Ethnomedicinal plants used by the Mara tribe in Saiha district of Mizoram, India

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Abstract: The study of ethnomedicinal plants was carried out with the Mara tribe in the Saiha district of Mizoram. In the present study 38 plant species belonging to 28 families were involved. The ethnomedicinal plants were used by the traditional users to treat different diseases. The importance of documenting ethnomedicinal plants in the region is important because of rapid loss of biodiversity due to anthropogenic activities and will help in conservation of the valuable used species.

Keywords: Mara, Tribe, Ethnomedicinal plants, Saiha, Mizoram.

I. INTRODUCTION

North East India comprises the state of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim fall under Indo Burma region which is one of biodiversity hotspot of the world. The state of Mizoram is a part of biodiversity hotspot with primary and secondary forest comprising tropical and subtropical forest types and situated in the extreme end of the Himalayan ranges in the North Eastern part of India it is located between 21° 58’ N and 24° 35’ N latitude and 92° 16’ E and 93° 29’ E longitudes and inhabited by 14 major tribes and 37 sub tribes [1]. The studied district Saiha having international boundaries with Myanmar in the east and south, on the west Lawngtlai district and on the north Lunglei district. The district covers an area of 2,258 sq.km, have predominantly mountainous terrain; mountain ranges run in north to south direction, the soil in general young, immature, moderate to acidic. The district enjoys a pleasant, moderate climate warm in summer and cold in winter, under the influence of south west and north east monsoon with an average rainfall of 2500 mm per annum, the temperature varies from 11°C to 35°C, forest cover in the region is tropical wet evergreen type and the region is rich in biodiversity with endemic flora and fauna. Mara tribe are the native inhabitants in the Mara autonomous district council, Saiha district, came from the chin hills of Myanmar and settled in villages, speak Mara language related to Tibeto burman family live in hills and valleys of Kolodyne river [2], [3], [4]. Agriculture is the main occupation, practice shifting cultivation, also do hunting, gathering food, medicine, construction material from natural forests and rich ethnobioculturally on the use of biodiversity and folk knowledge. In recent years the interest in traditional medicine has increase significantly in different countries, India is one diverse country in the world rich in traditional system of herbal medicine to sustain health care in the life of tribal people [5], 2416 plants of ethno-medicinal purpose has been recorded in India among which 1963 plants are used by different tribal societies of North east India [6].

In the present context of study information on various traditional medicines used by the natives of Mizoram is available [7], [8], [9], [10], medico-botanical exploration of districts of Kolasib, Aizawl and Champhai had also been made [11], but there is no proper documentation on plants used by Mara tribe in Saiha district due to remoteness of the region, so the study aimed to enumerate, identify, different species in the region and to harness the traditional ethnomedicinal knowledge, used by the tribe in the treatment of different diseases. The study proposes in increasing the awareness among the local and to boost the importance of different ethnomedicinal species in the remote region for health care.

II. MATERIALS AND METHODS

Intensive field visits were conducted during the period from January 2013 - December 2014 covering different Mara villages in the region. During the visits to the village transect walks in natural reserve, secondary forest in around the
region covered to collect ethnomedicinal species. The local tribes have been taken to the collection site to locate the plant for the correct identification corresponding with the vernacular name and binomial nomenclature. A structured feedback form was used to collect information from the resource persons using standard method [12]. Interviews, discussion with knowledgeable resource villagers like local herbal practitioners, elderly men, women about the ethnomedicinal information utilizing questionnaire on the following aspects of the species local name, parts used, form of use and method of administration for different diseases. The plant sample collected processed following the method of plant collection and herbarium technique [13]. The specimen collected identified with the help of relevant floras and standard literatures [14], [15], [16], [17].

III. RESULTS AND DISCUSSION

The study reveals the diversity of ethnomedicinal plants used by Mara tribe a total of 38 species belonging to 28 families identified. The status on the habit of the ethnomedicinal species in the studied region show the dominant species herbs, followed by trees, shrubs and climbers. The popularity of herbs as dominant species in traditional medicine has been linked to their higher likelihood of containing pharmacologically active compound compared to woody plant form reported in other studies [18], [19]. The study on the parts used by the Mara tribe of the different species to cure different ailments the most widely used plant part leaves followed by root, bark whole plant, fruit, stem, rhizome and tuber each, shoot, bulb, corm, flower and seed. Leaves dominant plant part in traditional medicine mostly used part for preparation of different ethno medicines might be due to easy availability, containing high amount of chemicals, easily extracted and use of leaves does not cause damaging effect on the plant life cycle as compared with other parts like root, flower [20], [21]. The information on the mode of preparation of different species by the ethnic group to cure different diseases show the most common form decoction followed by raw, juice, infusion, paste, boiled, inhalation, powdered and most of the medicines are administered orally. Few plants in the studied site have multiple uses and many diseases are treated Carica papaya, Oroxylum indicum, Phyllanthus urinaria, Psidium guajava and Zingiber officianale. The study reflects that seven ethno medicinal plants used by different tribes of North east India listed in the present work are Centella asiatica [6], [22], [23], Curcuma longa [6], [24], Musa paradisiaca [23], [25], Oroxylum indicum [26], [27], Paedaria foetida [22], [23], Plantago major [6], Zingiber officianale [22], [23]. Curcuma caesia and Oroxylum indicum are reported for the first time used by the Mara tribe and regarded as threatened and high valued medicinal plants in Northeast India [28].

IV. CONCLUSION

The tribe has a rich traditional knowledge and its affinity to nature of their dependence to the use of plant resources available around them for their health care need in the remote region since people are not access to modern medicine. The study reveals that the ethnomedicinal knowledge is confined to few people only, so it is feared that with the passing of time important information may be lost, so documentation of this knowledge is very much helpful in understanding the utilization of the resource for conservation at local level for the development of Indian system of medicine, pharmaceutical industry and scientific investigation for the welfare of mankind.

**TABLE 1: ETHNOMEDICINAL PLANTS USED BY MARA TRIBE WITH FAMILY, LOCAL NAME, HABIT, PART(S) USED, MODE OF PREPARATION AND DISEASE(S)**

<table>
<thead>
<tr>
<th>Sl.no.</th>
<th>Botanical Name</th>
<th>Family</th>
<th>Local name</th>
<th>Habit</th>
<th>Part(s) used</th>
<th>Mode of Preparation</th>
<th>Disease(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Allium cepa L.</td>
<td>Amaryllidaceae</td>
<td>Purin sen</td>
<td>Herb</td>
<td>Bulb</td>
<td>Raw</td>
<td>Stomach problem</td>
</tr>
<tr>
<td>2</td>
<td>Alstonia scholaris (L.) R.Br.</td>
<td>Apocynaceae</td>
<td>Thumriot</td>
<td>Tree</td>
<td>Bark</td>
<td>Decoction</td>
<td>Fever</td>
</tr>
<tr>
<td>3</td>
<td>Annona dealbata Roxb.</td>
<td>Zingiberaceae</td>
<td>Anehbawp</td>
<td>Herb</td>
<td>Tubers</td>
<td>Paste</td>
<td>Bee bite</td>
</tr>
<tr>
<td>4</td>
<td>Ananas comosus (L.) Merr.</td>
<td>Bromeliaceae</td>
<td>Lakhwu</td>
<td>Herb</td>
<td>Leaves, Whole plant</td>
<td>Decoction</td>
<td>Post delivery problem, Diabetes, Stomach problem and Asthma</td>
</tr>
<tr>
<td>5</td>
<td>Annona squamosa (Roxb.) Drake</td>
<td>Compositae</td>
<td>Buar</td>
<td>Herb</td>
<td>Leaves</td>
<td>Juice</td>
<td>Diabetes, Typhoid and Dysentery</td>
</tr>
<tr>
<td>6</td>
<td>Carica papaya L.</td>
<td>Caricaceae</td>
<td>Thumbangla</td>
<td>Tree</td>
<td>Seed, Leaves, Fruit</td>
<td>Decoction</td>
<td>Diabetes, Typhoid and Dysentery</td>
</tr>
<tr>
<td>7</td>
<td>Centella asiatica (L.) Urb.</td>
<td>Apiaceae</td>
<td>Lambak</td>
<td>Herb</td>
<td>Whole plant</td>
<td>Decoction</td>
<td>Fever and Diabetes</td>
</tr>
<tr>
<td>8</td>
<td>Clerodendrum grandis Lindl.</td>
<td>Verbenaceae</td>
<td>Phuuhnam</td>
<td>Shrub</td>
<td>Leaves</td>
<td>Decoction, Crushed</td>
<td>High blood pressure, Inhaled for convolution</td>
</tr>
<tr>
<td>9</td>
<td>Clerodendrum thomsoniae</td>
<td>Verbenaceae</td>
<td>Phuuhnam</td>
<td>Shrub</td>
<td>Leaves</td>
<td>Juice</td>
<td>Skin diseases and Cleaning hairs</td>
</tr>
<tr>
<td>Common Name</td>
<td>Family</td>
<td>Genus</td>
<td>Plant Part</td>
<td>Use</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>10 Crotalaria zimmeri</td>
<td>Fabaceae</td>
<td>Crotalaria</td>
<td>Leaf</td>
<td>Fungal infection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Crotalaria juncea</td>
<td>Fabaceae</td>
<td>Crotalaria</td>
<td>Seed</td>
<td>Fungal infection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Acalypha indica</td>
<td>Euphorbiaceae</td>
<td>Acalypha</td>
<td>Leaf</td>
<td>Fungal infection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Acalypha indica</td>
<td>Euphorbiaceae</td>
<td>Acalypha</td>
<td>Root</td>
<td>Fungal infection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Acalypha indica</td>
<td>Euphorbiaceae</td>
<td>Acalypha</td>
<td>Stem</td>
<td>Fungal infection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 Acalypha indica</td>
<td>Euphorbiaceae</td>
<td>Acalypha</td>
<td>Flower</td>
<td>Fungal infection</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**REFERENCES**


