CHAPTER - 2
2. MATERIALS AND METHODS:

Rao and Hajra (1987) stated that first step in Ethno-botanical investigation is to identify a particular tribe in their local jurisdiction. Accordingly in the present investigation Reang inhabited villages of the State of Assam were identified with the help of the data from the deptt. of Forests, Govt. of Assam and local people.

Intensive field work has been undertaken from 1992 to 1997 covering different seasons so as to gather information on each and every species found useful in herbal medicine among the Reangs by conducting survey of approximately 36 tribal villages.

Plants have been collected in its flowering and fruiting stages as far as possible, from its natural habitat and serially tagged with collection numbers. Thorough observations have been made on the spot of collection of the individual plant species and recorded field data as regards location, natural habitat, distribution pattern, nature of roots or tubers, rhizomes, bulbs etc. The colour of the flowers and fruits and other relevant characteristics which cannot be observed after drying of the specimen are also recorded. Smaller herbaceous plants have been collected as a whole and in case of trees, shrubs, undershrubs, woody herbs and climbers, respective twigs were collected.
Photo - 15: 85 years old medicine man - Sarat Chandra Reang in front of his house with a branch of *Justicia gendarussa* Brum.
Photo - 16 : 71 years old medicine man identifying a medicinal plant taking smell of the rhizome.
Approaches and methodologies as suggested by Schultes (1960, 1962), Jain (1964a, 1967a, 1986, 1987, 1989); Jain and Rao (1977) and Ford (1978) have been followed during collection of informations on medico-botanical aspects. Information on medicinal plants have mainly been collected from medicine men and village chief of age group 45 to 85 yrs. (Photo-No.15-20). Repeated queries have been made and often the help of interpreters has been taken to confirm data on each medicinal plant.

Data on each plant has been collected as follows: (a) vernacular name, (b) parts used, (c) process of preparation of medicine and (d) doses and mode of application.

Instant pressing of specimens as far as possible was done. Rainy season’s collections were pressed by spraying 10% formaldehyde. Succulent plants and bulbous and rhizomatous were boiled till the plant turned yellow and pressed properly. Dried specimens were poisoned with saturated solution of Mercuric chloride dissolved in absolute alcohol and mounted with fish glue on standard herbarium sheets (42 x 28 cm). Field data with collection number, date of collection, locality, short description, vernacular name, collectors name etc. were transferred from field book to the printed label on the right hand corner of the herbarium sheet for ready identification.

A number of Floras and Monographs were consulted specially of Floara of British India Vol.1-7 (Hooker 1872-1887); Flora of Assam, Vol.1-4 (Kanjilal et al 1934-40) and Vol. 5 (Bor. 1940) along with neighbouring floras viz; Flora of Jowai, Vol.1 & 2 (Balakrishnan,
Photo - 17: Medicine man preparing herbal drugs.
Photo - 18: Medicine man searching medicinal plant inside the forest.
1981 & 1983), Flora of Nongpoh (Joseph, 1982); Flora of Tripura State, Vol. 1 & 2 (Deb, 1981 & 1983) etc., collected specimens were identified and finally confirmed by consulting herbaria viz; Gauhati University Herbarium, Kanjilal Herbarium, Shillong (ASSAM).

One set each of identified herbarium sheets has been deposited in Gauhati University Herbarium for future studies.

Alphabetical arrangement of all the medicinal plants has been made providing correct nomenclature followed by the names of the families of Angiosperms based on Bentham & Hookers (1862-1883) system of classification and Fern Allies & Ferns are those of Panigrahi (1994), given in parenthesis and invariably mentioned the vernacular names along with names found if any in Hindi (H), Sanskrit (S) and Bengali (B) literature.

Each plant species has been described in brief for easy identification followed by phenological data, locality, data of collection and field number. A detailed usage in Ethnomedicine of the plant/plant part(s), preparation of drugs, purpose of use along with established reports of utilization are also furnished.

For established reports of utilization a number of accounts viz., Bentley and Trimen (1880); Dey (1896), Kirtikar and Basu (1933); Dastur (1952); Nadkarni (1954); Chopra et al (1956, 1969); Wealth of India Series (1948-1976); Jain (1985); Nayar et al
Photo – 19: Medicine man in search of medicinal plant along with investigator.
Photo - 20: Medicine man collecting medicinal plants.
(1989); Asolkar et al (1992); The useful plants of India (Anonymous 1992) and Rawat and Chowdhury (1998) were consulted.

Tests for antiseptic activity of some of the collected plants were carried out following Vincent and Vincent (1944) modified filter paper disc method. Details of the procedure are mentioned in chapter 4.2.