INTRODUCTION

Medicinal plants are those plants which have some chemical ingredients stored in their tissues, produce definite physiological action on both man and animal bodies and act accordingly on proper application for curing diseases.

The branch of medical science which deals with the medicinal plants is known as Pharmacognosy – mainly concerned with the history, collection, identification, selection and preservation of crude drugs and raw materials. On the other hand the study of the action of drugs is known as Pharmacology.

Ethno-medico-botany, an interdisciplinary branch of Ethnobotany (Harsberger, 1895) develops from the study of traditional medicine and covers all aspects of both the branches of medical science i.e., Pharmacognosy and Pharmacology, involving more of a direct relationship of plants with man and environment. It has its origin in folklore – a study of the plants which the aborigines used as medicine. It incorporates certain well organised and precisely distinct methods of diagnosis, indigenous way of application of plants and cure. Weiner (1971) included herbal charms used in the treatment of various diseases and ailments. The study of Ethnomedicobotany, in recent years, has been given much attention not only due to its great academic or historical importance but also because of its wide application in community health care.

Plants have been studied in India from time immemorial from the medicinal point of view. Our medical heritage is perhaps the longest
unbroken one in human civilisation. In Sanskrit literature there are a number of writings on drug yielding plants and their indigenous system of application to combat diseases. Curative properties of some herbs were nicely dealt in *Rigveda* — the earliest record of use of plants in medicine. This is the oldest repository of human knowledge having been written in between 5000 and 4000 BC. The other ancient literature *Atharvaveda* contains description and medicinal properties of some 2000 plants. Mention of some miracle herbs or wonder drugs are often found in *Charaka Samhita* and *Susruta Samhita*. *Susruta Samhita* (*c. 1000 BC*) that deals with nearly 700 drugs, most of which were known to the ancient Hindus. Precise information on medicinal properties of plants are also found in other well known literature besides Unani and Siddha viz., *Astanga Hridayam*, *Nigantu*, *Raj Nigantu* etc. *Dhanvantari* and *Nagarjuna* became famous for their intimate knowledge of the curative properties of certain medicinal herbs. Outstanding grammatical works of Muniraya — Panini (7th and 6th Century BC); Katayana (5th or 3rd Century BC) and Patanjali (2nd Century BC) were of historical importance in the study of drugs. Panini’s 'Dravya' derived from 'Dru' (Plant) indicated the predominance of plant products used as drugs. Kalidasa (*c. 4th Century BC*), Varahamihira and Amarasimha (*c. 6th Century AD*), Banabhatta (*c. 7th Century AD*) and Rajsekhar (c. 9th Century AD) mentioned a number of drugs in their works.

But the systematic way of recording medicinal plants in India was started with the publication of *Os Coloquios* in 1565 by Garcida da Orta. A little over a hundred years later Henrich Adrian van Rheede tot Draakenstein, the Governor of Dutch in India published *Eortus*.
Malabaricus — a 12 volume work which contains data of usage of popular medicinal plants. Later on, during the 19th Century a good number of books were published dealing with medicinal plants. Worth mentioning ones are: A Catalogue of Indian Medicinal plants and Drugs by John Fleming in 1810; Materia Medica of Hindustan by Ainslie in 1819; Pharmacographia by Fluckinger & Handbury in 1874; The Materia Medica of the Hindus by U.C. Dutta in 1877; Indian Medicinal plants by Bently & Trimen in 1880; A Dictionary of Economic products of India by G. Watt (1889-99). In the 20th Century there has been a tremendous development in publication. A number of research papers and books have been published which have elaborately dealt about the uses of plants in medicine along with medicinal properties. A good number of books run into several volumes. Amongst those mention may be made of Useful plants of the district Lakhimpur in Assam (Carter & Carter, 1921); The Indian Materia Medica (Nadkarni, 1927); Indigenous drugs of India (Chopra, 1933); Indian Medicinal Plants (Kirtikar & Basu, 1935); Wealth of India — 1-11 Series on Raw Materials (C.S.I.R. publication, 1948-1976); Medicinal plants of India and Pakistan (Dastur, 1951); Common medicinal plants of Darjeeling and the Sikkim Himalayas (Biswas, 1956); Glossary of Indian Medicinal plants (Chopra et al, 1956) and its supplement (Chopra et al, 1969); Medicinal plants (Jain, 1968); Indian Medicinal plants used in Ayurvedic preparation (Dey, 1980); Economic Plants of India (Nayar et al, 1989, 1994); Second supplement to Glossary of Indian Medicinal Plants with active principles Part-I (A-K) (Asolkar et al, 1992); The Useful Plants of India (C.S.I.R. publication, 1992); Indian Medicinal Plants, Vols. 1-5 (Warrier et al, 1993, 1994, 1995, 1996); Ethno-Medico-

It has now been established that out of 18,000 vascular plants of India nearly 30% show potential of medicinal value. There may be much more as aborigines' usage of plants in medicine are yet to be accounted.

Studies in Indian Ethnobotany were initiated by Janaki Ammal since its inception of Economic Botany section of Botanical Survey of India in 1954. Intensive field studies among tribals of Central India made by Dr. S.K. Jain during 1960 (1963a-d, 1964 and 1965a-d) form the landmark of Ethnobotanical studies in India. His own contributions along with compilation of articles in Book form (Jain, 1968, 1981, 1987, 1991) opened new avenues of Ethnobotanical Research including Ethnomedico-botanical aspect in India. And now a number of Institutions of India are actively engaged in research in Ethnomedicine. Notable amongst them are: Botanical Survey of India (Head Quarters and Regional Centres); Central Council of Research in Ayurveda and Siddha, New Delhi; Central Council of Research in Unani Medicine, New Delhi; Central Council of Research in Homoeopathy, New Delhi; National Botanical Research Institute, Lucknow; Central Institute of Medicinal and Aromatic plants Lucknow and Regional Research Laboratory (Jammu & Kashmir, Jorhat). A number of Indian Universities and Organisations have also made significant contributions towards the knowledge of useful medicinal plants.

The region of North-East India is a home-land of different ethnic groups and cultural entities. The Lalungs (Tiwas) with a population of 1,62,760 (Bordoloï et al., 1987) are the prominent Scheduled Tribe of Assam mostly inhabiting the Plain areas. However, they did not find a
place in lists of Major Tribes of North-East Region recorded earlier by Gupta (1987) and Nath & Bordoloi (1988). They are the descendents of Mongoloids (Baruah, 1989), the mention of which has been made in old Sanskrit and Assamese literature, viz., The Vayurveda, The Atharvaveda, The Ramayana, The Mahabharata, The Kalikapurana, The Yoginitantra, The Kachari Burunjí, The Darrang Rajvanshavali etc. (Bhattacharjya, 1962). Out of a total Scheduled Tribe population 1,25,115 in the Nagaon (née Nowgong) district (s.t.), 76.4% are Lalungs as per 1971 Census. Their concentrations are chiefly found in the areas viz. Kopili, Mayong, Bhurbandha, Kathiatali and Kampur Development Block. These areas now fall within the jurisdiction of Morigaon district formerly a Sub-division of Nagaon district and at present raised to the status of a district since reorganisation of districts of Assam (cf. Assam Gazette Notification No. GAG(B)370/87/102 dated the 29th September, 1989 w.e.f. 1st October, 1989).

The Lalungs (Tiwas) are maintaining their traditional distinctiveness of socio-cultural fabric with characteristic religious beliefs and practices, festivals, languages, material cultures etc. Moreover, some miraculous medicines have been in vogue among the Lalungs (Tiwas). In many instances these much acquired knowledge of continued experiences are usually passed on word of mouth to next kith and kin from generation to generation as a guarded secret of certain families. Perhaps such folklore medicines till remain endemic to this region of the country among the Lalungs (Tiwas) and might disappear unnoticed unless recorded timely.
A resume of literature reveals that the Medico-botanical investigation in Assam is at a low ebb in comparison to the number of Tribes inhabiting the State. A haphazard but valuable information on Ethnomedico-botanical aspects of a few Tribes of Assam have been known through the works of Jain & Borthakur (1980) on Mikirs; Bhattacharjee et al (1980) on folk medicines from Kamrup district; Hajra & Baishya (1980) on Mishing Tribes; Barua & Sharma (1984) on Bodo; Tewari et al (1979) on folklore medicines from Assam and Arunachal Pradesh; Majumder et al (1978) on folklore medicines from Assam and Meghalaya; Borthakur (1980) on less known medicinal uses of plants among the Tribes of Mikir Hills (Karbi Anglong); Borthakur (1981) on certain plants in the folklore and folklife of the Karbis (Mikirs); Borthakur (1992) for child and women diseases; Tewari et al (1982) on folklore information from Assam on family planning and birth control; Gogoi & Boissya (1984) on herbal medicines used by the people of Assam against Jaundice.

A critical review of literature indicates that the Lalung (Tiwa) Tribe is Medico-botanically unexplored. Selection of the Tribe Lalung (Tiwa) for present investigation is based on the fact that they are a recognised Scheduled Tribe of Assam. 95% of nearly 1 lakh population in Morigaon district still remain secluded from urban culture. They have somehow evaded the attention of research workers on the aspect of utilisation of plants in general and knowledge and usage of medicine in particular. Study of certain socio-cultural aspects of Lalungs (Tiwas) of Assam have been undertaken by Sharma Thakur (1985); Bordoloi et al (1987) and Barua (1989). But no work in any form has so far been done to evaluate the medicinal plantlore of Lalung (Tiwa) as a whole. This has
necessitated the study in detail of Ethnomedicobotanical aspects of Lalungs (Tiwas) settled here in Assam for centuries.

Keeping all these aspects in view, the present investigation "Ethnomedicobotanical aspects of Lalung (Tiwa) Tribe of Morigaon district of Assam" has been undertaken with the objective to bring out an illustrated account following the methodologies of Ethnobotanical studies including Ethnomedicobotanical aspects suggested by Schultes (1960, 62); Jain (1964a, 1967a, 1986, 1987, 1989); Ford (1978) and Rao & Hajra (1987). The emphasis has been laid for a detailed study on the application of plants and their parts, process of preparation of medicine, methods of treatment and dosage forms by making exhaustive queries for authenticity of remedies.