Chapter 2:
About the plants
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ABOUT THE PLANTS

2.1 Introduction:
Medicinal plants offer alternative remedies for different health problems. Diabetes mellitus is one of the major diseases affecting many people on the globe (Sidhu and Sharma, 2013). Diabetes and herbs have got a long relation from the past. Traditional plant based remedies are still the first choice in the developing countries because of their cost effectiveness, easy availability and minimum or no side effects (Kameswara et al., 1993; Okigbo and Mmeka, 2006). Traditional medicines from readily available medicinal plants offer great potential for the discovery of new antidiabetic drugs. The ethanobotanical information suggests that about 800 plants species have been identified throughout the world which may possess anti-diabetic potentials (Patel et al., 2012). Based on the traditional knowledge of the people of north eastern India especially Manipur, *Eurya japonica* Thunb. and *Ficus auriculata* Lour. are the medicinal plants which have been reported to be beneficial for the treatment of type 2 diabetes (Figure 2.2 & 2.3).

Given below are the general description about these two medicinal plants under study:

2.2 Herb Scientific name: *Eurya japonica* Thunberg
Synonyms: *Eurya nitida* Korth. [= *Eurya japonica* var. *nitida*]
Family: Theaceae (Tea family)
Genus: Eurya
Species: Japonica
Author: Thunb.
English name: Japanese eurya
Local name: Uyangal Laba (Manipuri); Saseni, murmura (Assamese)
Habitat of *Eurya japonica*:
Asia- temperate: China, Japan, Korea, Taiwan.
Asia- tropical: India, Malaysia
Description of the plant:

<table>
<thead>
<tr>
<th>Plant</th>
<th>Height</th>
<th>Flowering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shrub or an evergreen tree</td>
<td>4-8 m (9ft). Tall; Leaves 3-8 cm ; Flower white 5-6mm</td>
<td>March-April</td>
</tr>
</tbody>
</table>

**Importance:** The leaves are used as a tea substitute or to adulterate China tea. Leaves are used as poultice on skin eruption. Wood - soft, close grained. Used mainly as a fuel. Branches of *Eurya japonica* Thunb. are used in Shinto ceremonies in Japan.

2.3 **Herb scientific name:** *Ficus auriculata* Lour.

**Synonyms:** *Ficus macrophylla* Roxb. & Buch.-Ham. ex Sm. (1810); *Ficus hamiltoniana* Wall. (1831); *Ficus rotundifolia* Roxb. (1832); *Ficus roxburghii* Steud. (1840); *Covellia macrophylla* Miq. (1848); *Ficus sclerocarpa* Griff. (1854); *Ficus scleroptera* Griff. (1854); *Ficus oligodon* Miq. (1867); *Ficus regia* Miq. (1867); *Ficus pomifera* Wall. ex King (1888); *Ficus macrocarpa* H.Lév. & Vaniot (1907); *Ficus hainanensis* Merr. & Chun (1935).

**Family:** Moraceae

**Genus:** Ficus

**Species:** Auriculata

**Author:** Lour.

**English name:** Elephant ear fig tree

**Local name:** Hieba (Manipuri); Athua dimaru (Assamese)

**Habitat of *Ficus auriculata***:

Asia- temperate: China

Asia- tropical: Bhutan, India, Nepal, Pakistan, Myanmar, Thailand, Vietnam, Malaysia
Description of the plant:

<table>
<thead>
<tr>
<th>Plant</th>
<th>Height</th>
<th>Flower/Fruit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shrub or an evergreen or semi-deciduous tree</td>
<td>10 m tall, with expanded canopy, trunk up to 45 cm of diameter. Leaves 30-40 cm in diameter and oval to ovate. They have a gritty sandpaper texture and new growth is red turning green. Flowers are insignificant. Fruit depressed-globose to pear-shaped, 8 cm in diameter, silky-hairy, green to red-brown with conspicuous white or rusty flecks, found as large clusters on the trunk, on thin branches arising from the trunk or even on the roots of the plant.</td>
<td>Aug.-Nov.</td>
</tr>
</tbody>
</table>

**Importance:** The fruits are very good for eating and the jelly-like substance contained in them makes them very tasty. The possibility of jam-making from this fruit should also be explored. The leaves of *Ficus auriculata* are used as a fodder during the winter season and are very much liked by cattle. The leaves are also used as plates by stitching 3-4 leaves together for taking food during the feasts in the villages.
Figure: 2.2 (A) & (B) *Eurya japonica* Thunb. plant in natural habitat, Phayeng Imphal west district, Manipur. (C) Dry leaves of *Eurya japonica* Thunb. and (D) Fresh fruiting branch and leaves of *Eurya japonica* Thunb.
Figure 2.3 (A) *Ficus auriculata* Lour. plant in natural habitat, Phayeng Imphal west district, Manipur. (B) Dry leaves of *Ficus auriculata* Lour. and (C) Fresh leaves of *Ficus auriculata* Lour.