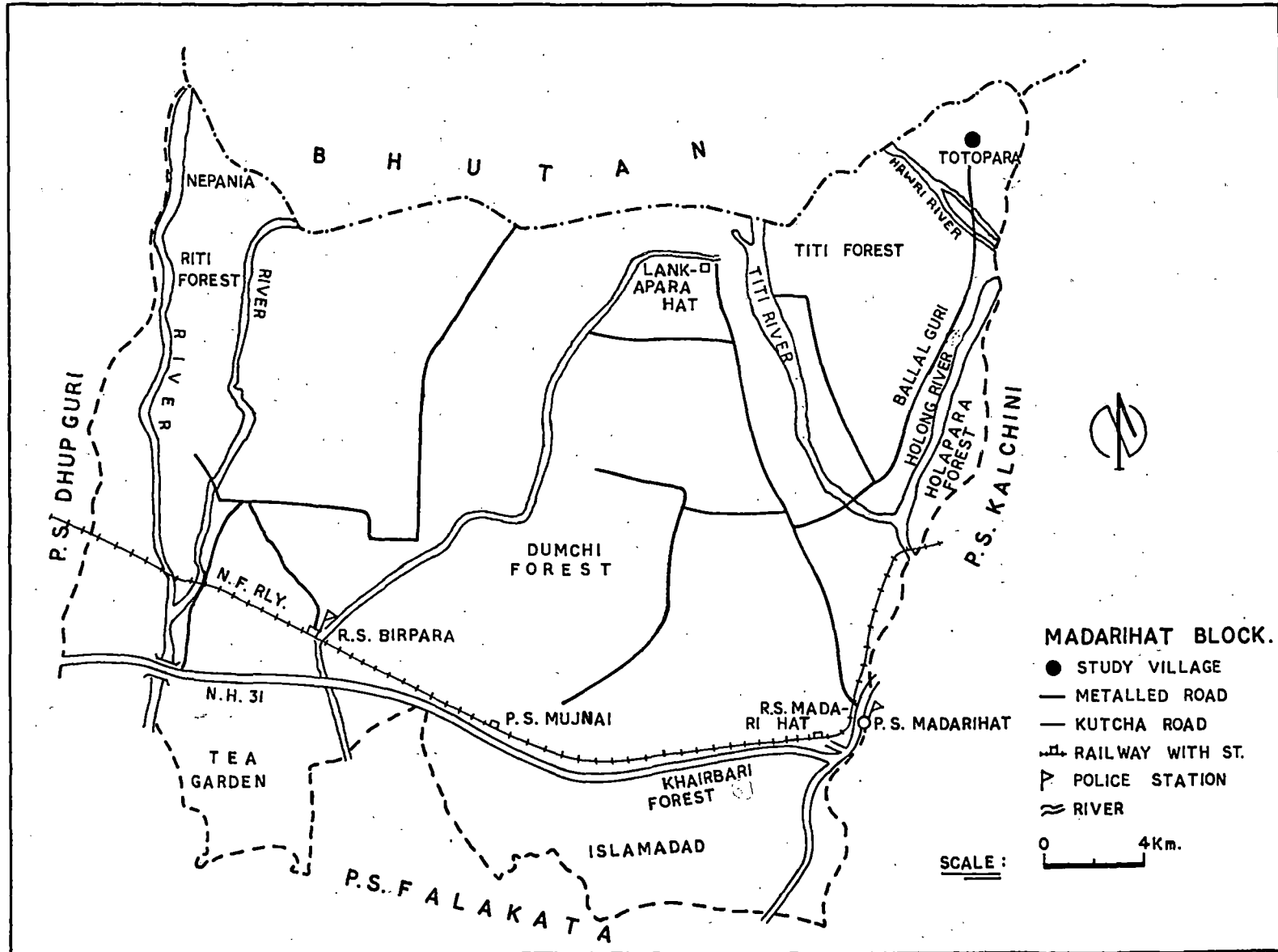


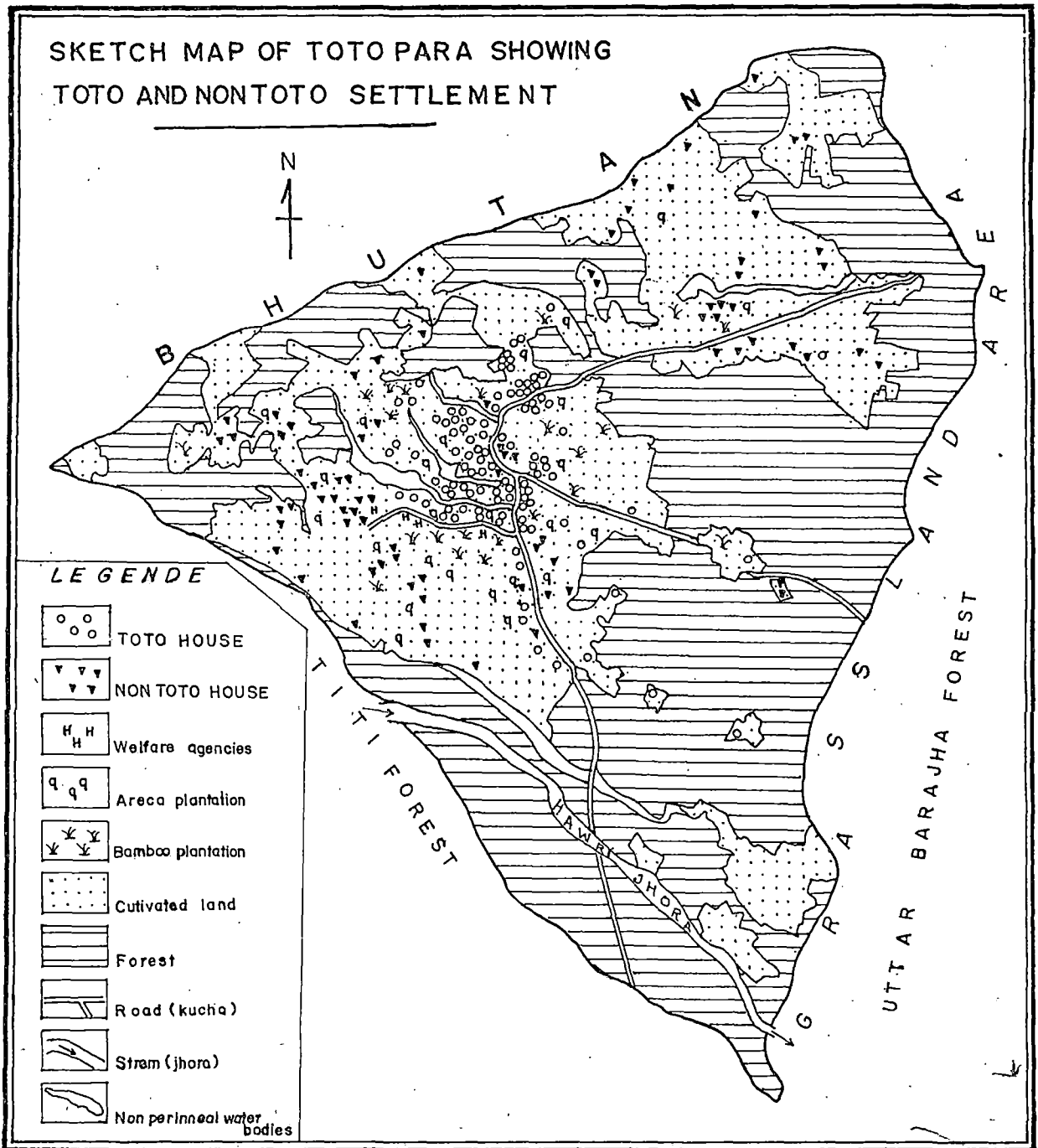
Fig. 1.3 MAP OF MADARIHAT BLOCK SHOWING THE ROUTE FROM NEERARA, AND MADARIHAT TO TOTOPARA.

### 1.1.2 Socio-Political Organisation

Traditionally socio-political organisation of the society consisted of two parts, i.e., a religious chief priest called 'Kaiji' and a headman 'Mandal.' A group of people called 'Karbari' conveyed information from 'Kaiji' and 'Mandal' to the members of the society. The posts of 'Kaiji' and 'Mandal' were hereditary. It is reported that previously both the offices i.e., 'Kaiji' and 'Mandal' were held by the same person. During British rule the posts were separated and handed over to two different persons of the tribe (Sinha and Pal, 1984).

### 1.1.3 Toto-country

Totopara is situated in the district of Jalpaiguri, P.S. Madarihat (Fig. 1.3) at Lat  $89^{\circ}20'$  and Long  $26^{\circ}30'$ . It covers an area of about 2000 acres spanning over a cluster of three small, nearly flat hillocks. It is 228-382m above the sea level and rises rather steeply from the dry sandy bed of the Torsa. The shape of the village is more or less trapezoid (Fig. 1.4) the maximum north-south distance being 4.8 km and east-west distance 0.8 km. The northern end of the village touches the southern border of Bhutan, the river Torsa is on the east and the south western part is confluent with deep forest. The village is fragmented by the five rivulets passing down in the south-eastern and western directions. One of the five rivulets flows throughout the year and provides water for drinking and all other purposes of the community.



**Fig. 1.4 SKETCH MAP OF TOTO PARA SHOWING TOTO AND NONTOTO SETTLEMENT.**

### 1.2 Aim of Study

This dissertation concerns with a three year (1980-1983) study on the socio-ecological and ethnozoological aspects of the Toto Tribes at Totopara, in the district of Jalpaiguri, West Bengal. The Totos have never been studied in the socio-ecological perspective as attempted in this work.

The main objectives of the study was to collect qualitative and quantitative data on some specific aspects listed below, in order to evaluate the present level of development and progress of the community and possibly to recommend appropriate planning strategies for their development. Data were collected to determine the following :-

- 1 Biotic and abiotic factors.
- 2 Primary and Secondary productivity of the area.
- 3 Ethnozoological aspects.
- 4 Demographic aspects.
- 5 Time budget analysis.
- 6 Some pulmonary and haematological aspects.

Table 1.1 Institutional infrastructures and agencies serving the Toto community since 1951.

Institutional Infrastructures and agencies	Structural Description	Location and distance(km) from Totopara	Remarks
Primary and Junior High School	G.I. Corogated sheet and brick construction	Totopara (within village)	Aided by Govt. of West Bengal
High School	-do-	Madarihath (32 km)	-do-
Health Sub-Centre	Brick construction	Ballalguri (5 km)	Dept. of Health, Govt. of W. Benga (not functioning)
Primary Health Centre	-do-	Madarihath	Dept. of Health, Govt. of W.Bengal
Homeopathy Research Unit	Rented house	Totopara (within village)	Homeopathy Medical Research, Govt. of India
Dispensary and Welfare Centre	Wooden construction	-do-	Lutheran World Service organisation (not functioning)
Tribal Welfare Centre	-do-	-do-	Schedule Caste and Tribal Welfare Dept., Govt. of W. Benga.
Veterinary Sub-Centre	Rented house	-do-	Dept. of Animal Husbandry, Govt. of W. Bengal

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Table 1.1.(contd.)

Institutional Infrastructures and agencies	Structural description	Location and distance (km) from Totopara	Remarks
Religious house (Densa)	Thatched roof bamboo structure	Totopara (within village)	Religious centre for Toto community
Club (Paikingsa)	Brick construction	-do-	Recreation centre for Toto males, W.Bengal Govt. aided
Village library	-do-	-do-	Sponsored by Govt. of W. Bengal
Co-operative Marketing Society	G.I. Corrogated sheet construction	-do-	not functioning
*LAMPS Sub-Centre	Rented house	-do-	Guided by Totopara-Ballalguri Panchayet, Govt. of W. Bengal
*LAMPS Block Centre	G.I. Corrogated sheet construction	Madarihat	Block Development office, Madarihat, Dept. of Panchayet, Govt. of W. Bengal
Rural Bank	Rented house	Within Village	Uttar Banga Khetria Gramin Bank Division
Totopara-Ballalguri Panchayet Office	-do-	Ballalguri (5 km)	

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Table 1.1 (contd.)

Institutional Infrastructures and agencies	Structural description	Location and distance (km) from Totopara	Remarks
Block Development Office	Building	Madarihahat (32 km)	Under B.D.O.
Market	Weekly Market or Hat	Within village	Tuesday
	"	Jaygaon (7.0 km)	Tuesday
	"	Lankapara (12.5 km)	Wednesday
	"	Birpara (30.0 km)	Sunday
	"	Madarihahat	Sunday
Post and Telegraph Office	-	Lankapara (12.5 km)	-
Police Station	-	Madarihahat	Under Jalpaiguri District
Bus Stop	Totopara to Madarihahat and Jalpaiguri	Within Village	One trip daily at 7.00-7.30 a.m. from Totopara and 4.00-4.30 p.m. from Madarihahat
Railway Station	Meter gauge (Assam-Siliguri)	Madarihahat Hashimara (16 km)	N F Railway -do-

\*Large-sized Multipurpose Co-operative Society.