1.1. Anthropological Study of Population

Physical anthropology is primarily concerned with the study of man as a physical organism in both time and space. Its main objective is to understand the processes of human evolution at both micro and macro levels as well as to find out human variations and the causes of such variations. Till the middle of the present century, the physical anthropologists were largely involved in taxonomic classification of human populations. They mostly used anthropometric techniques. But since the middle of this century, they have shifted their interest from taxonomic research to population genetical research with a view to finding out human genetical variations and understanding the causes of variation and the various processes of human evolution. They have been gradually realising that along with anthropometric, serological and other techniques, emphasis on demographic research could be beneficial to the study of human evolution and variation. Moreover, anthropological study of population is likely to bring to light some useful estimates of general population trends, which are very useful supplement to the formal demographic research and socio-economic planning (Macfarlane, 1976; Raja, 1960; Nag, 1977; Mukhopadhyay, 1981). Thus, physical anthropology and demography, though the latter generally involves large scale of data with sophisticated-statistical techniques, are closely interrelated. Demographic variables, like fertility and mor-
tality are of great importance to the study of anthropological genetics to understand various micro-evolutionary processes. For instance, selection is believed to be one of the major evolutionary forces that brings about changes in the genetic make-up of a population and operates through differential fertility and mortality. It is true that no specific discipline of science is traditionally known as 'demographic genetics'. But in the field of population genetics one deals with those aspects of genetic processes which need consideration of some demographic parameters. In that sense, population geneticists traditionally consider all those population properties, on which the discipline of demography is conceivably concerned. In this dissertation, we shall look into various demographic parameters of a population, taking into consideration some biological as well as social aspects.

In 1964 and subsequently in 1968, the World Health Organisation (WHO) suggested that there was an urgent need to carry out population genetical research among the primitive groups. It has been reported that many of the primitive communities have been facing with an immediate threat of disintegration of their culture owing to increasing contact with more advanced societies (WHO, 1968). Prior to the WHO's concern about the primitive groups many scholars like Lasker (1952), Eaton and Mayer (1953), Roberts (1956), and some others have diverted their keen interest in understanding the demographic
structure of the primitive communities from population genetic point of view. In India, since 1960, some stray researches on demography, at micro-level among some of the primitive societies, have been carried out mostly in the eastern, southern and northern parts of India (Basu, 1969; Ghosh, 1970, 1972 and 1976; Basu et al., 1980; etc.). Recently (1989), the Anthropological Survey of India has brought out a volume on genetical demography of various Indian populations. In the above mentioned volume, except one or two studies in the north-eastern India, most of the studies are concerned with the populations in other parts of the country. It seems that so far, the researchers have not been taking sufficient interest in the populations of north-eastern region of the country, where hundreds of small primitive groups of people reside since time immemorial. It is, of course, true that some anthropologists have carried out some valuable researches with limited purposes in some of the populations of north-eastern region (Das, 1962; 1978 a, 1978 b, 1978-79; Mahendra, 1969; Das and Baruah, 1974; Phookan and Bazarbaruah, 1980; etc.). They mostly worked on anthropometry, dermatoglyphics, serology, abnormal haemoglobins, etc., and hardly anyone had taken interest in genetical demographic studies among the indigenous populations of this part of the country.

With this end in view, we propose to undertake a study on bio-social demography among the War Khasi of
the East Khasi Hills district in Meghalaya. By 'biosocial
demography', we mean to undertake a study on demographic
structure of a population with special reference to some
socio-economic factors like education, economic condition,
mating pattern, etc. and thereby to understand the genetic
implications of such parameters.

1.2 Objectives of the study

The objectives of the present study are as follows:-

a) To describe the demographic structure of the War-
Khasi - both Christian and non-Christian;

b) To find out how far the rule of clan exogamy is ope-
rating among the Christian and non-Christian War
Khasi;

c) To find out the effects of some socio-economic fac-
tors, such as education, economic condition, age at
marriage, marriage pattern, etc. on the reproductive
behaviour of these two sections of the War Khasi
population;

d) To determine the rates of infant mortality and repro-
ductive wastages in these two sections of the War-
Khasi;

e) To find out the rate of admixture with other Khasi
and non-Khasi groups;

f) To find out how evolutionary forces, like selection,
drift, etc. are acting on these two sections of
the War Khasi;

g) To determine the marriage distance and its genetic
implications;

h) To compare the present findings with the existing
data on other Indian and non-Indian populations as
far as possible.
1.3. AREA OF STUDY

Location and Topography

Meghalaya is essentially a tribal state, which came into existence on 21st January, 1972. Initially, it was a part of Assam and it was composed of only two districts, namely, the United Khasi and Jaintia Hills district and the Garo Hills district. At present, there are five districts, namely, Jaintia Hills, East Khasi Hills, West Khasi Hills, East Garo Hills, and West Garo Hills districts in Meghalaya (Fig. 1).

The War Khasi mostly live in the southern slope of the East Khasi Hills district of Meghalaya. The district covers an area of 5,196 sq.Kms. It is bounded by Assam on the north, Bangladesh on the south, Jaintia Hills on the east and West Khasi Hills on the west. The district lies between 25° N and 26° N latitudes and 90° E and 92° E longtitudes. The district headquarters is Shillong, which is situated about 1510 metres above sea level, and it is also the capital of the State.

The southern slope of the East Khasi Hills
district is also known as the War country (Ri'War). It extends from Dawki on the east to Balat on the west. It is situated between the central upland region and the plains of Bangladesh. The area is characterised by hill slopes and precipices, beautiful platforms and waterfalls. The famous platforms are Sohra (1337 m), Mawsynram (1305 m) and Pynursla (Zimba, 1983).

The important rivers in the War area are Umngot, Khasmar, Umrew, Umiam, Khasimara, Khuba, etc. These rivers have created the deep valleys through cretaceous sandstones and hard rocks, while flowing towards Bangladesh.

**Geological Composition**

The important geological feature of the War country is its main composition of sandstone and gneiss rocks. It is said that the submetamorphic rock of the central region or upland Khasi hills is connected with the outburst of volcanic trap, known as the 'Sylhet trap', which is the result of basaltic lava flowing of the Deccan (Zimba, 1983). This trap is close to the Dawki-Shella fault. Zimba describes that the 'calcareous or chalky rocks which contain coalfields and limestones in alternating strata of compact rocks are transitional nummulities'.

The War area is very rich in limestone and coal deposits. Limestones are found to exist in the whole area of southern slope from Lubha river on the west to Umngot river and southern parts of the Jaintia Hills dis-
trict on the east. The Commorrah quarry near Bhologanj is very well known for its supply of limestone to Assam-Bengal factory at Chattak, now in Bangladesh. Coal deposits of the War area are found in Mawlong, Mustoh, Mawsynram, Madon, Langrin, Langkyrdem and Pynursla. Petroleum is also found to exist in the valley of Khasimara river on the west of Shella village. (Das Gupta, 1984).

**Climate**

The climate is wet and warm during summer (May – September) and dry and cold during winter (October-April). The average temperature ranges from 30°C to 34°C during summer and it drops to as low as 5°C during winter. The average annual rainfall in the Khasi Hills district is about 7090 mm (Zimba, 1983). According to annual record of rainfall in 1974, Sohra (Cherrapunjee) experienced about 967 inches or 24,554 mm. Thus, Sohra and its adjoining areas are well known for having the heaviest rainfall in the world.

**Flora and Fauna**

The important flora of the area include teak (Tectona grandis), oak (Quercus serrata), Pooma or Dieng-bti (Cedrela toona), rubber plant (Ficus Religiosa), Upas (Rhus succedanae), palm tree (Pomen dactilifera), bay leaf (Betula acuminata), arecanut (Aerica catechu), simul tree (Bombax malabarica), orange (citrus aurantium), mango (Mangifera indica), jackfruit (Artocarpus integrifolia), guava (Oissidium guava), papaya (Carica papaya), pine apple (Bromelia ananas), pan leaf (Buclandia populnea),
pepper (piper betle), pitcher plant (Nepenthes Khasiana). Other flora like thysamolanena Maximus, cinanamomum zeilandicum, quercus spicata, citriodora, bacaria sapeda, sapindus mukorosi, litchee, chestnut, orchids, species of ferns, mosses, fungi, lichens, etc., are also found in the War country.

The area was once a sanctuary of various types of wild animals. But owing to the practice of jhum or shifting cultivation and merciless killings of animals, most of the fauna have now become very rare and many of them have become extinct. The fauna that are found at present, are leopard, bear, deer, mongoose, small rodents (locally known as Brai), otter, monkey, squirrel, wild fowl, crow, myna, pheasant, etc.

1.4 THE PEOPLE

Distribution

The people of Meghalaya are mostly tribals, among which the Khasi and the Garo are the most dominant groups. Besides these two tribal groups, other tribal populations like the Naga, Mizo, etc., along with some Hindu caste and Scheduled Caste populations, Muslim, Nepali, etc. have also settled in the State. According to 1981 census, the total population of Meghalaya is 13,35,819. The density of population is approximately 60 per sq. Kms. The overall sex ratio is slightly high (104 males: 100 females).
The total population of the East Khasi Hills district, according to 1981 census, is 5,11,414. In the East Khasi Hills district, the most dominant group is the Khasi, which include the Khynriam, Bhoi and War, and each of them is by and large endogamous in nature. It may, however, be mentioned that in spite of being endogamous in nature, they have at times some marital relations with other communities like the Garo, Assamese, Bengali, Nepali, etc.

The entire southern slope of the district is dominated by the War Khasi population. The area consists of more than 250 War Khasi villages.

Occupation

The main occupation of the people in this area is agriculture. The major agricultural products include paddy, arecanut, bay leaf, orange, lemon, banana, guava, ginger, turmeric, etc. Some people are also engaged in business and services. Some other have trade and commerce relation with the Khynriam (Upland Khasi or Khasi proper) and others mainly at the centres like Shillong, Balat, Shella, Sohra (Cherrapunjee), Langkyrdem, Pynursla, Dawki, etc.

Physical Characteristics

From anthropological point of view, the Khasi or Khynriam, Pnar, Bhoi and War belong to the Mongoloid racial stock (Das, 1978-79). These groups follow the
traditional-matrilineal pattern of society and linguistically they speak different dialects of the Monkhmer language, which belongs to the Austro-Asiatic group (Das, 1978). Haddon (1929) describes the physical features of the Khasi as Asiatic Xenthoderm, having cephalic index of 786, nasal index 86.00 and stature 1.569 m. He further states, "It may be tentatively suggested that there is an ancient dolichocephalic platyrrhine type (Pre-Dravidian) which is strong among the Khasi...." In describing the physical characteristics of the Khynriam, Pnar, Bhoi and War, Das (1978b) says that these four divisions do not deviate much from the average Khasi in relation to stature and trunk height. He, however, points out that the "Pnar and the Bhoi show most often deviation in higher magnitude and that these two populations are standing opposite to one another in relation to average Khasi". It may be mentioned that the people have so far treated the Khynriam, Pnar, Bhoi and War as one and the same ethnic group. Marwein (1987) says that the Khasi are "known sometimes by different names at different places. The names are either confined to a particular Syiemship or state or a particular geographical region". In this connection, it may be recalled that the State Government has reserved about 80% of the jobs for the scheduled tribes of which 40% are meant for the Garo and another 40% for the Khasi. But there is no mention about the Khynriam, Pnar, Bhoi and War. However, at present, the Pnar or Jaintia claim a separate ethnic identity for themselves, and they do not like to be considered an offshoot of the Khasi. There
is also a demand for creating a separate Jaintia State (Dongmusa, Vol. 19, July, 1990).

Rule of Inheritance

Among the War Khasi, the rule of inheritance is one of the most peculiar aspects of social organisation. It is generally known that both sons and daughters inherit the parental property (Gurdon, 1990; Cantlie, 1974; Bareh, 1974; Das Gupta, 1984; etc.). It may, however, be mentioned that this practice is mainly prevalent among the War Shella and some parts of the War Sohra. The other War Khasi living in Balat, Pynursla and Dawki areas, do not practise this pattern of inheritance; but they follow the custom adopted by the Khynriam, which shows that the daughters (the youngest daughter gets the lion share), but not the sons, inherit the parental property.

Religion

The War Khasi have been in contact with different people of different religious faiths from time to time (Das Gupta, 1984). The arrival of the Christian and Hindu Missionaries, particularly in Shella area, has brought about a tremendous change in traditional religion and beliefs of the people. At present, there are three distinct religious sections in the War Khasi. These are as follows:– (1) Seng War Khasi – believer of traditional religion (this term has been used for the convenience of the present study, though the people use to call the name of their religion as 'Khasi'); (2) Christian War
Khasi - believer of Christianity, and (3) Hindu War Khasi - believer of Hinduism. Of these three religious groups, the Seng War Khasi and the Christian War Khasi are the most predominant sections in the War Khasi. The spread of Hinduism among the War Khasi is mostly restricted in Shella and in some parts of the War Sohra. The Christian War Khasi are divided into different sections, like the Presbyterian, Roman Catholic, Church of God and Fellowship.

The people, who are still following their traditional religion, are actually monotheistic. They believed in one Supreme God, the Creator and Master of universe (U Blei Nongbuh Nongthaw). They also believe in life after death and in the presence of good and evil spirits (Marwein, 1987). Breaking of eggs and sacrificing of animals like fowls, pigs, goats, etc. are their important religious rites. The priest, who is locally known as, 'U Nongkia', performs all these religious rites and ceremonies. They do not have any religious scripture or any common place of worship, like the Churches in case of the Christians. It may, however, be mentioned that the movement for revivalism of the traditional religion has already started among the War Khasi.

Marriage Practice and Clan Exogamy

Monogamy is the general practice of the War Khasi. According to Gurdon (1990), this pattern of marriage is prevalent among the Khasi due to matriarchal system of the society. Though, the War Khasi do not
strictly prohibit intermarriages between other Khasi groups, like the Khynriam, Pnar, Bhoi and Lyngngam; yet village endogamy is more frequent. Marriages with other populations or communities, like the Garo, Mizo, Naga, Bengalee, Nepali, etc. also take place at times.

Another important feature of the marriage practice among the War Khasi is that one cannot marry within one's clan. The clans are strictly exogamous and this rule is observed by both the Christian and non-Christian War Khasi (Cantlie, 1974; Das Gupta, 1984; etc.). Marriage with maternal uncle's daughter or father's sister's daughter is prohibited (Gurdon, 1990). However, marriage with maternal uncle's daughter is not theoretically forbidden, especially after the death of the maternal uncle (Das Gupta, 1984).

Education

According to 1981 census, Meghalaya is the second lowest state of the north-eastern region in literacy rate (34.08%). It is indeed very surprising because the modern education system started in the state, right from the early part of the nineteenth century. Among the War Khasi, it is observed that in all villages, there are primary schools, and in some villages, there are also Middle and High schools.

Relation with other neighbours

The War Khasi are surrounded by the Khasi proper (Khynriam), people of Bangladesh, Pnar and Lyngngam on the north, south, east and west respectively. Social
contacts with these neighbours are always through trade
and business transactions, mainly at the centres, like
Balat, Shella, Sohra, Pynursla, Majai, Nongjri, Hatthymmai,
Lyngkhat, Dawki, etc. It may be mentioned here that the
War Khasi, who are always in contact with the Pnar, are
those who inhabit in Pynursla and Dawki areas. Similarly,
the people who are in continuous contact with the Lyngngam
are those who live in the western part of the War country
or Balat area. The War Khasi are dependent on the Muslim
and the Hindu of Bangladesh for the supply of fish, egg,
fowl, utensils, etc. In turn, they sell to the neighbours
timber, arecanut, bay leaf, pan leaf, orange, lemon, ginger,
etc. These local products are also sold at Sohra,
Shillong, Pynursla, etc., where they frequently meet with
the Khynriam and others. It is also from these centres
that they purchase rice, cloth, and other essential commo-
dities.

With this little introduction about the War
Khasi, we may now see what types of demographic researches,
particularly genetical demographic researches have so
far been carried out among the various populations of
this country and elsewhere.

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