Study of some important wild aromatic medicinal plants found in Imphal –West District, Manipur, India.

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Abstract- The present field investigation revealed that a total of 45 wild aromatic plants belonging to 19 families were recorded for different ailments viz. skin diseases, asthma, high blood pressure, diabetes, diarhoea, dysentery, rheumatism etc. Zingiberaceae (12) family falls higher no. of species followed by Asteraceae (8), Rutaceae (6), Lauraceae (2). Some important aromatic wild medicinal plants which are widely used by the local healers are Acorus calamus Linn., Aquilaria agallocha Roxb, Artocarpus lakoocha Wall., Curcuma amada Roxb., Cinnamomum tamala Nees, Curcuma angustifolia Roxb, Kaempferia rotunda(L), Citrus ganrhhini Lush, Curcuma amada Rosc., Magnolia champaca (L) Baill. However, Cinnamomum tamala Nees, Curcuma angustifolia Roxb, Kaempferia rotunda(L) ,Curcuma amada Rosc. are included in Red data list due to deforestation, urbanization and other human activities etc. as a result of which the rich habitats are gradually depleting day by day. Therefore, the conservation of rich biodiversity of bio-resources needs to be conserved for future generation.

Index Terms- Aromatic Plants, Conservation, Therapeutic, Biodiversity, Manipur.

I. INTRODUCTION

Manipur is widely characterized by rich diversity of ethnomedical plants as well as a rich heritage of medicinal and aromatic plants. It has two biodiversity hot spots of the world viz., Eastern Himalaya and Indo Myanmar (P.K Singh, 2011). The use of wild medicinal plants in curing various diseases is still current, starting with ancient time (Salave et al., 2010). The medicinal plants have value of drug due to the presence of specific chemical substances like alkaloids, glucosides, antioxidants, tannins, vitamins, essential and fatty oils etc. The main constituents of essential oils are mono and sesquiterpenes including carbohydrates, phenols, aldehydes, alcohols, ether and ketones are responsible both for the fragrance and for the biological activities. These plant constituents found in fruits, rhizomes, vegetables that are responsible for human health benefits. Manipur has rich heritage and long history on use of medicinal plants as medicine, cosmetics, health hygiene, toiletries, fragrance and food supplements in improving the quality of life. Some aromatic plant products having an aromatic or pungent vegetable substances used to flavor food and food products. Conservation resources of medicinal plants have been conducted in different parts of the world (Joy et al., 2001) (Lyle, 2007), (Shankar et al. 2010). Some of the noteworthy account of the floristic study and the sacred plants species having medicinal and religious importance of Manipur have been reported by Mukherjee (1953), Jain and Shukla (1979), Phukan (1999) and (Khubongmayum, 2004). Medicinal plants are used as therapeutical activities such as diuretic, antiseptic, antihelmintic, stimulant, analgesics and carminative etc. In Manipur, medicinal plants are associated with folk traditions and local healers. Still, about 1200 medicinal plants are used by practitioner in traditional herbal home remedies (Tombiraj 2011). (Vieira et al., 1993) and (Jain et al.,2007) reported that approximately 85% of villagers consult with traditional medicine preparation involve plants extracts. The ethano-biological knowledge of people may help in understanding human environment interactions . In the present investigation, we focus on identification and conservation of wild aromatic plants currently used in the folk medicine.

II. MATERIALS AND METHODS

An intensive study of wild aromatic plants was carried out in Imphal-west (24014N latitudes and 93011 E longitudes). The present paper was based on the wild aromatic plants used by the indigenous group of communities of Manipur their identification, categorization with locally available materials. The field survey was conducted in the month of Feb-July of this year 2017 in different remote villages of the Imphal West District. Information on the wild aromatic medicinal plants and its products were collected from well-known village headman, many traditional healers regarding the utilities of plants as home remedies through interaction. Voucher specimens were collected from the natural habitat as well as from the markets and maintained were followed for correct identification and nomenclature (Sinha,1996; Brown,1969; Vedaja,1998).
### Table 1. Wild aromatic medicinal plants

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Botanical name</th>
<th>Common Name</th>
<th>Local Name</th>
<th>Family</th>
<th>Flowering &amp; Fruiting</th>
<th>Parts Used</th>
<th>Medicinal Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><em>Artemisia indica</em> Linn.</td>
<td>Worm seed</td>
<td>Laibakngau-nakuppi</td>
<td>Asteraceae</td>
<td>Sept-Feb</td>
<td>Whole plant</td>
<td>Stomach pain, anti-septic</td>
</tr>
<tr>
<td>2.</td>
<td><em>Artemisia nilagirica</em> (Clarke) Pamp. Roxb.</td>
<td>Indian worm wood fleavane</td>
<td>Laibakngou</td>
<td>Asteraceae</td>
<td>Oct-Jan, Jan-Feb</td>
<td>Whole plant</td>
<td>Tonic, antiseptic, insect repellant</td>
</tr>
<tr>
<td>3.</td>
<td><em>Acorus calamus</em> Linn.</td>
<td>Sweet flag</td>
<td>Oak-hidak</td>
<td>Araceae</td>
<td>Non-flowering</td>
<td>Leaves, Root, Rhizome</td>
<td>Cough, fever, itching</td>
</tr>
<tr>
<td>5.</td>
<td><em>Ageratum conyzoides</em> Linn.</td>
<td>Goat weed</td>
<td>Khongjai-napi</td>
<td>Asteraceae</td>
<td>Feb-July</td>
<td>Leaves</td>
<td>Hair care lotion, wound, gastrointestinal diseases</td>
</tr>
<tr>
<td>8.</td>
<td><em>Alpinia officinarum</em> Wild</td>
<td>Small galanga</td>
<td>Pulleimanbi</td>
<td>Zingiberaceae</td>
<td>May-June</td>
<td>Rhizome, inflorescence</td>
<td>Stimulant carminative, spices</td>
</tr>
<tr>
<td>9.</td>
<td><em>Amomum dealbatum</em> Roxb.</td>
<td>Bengal cardamom</td>
<td>Namara</td>
<td>Zingiberaceae</td>
<td>April-May</td>
<td>Rhizome, inflorescence</td>
<td>High B.P, constipation</td>
</tr>
<tr>
<td>10.</td>
<td><em>Artocarpus lakoocha</em> Wall.</td>
<td>Monkey jack tree</td>
<td>Hari-kokthong</td>
<td>Moraceae</td>
<td>July-Aug</td>
<td>Fruit, leaves</td>
<td>Skin diseases, tonic, heart diseases</td>
</tr>
<tr>
<td>11.</td>
<td><em>Aegle marmetos</em> (L.) Correa</td>
<td>Indian bael</td>
<td>Hei-khagok</td>
<td>Rutaceae</td>
<td>March-June</td>
<td>Fruit, leaves</td>
<td>Diabetes, dyspepsia, dysentery</td>
</tr>
<tr>
<td>12.</td>
<td><em>Artabotrys hexapetalus</em> (L.F.)</td>
<td>Tai grape</td>
<td>Chini-champra</td>
<td>Amonacea</td>
<td>April-May</td>
<td>Inflorescence, leaves</td>
<td>Insect repellent, cholera, perfume</td>
</tr>
<tr>
<td>15.</td>
<td><em>Cucurma angustifolia</em> Rosc.</td>
<td>East Indian arrow root</td>
<td>Yaipal</td>
<td>Zingiberaceae</td>
<td>April-May</td>
<td>Inflorescence</td>
<td>Anti-fungal, antibacterial, cough, diarrhea</td>
</tr>
<tr>
<td></td>
<td>Species Name</td>
<td>Family</td>
<td>Other Names</td>
<td>Flowering/Fruiting Period</td>
<td>Parts Used</td>
<td>Uses</td>
<td></td>
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<td>16.</td>
<td><em>Cymbopogan flexuosus</em> St</td>
<td>Poaceae</td>
<td>Citronella grass, Houna</td>
<td>Sept-Dec</td>
<td>Leaves</td>
<td>Throat pain, hair care lotion</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td><em>Citrus lalipes</em> DC.</td>
<td>Rutaceae</td>
<td>Khasipapeda, Heiribob</td>
<td>March, Nov.</td>
<td>Fruit</td>
<td>Anti-dandruff, good complexion, stone case</td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td><em>Citrus limethiodes</em> Tanaka</td>
<td>Rutaceae</td>
<td>Grape fruit, Heithum</td>
<td>April-june</td>
<td>Fruit</td>
<td>Flavouring, beverage, confection</td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td><em>Costus Speciosus</em> (K) sm</td>
<td>Zingiberaceae</td>
<td>Male bamboo, Khongbal Takhellei</td>
<td>May-July</td>
<td>Root</td>
<td>Purgative, stimulant, tonic</td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td><em>Gynura cusimba</em> L.</td>
<td>Asteraceae</td>
<td>Silk cotton tree, Terapaibi</td>
<td>May-Aug</td>
<td>Leaves</td>
<td>Colitis, stimulant, tonic, stomach ulcer</td>
<td></td>
</tr>
<tr>
<td>29.</td>
<td><em>Hedychium marginatum</em> C.B. Clarke.</td>
<td>Zingiberaceae</td>
<td>Red ginger lily, Takhellei-agangba</td>
<td>July-Sept</td>
<td>Rhizome, leaves</td>
<td>Carminative, t,bronchitis, tonic</td>
<td></td>
</tr>
<tr>
<td>30.</td>
<td><em>Houttuynia cordata</em> Thunb.</td>
<td>Sauraceae</td>
<td>Moluca bean, Tongningkhok</td>
<td>July-Sept</td>
<td>Leaves, rhizome</td>
<td>Dysentery, gonorhoea,</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Species Name</td>
<td>Common Name</td>
<td>Family</td>
<td>Season</td>
<td>Part Used</td>
<td>Medicinal Uses</td>
<td></td>
</tr>
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<td>-----</td>
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<tr>
<td>31.</td>
<td><em>Kaempferia rotunda</em> (L)</td>
<td>Aromatic ginger</td>
<td>Zingiberaceae</td>
<td>May-June</td>
<td>Rhizome</td>
<td>Sinusitis, mur, tumour, high bp,</td>
<td></td>
</tr>
<tr>
<td>32.</td>
<td><em>Lantana camara</em> Linn.</td>
<td>Largeleaf lantana</td>
<td>Verbenaceae</td>
<td>Through the year</td>
<td>Leaves, fruit</td>
<td>Anti-fungal, diabetes, antihelmintic</td>
<td></td>
</tr>
<tr>
<td>34.</td>
<td><em>Magnolia champaca</em> (L) Baill</td>
<td>Fragrant champaca</td>
<td>Magnoliaceae</td>
<td>May-March</td>
<td>Inflorescence, root</td>
<td>Dyspepsia, gonorrhoea, stomach complaint</td>
<td></td>
</tr>
<tr>
<td>35.</td>
<td><em>Paederia foetida</em> L.</td>
<td>Stinkvine</td>
<td>Rubiaceae</td>
<td>March-Oct</td>
<td>Leaves</td>
<td>Piles, paralysis, rheumatism, dyspepsia</td>
<td></td>
</tr>
<tr>
<td>36.</td>
<td><em>Pogostemon bengalensis</em> Kuntz.</td>
<td>Passion flower</td>
<td>Lamiaceae</td>
<td>In cold season</td>
<td>Leaves, root</td>
<td>Hair care lotion, piles</td>
<td></td>
</tr>
<tr>
<td>37.</td>
<td><em>Pogostemon parviflorus</em> Benth</td>
<td>Phangla</td>
<td>Asteraceae</td>
<td>Oct-Dec, Dec-Jan</td>
<td>Whole plant</td>
<td>Antibiotic to wound &amp; cut, Piles, Hair care lotion</td>
<td></td>
</tr>
<tr>
<td>38.</td>
<td><em>Plectranthus sternifolius</em> Don.</td>
<td>White champa</td>
<td>Lamiaceae</td>
<td>Sept-Nov, Jan-March</td>
<td>Leaves</td>
<td>Disinfectant, antifungicide</td>
<td></td>
</tr>
<tr>
<td>40.</td>
<td><em>Schefflera venulosa</em> C.B. Clarke</td>
<td>Needlewood</td>
<td>Araliaceae</td>
<td>Feb-Jun</td>
<td>Wood, leaves</td>
<td>Dropsy, paralysis</td>
<td></td>
</tr>
<tr>
<td>41.</td>
<td><em>Spondia spinnata</em> (Linn.f.) Kurtz.</td>
<td>Indian hog plum</td>
<td>Anacardiaceae</td>
<td>March-June</td>
<td>Fruit, leaves</td>
<td>Piles, hair growth, dysentery, gonorrhoea</td>
<td></td>
</tr>
<tr>
<td>42.</td>
<td><em>Tithonia diversifolia</em></td>
<td>Mexican sunfloweri</td>
<td>Asteraceae</td>
<td>Sept-Feb</td>
<td>Leaves, seed</td>
<td>Gastric problem, wound, bruises,</td>
<td></td>
</tr>
<tr>
<td>43.</td>
<td><em>Vitex trifolia</em> (L.)</td>
<td>Chinese chaste tree</td>
<td>Verbenaceae</td>
<td>June-Sept</td>
<td>Leaves</td>
<td>Muscular sprain, anti-fungal, anticancer, tuberculosis</td>
<td></td>
</tr>
<tr>
<td>44.</td>
<td><em>Zanthoxylum acanthopodium</em> D.C.</td>
<td>Winged leaf prickly ash</td>
<td>Rutaceae</td>
<td>Dec-Feb</td>
<td>Fruit, leaves</td>
<td>Chronic fever, indigestion,</td>
<td></td>
</tr>
</tbody>
</table>
III. RESULTS AND DISCUSSION

In the present investigation, a total of 45 wild aromatic plants belonging to 19 families were recorded in the Imphal west District, Manipur (Table 1). And the plant species are arranged in alphabetical order. Table 2 showed that the plant parts used in different ailments. The higher no. of species falls in the Zingiberaceae (12) family followed by Asteraceae (8), Rutaceae (6), Lauraceae (2). Out of the total aromatic plants, four species included in IUCN Red data list viz, Cinnamomum tamala Nees, Curcuma angustifolia Roxb, Kaempferia rotunda(L) Curcuma amada Rosc. (Anonymous 2013). The usage of herbal medicine has been increased to many diseases and there is a great demand for therapeutic. The side effect of herbal products are not yet reported in many industries and market. The used of these species plants to enhance the taste of...
The communities of Manipur still need foods, beverages and drugs, because of poor socio-economic conditions. Lack of institutional support, unsustainable use, cultural changes have threatened resources and local traditional knowledge (Rajendro et al., 2009). The present investigation suggested that for an urgent need to explore proper domestication research and development of rapid medicinal plant production and new good technologies. Publics should be educated and have scientific knowledge about the herbal products. The rapid increasing interest in the field of medicinal plants, we must require active collaboration amongst Scientists, Technologies ,Government or Private Organization.

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REFERENCES


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