

## LESS KNOWN EDIBLE FRUIT – YIELDING PLANTS OF NILGIRIS

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**ABSTRACT:** *The present paper is concerned with 27 species belonging to 22 genera and 18 families, which yield wild edible fruits. They are arranged in alphabetical order followed by their local names and habit. An attempt has been also made to indicate the nutritive values of edible portions on the basis of documented literature. Brief illustration is furnished wherever necessary.*

### INTRODUCTION

The wild fruits / plants form an important additional food source for the people of Nilgiri district. The forest wealth of edible fruits / plants is exploited by these people to quench their hunger during adverse environmental conditions. The Nilgiri district is blessed by nature with its diversified and rich flora. The district is also characterized by the presence of different ethnic groups like, *Badagas, Todas, Kotas, Irulas, Kurumbas, Panyas and Kattunayakkas*. These groups have peculiar religious customs and practices of their own. It has been noted from the records that Nilgiri ethnic groups have inhabited the Western ghats from 300 BC (Gardner, 1976). Most of these groups practice primitive type of agriculture to cultivate crops like food grains, fruits and pulses. They also depend on various wild edible fruits available to them in the forests.

Nilgiri is one of the smallest districts of the state of Tamilnadu and lies in between 11<sup>o</sup>,43' and 76<sup>o</sup>,14' and 77<sup>o</sup>,1'E respectively. It covers an area of 2,545.40 Sq. Km., and population strength is 6,30,169

(1981, Census). The Nilgiri has four taluks viz., Udthagamandalam, Coonoor, Kotagiri and Gudalur.

### Topography

The Nilgiri district consists of undulating hills with elevations varying from 350 – 2,623m. Topographically the district has been divided into four regions (Jayadev, 1957) namely, 1. the Nilgiri plateau, in the Central part 2. the Sigur plateau, which is in the foot hills towards north of the former 3. Nilgiri – Wynaad extending to the western side and lastly 4. the plains of Mettupalayam, Bhavani and Pilloor. Doddabetta, the second highest peak in South India with an altitude of 2,623m is the crest of the plateau.

### Geology and Soil

The Nilgiris hills are formed by Archaen charnockite genesis. It is a series of rocks varying from acid to ultra basic ones, the intermediate syeno-diorite type being the most common. Charnockites vary in texture from a coarse crystalline rock, to a dark

finely divided crystalline rock, to a dark finely divided crystalline rock. The minerals present in the rock are the blue quartz, plagioclase feldspars, hornblende, hypersthene and secondary minerals as garnets etc.

The soils are lateritic and are possibly derived from charnockite soils stained with black markings which suggest the presence of Ferro-magnesium minerals. In different localities of the district the soils are deep red and black sandy loam (Venkataraman and Vasu, 1982).

### Climate and Rainfall

The Nilgiri district is situated in tropics with a climate varying between sub-tropical and temperate followed by high rainfall ranging from 500 – 6,000 mm. per annum. The South-west monsoon starts in the western part of Western Ghats during May – August. North – East monsoon starts in Eastern part of Western Ghats during October – December. The temperature ranges from a minimum of 0°C to maximum of 33.69°C. April and May are the hottest months. December and January are considered the coldest.

### Methodology

The data for the present study forms the collection of wild edible fruit yielding plants during our field trips. The essential information comprise of local names, frequency and mode of their botanical names. A short resume of the plants is also given. An attempt has been made to indicate the nutritive values of their edible portions on the basis of reported literature Table-1 (Gopalan *et al.*, 1987). A selected diagrammatic illustration is also furnished.

*Berberis tinctoria* Lesch

(Berberidaceae)

Local name : *Oosi Kala*

An erect, evergreen bushy with pale brown shining twigs. Leaves prickly. Flowers yellow in panicles or corymbs. Fruits glaucous spindle-shaped dark blue, common.

*Duranta repens* Linn  
(Verbenaceae)

An erect bushy shrub or small tree with spinous branches. Leaves oblong-lanceolate. Flowers blue in racemes at the end of the branches. Fruits in berries, orange, rare.

*Elaeagnus Kologa* Schlecht  
(Elaeagnaceae)

Local name : *Korangu Pazha, Kolungai*

A straggler climbing up and over tall trees. Leaves ovate-oblong, shining. Flowers sessile in clusters near the end of branches, red fleshy with a pleasantly acid taste, common.

*Elaeocarpus tectorius* (Lour.) Poir  
(Elaeocarpaceae)

Local name : *Bikki*

A large tree with whitish wood. Leaves 3 – 4, elliptic, crenate-serrate with small glandular point at each of the crenatures, shining. Flowers in racemes, white. Drupes oblong, narrowed at both ends, green, common.

*Ficus exasperate* Vahl  
(Moraceae)

Local name : *Athi-maram*

A small tree without aerial roots. Leaves alternate, oblong-lanceolate, serrate. Male and female flowers are borne on the fleshy receptacle. Achenes elongate, obovoid, yellowish-purple and the pulp is light red, rare.

*Ficus bengalensis* Linn.  
(Moraceae)

Local name : *Ala-maram*

A very large tree with many aerial roots from the branches. Leaves ovate, entire. Male flowers are near the mouth of the receptacle. Fruits globose, red when ripe, common.

*Gaultheria fragrantissima* wall.  
(Ericaceae)

Local name : *Yenna Annu*

A branched shrub with fulvous hairs. Leaves ovate, lanceolate, serrate. Flowers polygamous in axillary umbellate cymes, white. Drupes fleshy, wrinkled, slightly 4-lobed.

*Opuntia dillenii* (Ker-Gawl.) Haw.  
(Cactaceae)

Local name : *Sappathi kalli*

A succulent subshrub, segments flat thick, obovate. Areoles bearing yellowish spines and numerous small bristles. Flowers yellow. Fruits orange-red, common.

*Passiflora edulis* Sims  
(Passifloraceae)

Local name : *Thatput*

A climber with deeply lobed, toothed leaves velvety. Flowers bright pink. Fruits mature greenish yellow, oblong, common.

*Phyllanthus emblica* Linn.  
(Euphorbiaceae)

Local name : *Peru Nelli*

A deciduous small tree with spreading branches. Leaves linear. Flowers greenish yellow. Fruits fleshy, globose, with 6 obscure vertical furrows, pale yellow, common.

*Physalis peruviana* Linn  
(Solanaceae)

Local name : *Thol Thakkali*

An erect, branched herb. Leaves ovate-cordate. Flowers white with purplish spot. Fruit covered with calyx, yellowish green, common.

*Pithecellobium dulce* (Roxb.) Benth.  
(Mimosaceae)

Local name : *Karapilly, Kodukkapulli*

A armed tree with short straight stipular thorns. Flowers green. The pods are curiously twisted and the seeds are embedded in a sweet whitish pulp. The pulp is edible, rare.

*Polygonum chinense* Linn.  
(Polygonaceae)

Local name : *Kakka karumbu*

A large rambling under-shrub. Leaves elliptic or ovate, glabrous above. Flowers sessile in paniculate heads, white, slightly fragrant. Fruits black, common.

*Potentilla indica* (Andr.) Wolf.  
(Rosaceae)

Local name : *Keppu Annu*

A runner, rootstock with long internodes.  
Flowers yellow. Fruits bright red, common.

*Rhodomyrtus tomentosa* (Alt.) Hassk  
(Myrtales).

Local name : *Thavutu pazham*

A shrub or small tree. Leaves opposite,  
obovate. Flowers pink in small cymose  
axillary corymbs. Fruits globular, dark,  
purple, common.

*Rubus ellipticus* Smith  
(Rosaceae)

Local name : *Mullu pazham*

A climbing shrub young parts covered with  
glandular hairs, prickles slender curved  
down. Leaves pinnately 3-foliolate. Flowers

in dense terminal and axillary racemes.  
Fruits yellow, common

*Rubus racemosus* Roxb.  
(Rosaceae)

Local name : *Mullu pazham*

A climbing shrub with inflorescence clothed  
with glandular hairs. Leaves 3 – 5, densely  
white below. Flowers few, white, axillary  
corymbs. Fruits bright pink, common.

*Rubus rugosus* Sm.  
(Rosaceae)

Local name : *Mullu pazham*

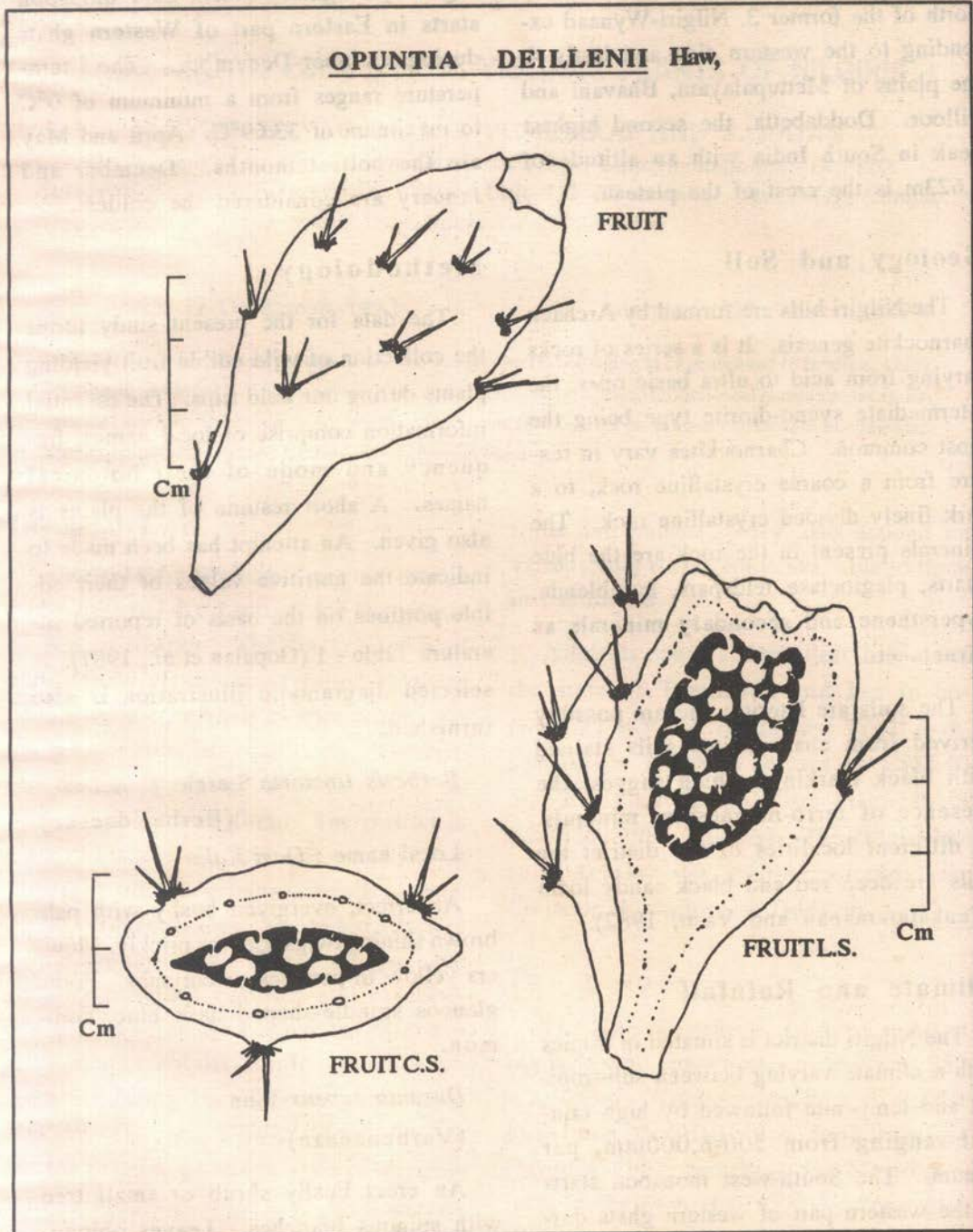
A shrub with many prickles. Leaves simple  
with 3 – 7 lobes ovate or triangular, deeply  
cordate. Flowers white. Fruits dark purple,  
common.

*Solanum nigrum* Linn.  
(Solanaceae)

Local name : *Manathakkali*

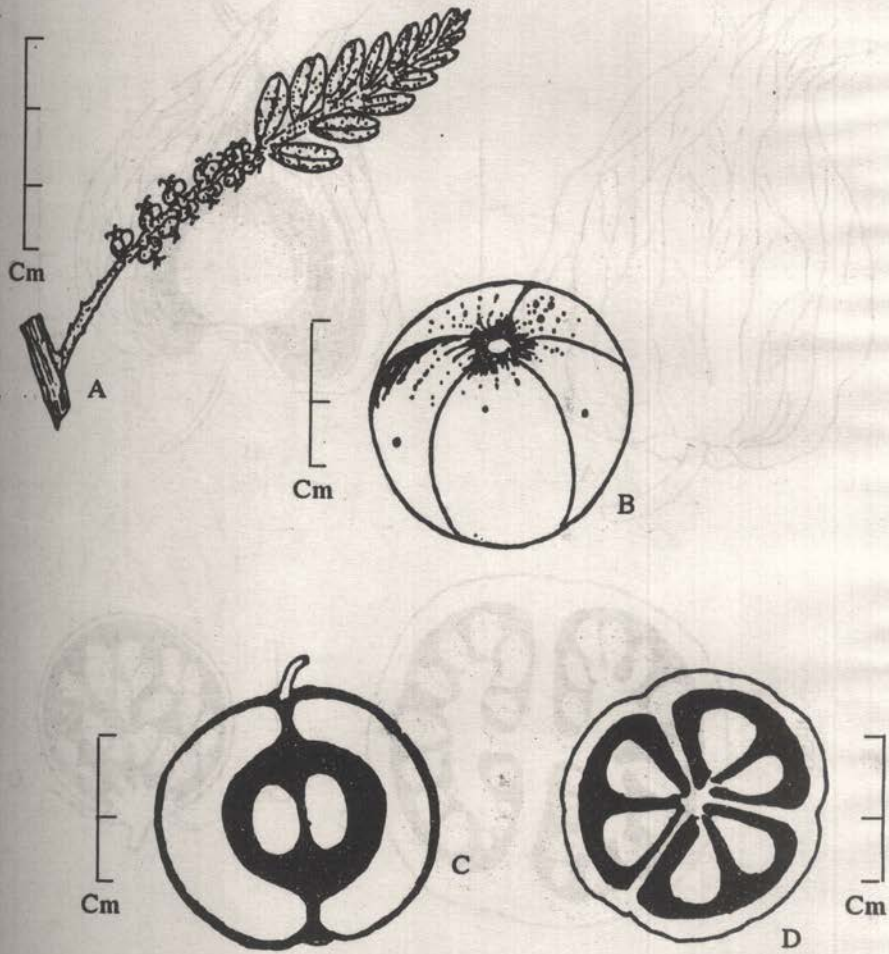
TEXT FIG.1

OPUNTIA DEILLENII Haw,



TEXT FIG.2

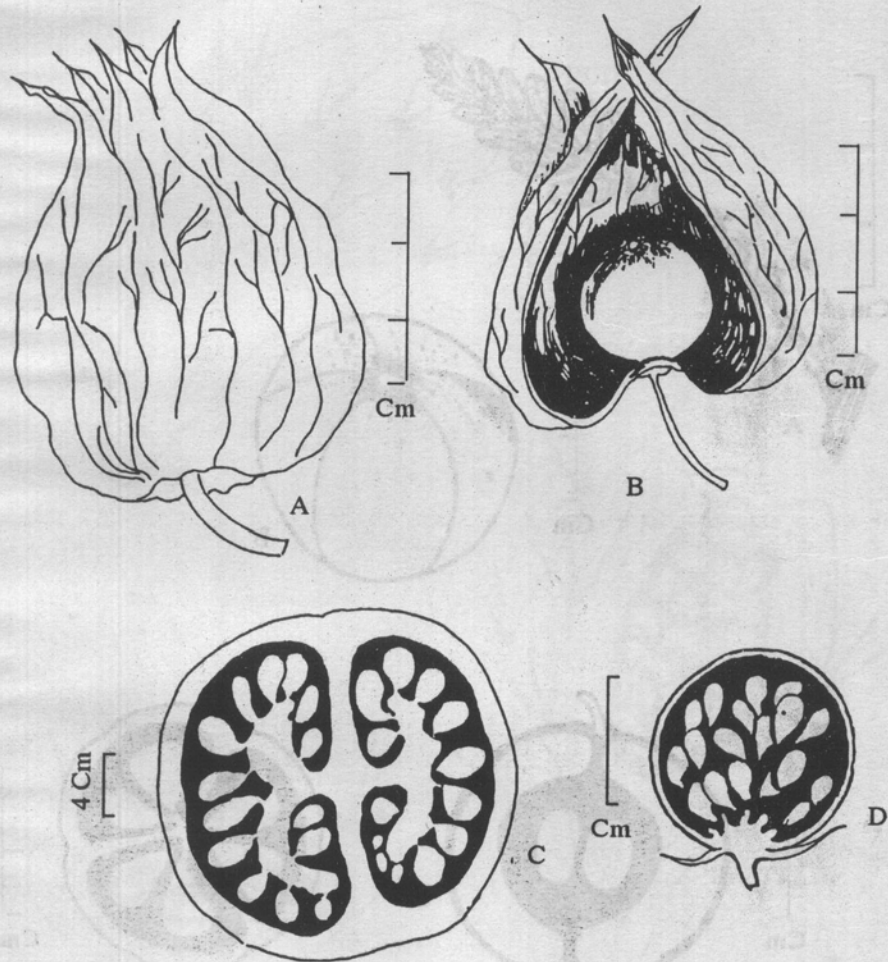
EMBLICA OFFICINALIS Gaerth



A. Twig with fruits, B. Fruit, C.Fruit L.S., D.Fruit C.S.

TEXT FIG.3

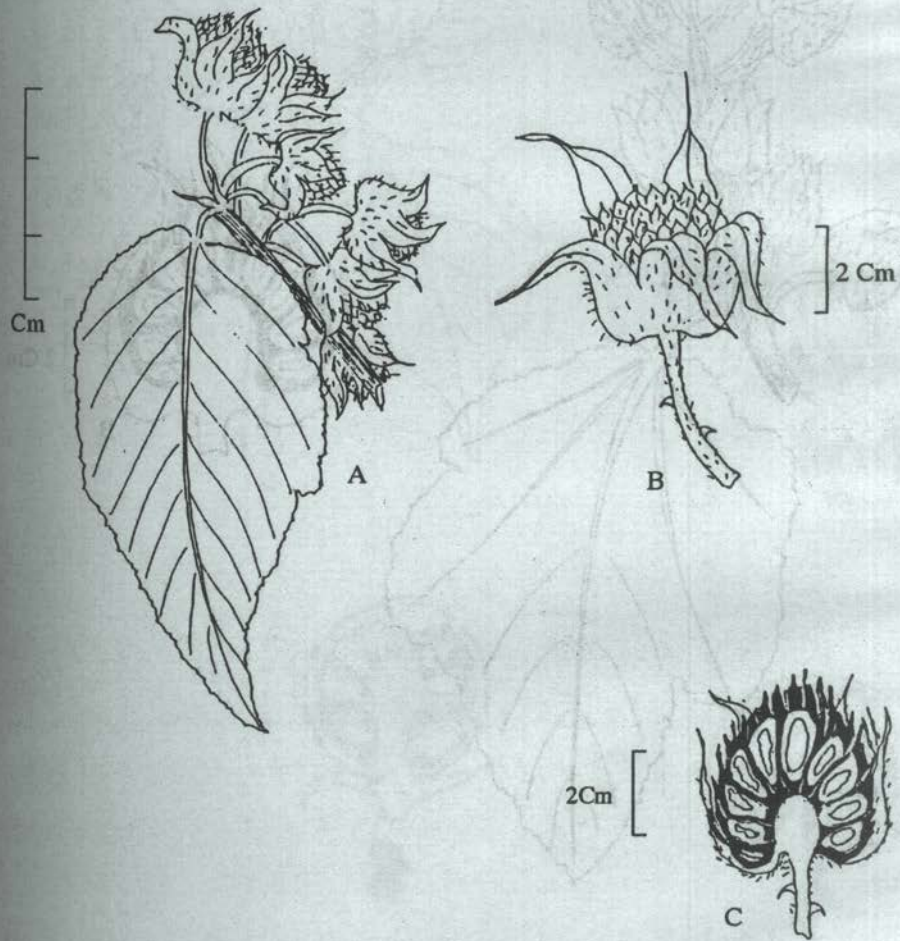
PHYSALIS PERUVIANA Linn,



A. FRUIT. B. FRUIT (part of calyx removed), C. C.S., D.L.S.

TEXT FIG.4

RUBUS RACEMOSUS Roth

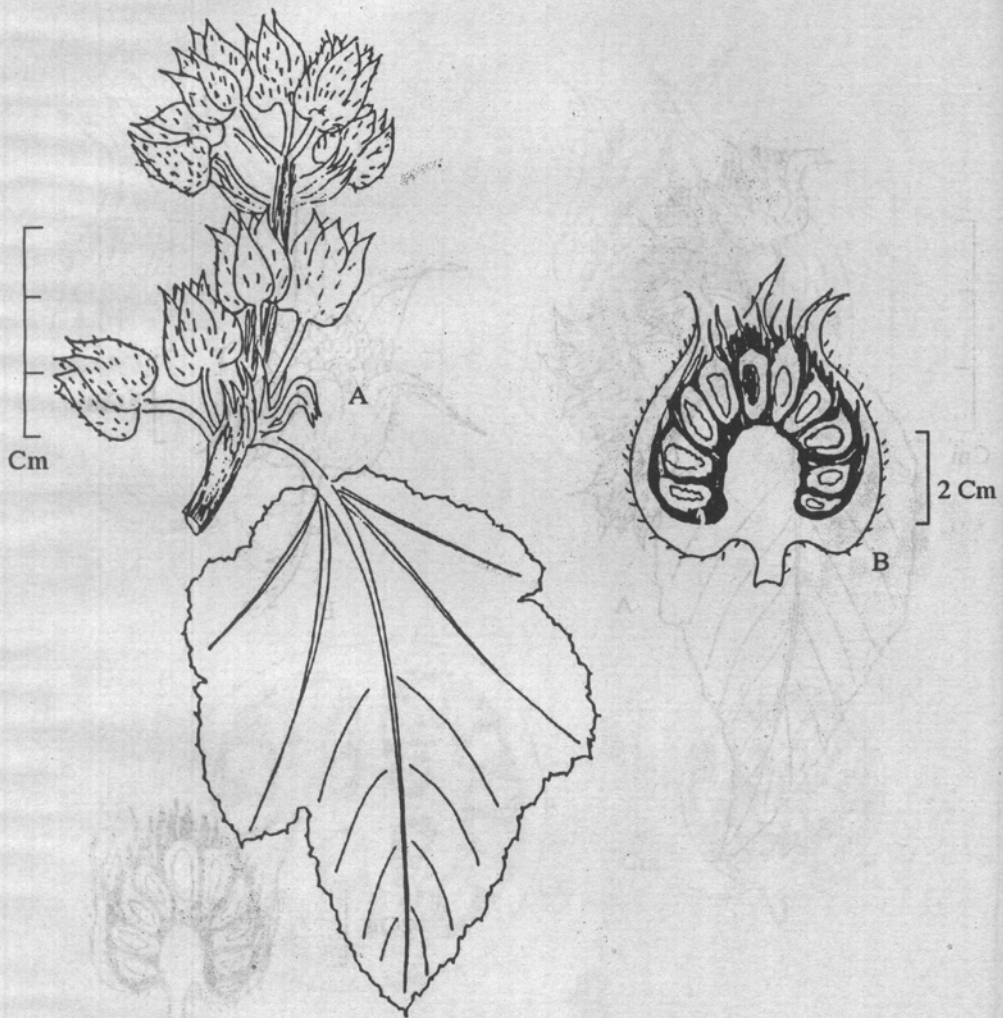


A. Twig with fruits, B. Fruit, C. Fruit L.S.



TEXT FIG.5

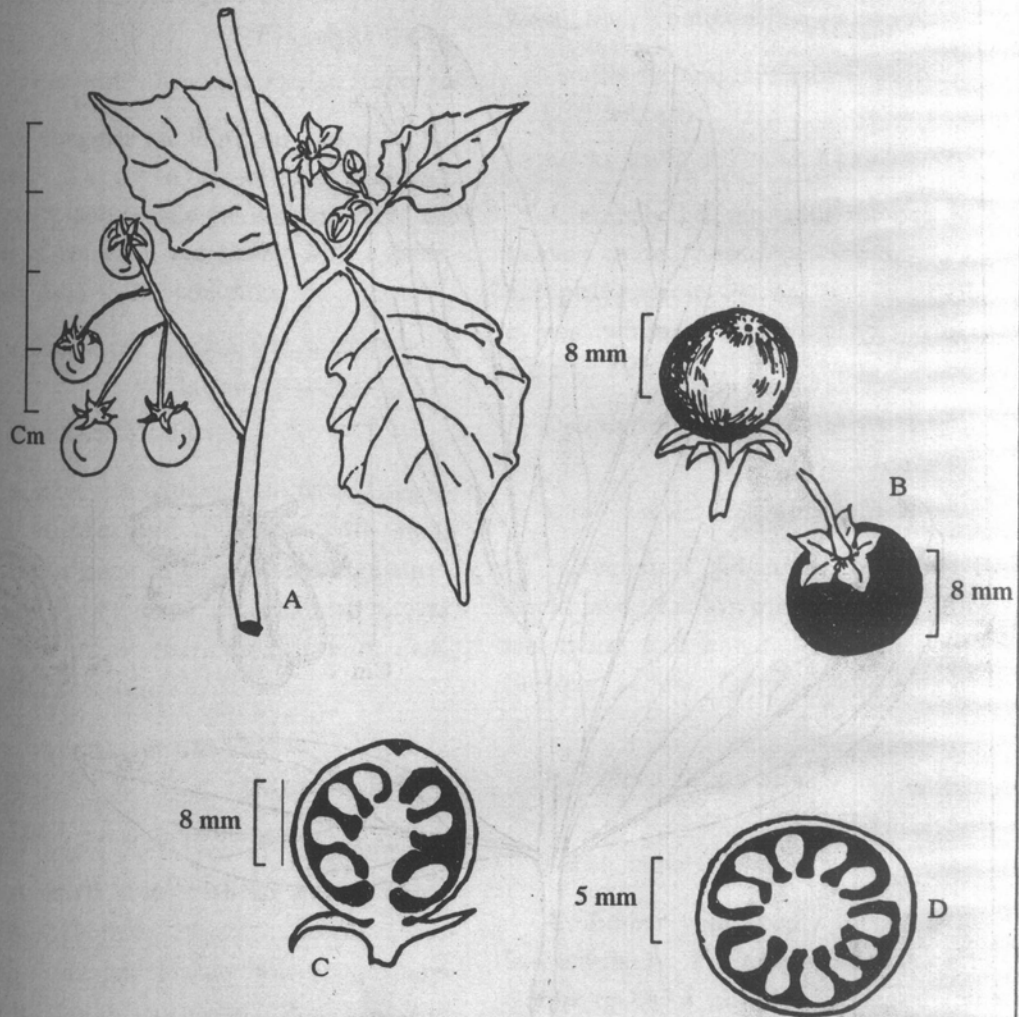
RUBUS RUGOSUS Smith.



A. Twig with fruits, B. Fruit L.S,

TEXT FIG.6

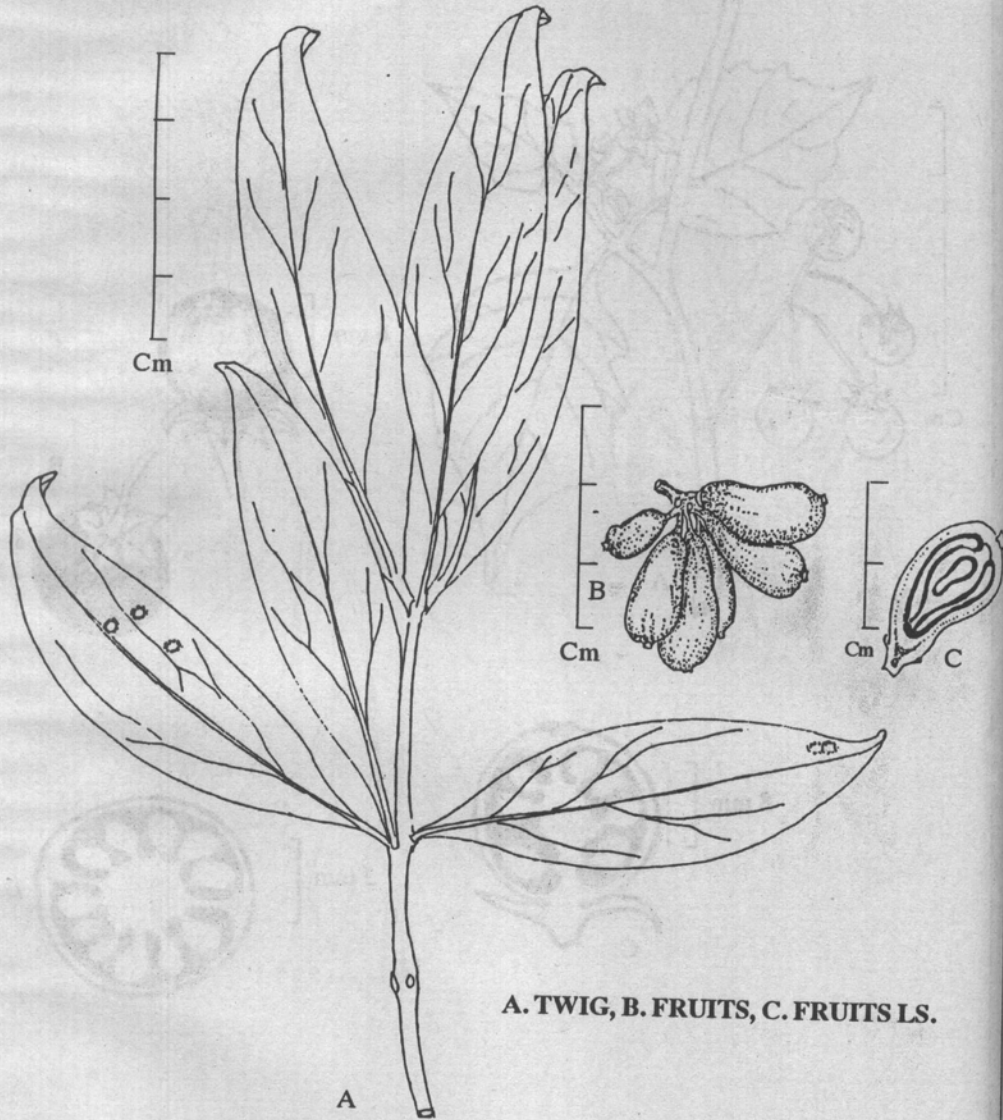
SOLANUM NIGRUM Linn.



A. Twig , B. Fruits, C.Fruit L.S., D.Fruit C.S.

TEXT FIG.7

TAXILLIS CUNEATUS (Roth.) Dancer



A. TWIG, B. FRUITS, C. FRUITS LS.

**TABLE 1**

**All the values given as per 100 gms. Of edible portions. Proximate principles, minerals and vitamins.**

Botanical Name of the Plant	Edible portion	Moisture	Protein	Fat	Minerals	Fibre	Carbohydrates	Energy	Calcium	Phosphorus	Iron	Carotene	Thiamine	Riboflavin	Niacin	Vitamin
	%	gm	gm	gm	gm	gm	gm	Kcal.	mg	mg	mg	mg	mg	mg	mg	Mg
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. <i>Elaeocarpus tectorius</i> (Lour.) Poir	54	59.3	1.4	0.1	1.1	1.6	36.2	153	37	26	3.1	190	0.02	0.06	0.3	0
2. <i>Ficus benghalensis</i> Linn	...	74.1	1.7	2.0	1.9	8.5	11.8	72	36.4	43	...	...	...	...	...	...
3. <i>Passiflora edulis</i> Sims	...	76.3	0.9	0.1	0.7	9.6	12.4	54	10	60	2.0	54	0.07	0.14	1.6	25
4. <i>Phyllanthus emblica</i> Linn	89	81.8	0.5	0.1	0.5	3.4	13.7	58	50	20	1.2	9	0.03	0.01	0.2	60.0
5. <i>Physalis peruviana</i> Linn	87	82.9	1.8	0.2	0.8	3.2	11.1	53	10	67	2.0	14.28	0.05	0.02	0.3	49
6. <i>Pithecellobium dulce</i> (Roxb.) Benth.	60	79.2	2.7	0.4	0.7	0	16.0	78	14	49	1.0	0	0.22	0.06	1.6	108
7. <i>Rhodomyrtus tomentosa</i> (Ait.) Hassak	92	82.5	0.6	0.2	0.4	5.6	10.7	47	40	15	0.9	44	0.07	0.04	0.3	0
8. <i>Spondias pinnata</i> (Linn.f.) Kurz.	...	90.3	0.7	3.0	0.5	1.0	4.5	48	36	11	3.9	270	0.02	0.02	0.3	21
9. <i>Syzygium cumini</i> (Linn.) Skeels	75	83.7	0.7	0.3	0.4	0.9	14.0	62	15	15	1.2	48	0.03	0.01	0.2	18
10. <i>Ziziphus mauritiana</i> Lam	...	81.6	0.8	0.3	0.3	...	17.0	74	4	91.8	21	0.02	0.05	0.7	76	...
11. <i>Ziziphus rugosa</i> Lam.	...	55.3	3.2	1.3	2.0	4.9	33.3	158	270	94	...	...	...	...	...	...

A erect, branched herb. Leaves very thin entire or toothed. Flowers small in extra axillary, white. Fruits globose, usually purplish-black, but sometimes red or pale yellow, smooth, shining, common.

*Spondias pinnata* (L.f.) Kurz  
(Anacardiaceae)

Local name : *Kattuma*

A tall tree; bark smooth, gray. Leaves 3 – 5 pairs. Flowers sessile, numerous, pinkish – green, terminal panicles. Fruits ovoid, yellow, rare.

*Syzygium cumini* (Linn.) Skeels  
(Myrtaceae)

Local name : *Nava-mara annu, Naval.*

A large tree. Leaves variable, smooth and shining. Flowers dirty – white, fragrant. Fruits subglobose varying in size, dark purple, smooth, juicy, rare.

*Taxillus cuneatus* (Roth.) Dancer  
(Loranthaceae)

Local name : *Ottu sedi annu*

Epiphytic on tree. Leaves 3 – nerved from base. Flowers in cymes, yellowish green. Fruits dark brown, common.

*Toddalia asiatica* (Linn.) Lam.  
(Rutaceae)

Local name : *Siru kindu Mullu annu*

Straggling woody plants, armed with prickles. Leaves trifoliate. Flowers small white. Fruits fleshy berry of several cells each with usually one seed, common.

*Ziziphus mauritina* Lam.  
(Rhamnaceae)

Local name : *Ilanthai*

A small thorny tree. Leaves bifarious, rounded at both end, prickles solitary or in pairs. Flowers greenish – yellow. Fruits globose, fleshy, smooth, yellow or orange when ripe, rare.

*Ziziphys rugosa* Lam.  
(Rhamnaceae)

Local name : *Kattilanthai*

A large straggling armed shrub. Leaves elliptic. Flowers in long peduncled cymes. Fruits globose white when ripe, rare.

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