RESULTS
*Abrus precatorius* L.  
FABACEAE (Gulaganji, Kempugaulaganji)

**Description**

**Ethnobotanical information**
The Kadugolla tribals employ the root and seeds are powdered and mixed with butter. The butter is smeared with cock feather to internal ear for deafness. The leaf paste is applied externally on the neck of Oxen to heal-up the wound caused due to ploughing. The Lambani tribals apply leaf paste externally for ringworms. The Nayaka and Jogi tribals gives orally a small quantity of seed powder to induce abortion.

**Magico religious belief:** The Lambani and Jogi tribals believe the pods are used for destroying the social relation and peace of the family.

**Information from literature**
Jain and Tarafdar (1970) reported the use of plant for night blindness, inflammation of gums, muscular pain, convulsions, mucus in urine, gravel, diarrhoea, and bone fracture in cattle. Bhargava (1983) reported the uses of ripe pods, which are eaten after roasting by 'Onge' tribals. Yoganarasimhan (2000) reported use of root for diuretic, tonic and emetic. Seed paste applied locally on sciatica, stiffness of shoulder joints and paralysis. Saini (1996) reported the use of seed juice as a muscle relaxant during delivery, whereas Seema Malik (1996) reported as a contraceptive. Root extract is used for the treatment of syphilis (Singh, 1996). The leaves are used for curing leprosy (Dharma Chandra Kumar, 1997).
Abutilon indicum (L.) Sweet
MALVACEAE (Pettigegida, Sreemudregida, Thurubigida)

a) Description
Annual or perennial, densely tomentose herbs. Leaves ovate, acute at tip, cordate at base, crenate, 7-9 nerved. Pedicel longer than petiole, pedicel articulate above the middle. Flowers solitary and axillary. Epicalyx absent. Calyx campanulate 5-lobed, persistent, slightly accrescent, stellately spreading on fruit. Petals 5, free, rotate, yellow. Staminal column stellately hairy below, glabrous above. Cocci 10, longer than calyx, shortly acuminate at tip, ovary 5-many locular, each locule 2-many ovuled; styles as many as locules, shortly connate at base; stigma capitate. Fruit schizocarp depressed-globose, seeds glabrous to sparsely hairy. Common along roadsides, on open places and plains of scrub. Flowering and fruiting during November to December.

b) Ethnobotanical information
The Jogl tribals employ the root powder with cow milk daily for haemorrhages, cardiac problems, uterus weakness and debility. The traditional healer employ the fresh leaves squeezed with hands to massage externally on ribs to treat respiratory disorders. The Kadugolla tribal apply the leaf paste with mustard oil and applied externally for one week to cure rheumatism; the whole plant is made into paste and given orally with buttermilk for black quarter in cattle.

c) Information from literature
Jain and Tarafdar (1970) reported the use of the plant for convulsions, cramps, colic pain (may be strangulation of the intestine), spermatorrhoea, dysentery, cough, bronchitis, menorrhagia and bone fracture in cattle. Yoganarasimhan (2000) reported use of the whole plant as febrifuge, anthelmintic, and anti-inflammatory also in urinary troubles and lumbago. Root as nervine tonic, antipyretic and used in piles. Roots with Hydnocarpus laurifolius oil (chalmogra oil) used for curing leucoderma. Bark astringent and diuretic. Leaf extract used as diuretic and demulcent. Seeds for laxative and demulcent. Singh and Pandey (1998) reported the use of leaves and seeds against syphilis, gonorrhea and rheumatism.
003. *Acacia farnesiana* (L.) Willd.
MIMOSACEAE (Kasturijali)

a) Description
Shrubs or small trees. Rachis less than 5 cm long; petiole gland near middle; rachis eglandular; peduncle with a ring of bracts at the tip (in buds). Stipular spines straight; pinnae 5-7 pairs, leaflets in 15-20 pairs. Heads fragrant. Corolla yellow, twice a long as calyx. Stamens many. Ovary usually many ovuled. Pod cylindric, entire, obtuse at apex, slightly curved, faintly striate, 4-6 seeded. Occasional in scrub of plains. Flowering and fruiting during August to March.

b) Ethnobotanical information
The Kadugolla tribals employ the stem-bark powder with rock salt to prepare water based extract and given orally for rinder pest in cattle. The Jogi and Budibudike tribals use the tendered shoot tips with a pinch of common salt to apply on boils for suppuration.

c) Information from literature
Jain and Tarafdar (1970), reported that the use of plant for madness, carbuncle, epilepsy, rabies, convulsions, delirium, sores, cholera, sterility in women, snakebite and rinder pest. Yoganarasimhan (2000) reported that the third product known as 'Kheersal' is found in some of the older trees and used on sore throat and cough. Singh and Pandey (1998) reported the use of leaf paste externally to cure eye inflammation, reddening of eyes and conjunctivitis.

004. *Acacia ferruginea* DC
MIMOSACEAE (Bannimara)

a) Description
Deciduous trees. Leaves bipinnate; stipular spines minute. Petiole gland above the middle; pinnae of 4-6 pairs. Upper ones with glands between them; leaflets in 16-20 pairs glaucous. Spike 14 cm long, calyx campanulate, lobed or toothed. Corolla white, 2-3 times as long as calyx. Stamens many. Ovary usually many-ovuled. Pod slightly wavy and thick, apiculate, 5-7 seeded.
Occasional only few plants occurs in forests. Flowering and fruiting during March to July.

b) Ethnobotanical information
The Kadugolla tribals employ the buttermilk based leaf extract is given orally for dysentery on cattle. The tree is by local folk during Dasara festival.

c) Information from literature
Yoganarasimhan (2000) reported that the bark and fruits were used in Ayurveda for giddiness, diarrhoea, dysentery, piles, worm infection, haemorrhage, cough, dispnoea and skin diseases.

005. *Acacia leucophloea* (Roxb.) Willd.
MIMOSACEAE (Billjali)

a) Description
Deciduous trees. Leaves bipinnate, hispid; stipular spines slightly hooked; petiole gland near middle; rachis with gland between all the pinnae; pinnae 8-10 pairs; leaflets 20-25 pairs. Peduncle long. Flowers head in terminal panicles. Calyx campanulate lobed; Corolla yellowish white, twice as long as calyx. Stamens many. Ovary usually many ovuled. Pod slightly turgid, oblong, entire, obtuse, tomentose slightly curved, depressed between seeds on the outside; 10-12 seeded. Occasional in dry deciduous forests of plain. Flowering and fruiting during August to February.

b) Ethnobotanical information
The Kadugolla tribals employ the water-based decoction of the stem bark for bronchitis and biliousness.

c) Information from literature
Yoganarasimhan (2000) reported that the bark is used to treat bronchitis and biliousness. Whereas Dharma Chandra Kumar (1997), reported the use of bark to cure diabetes and the bark also used to tie around dislocated joints to suppress the pain as reported by Sikarwar (1996). The stem bark is used as astringent, cooling, alexiteric, anthelmintic, bronchitis and leprosy (Kirtikar and Basu, 1993; Chopra, 1956).
006. **Acacia sinuata** (Lour.) Merr. (= *A. concinna* (Willd.) DC)

MIMOSACEAE (Seegemara)

a) Description

Prickly climbing shrubs or small trees with brown pubescence. Leaves bipinnate; pinnae 6-9 pairs long uppermost pair with a gland in between; leaflets 20 to 25 pairs pubescent at first then glabrous; petiole gland globular (near middle). Flower in heads. Calyx compandulate, lobed or toothed. Corolla white, 1.5 times longer than calyx. Stamens many. Ovary sparsely pubescent. Pod thick, fleshy, rugose; wrinkled when dry; often indented on sutures, depressed between seeds; seeds 10-14. Commonly cultivated and found in forest for its fruits. Flowering and fruiting during January to April and November to February.

b) Ethnobotanical information

The tribals and local people use hot water based extract of the pods for washing hairs. It helps in the removal of dandruff, and also promotes cooling effect of scalp.

c) Information from literature

Secoy and Smith (1983) reported that the flowers and pods were used as an insecticide. Yoganarasimhan (2000) reported the use of pods as purgative and relieves biliousness.

007. **Acalypha ciliata** Forssk.

EUPHORBIACEAE (Kuppigida)

a) Description

An erect annual herb. Leaves alternate, membranous, long-petioled, ovate, cuspidate-acuminate, rounded or cuneate at base, serrate, glandular. Flowers usually axillary, spikes, monoecious; males very minute, sometimes separate. Female bracteate, generally leafy, compandulate, with many nerves ending on long subulate hispid teeth. Calyx in male 4, minute valvate membranous lobes. Petals absent; disk absent. Stamens many; filaments short, free; anther cells distinct. Ovary 3-celled; ovules solitary on each cell; style filiform, often very long laciniate; pistillode in males absent. Fruit a small capsule glabrous.
Common on open places, roadsides. Flowering and fruiting during March to October.

b) Ethnobotanical information
The Lambani tribal employ the leaves which are shade dried, powdered and made into paste with neem oil. It is taken orally for cough, it dissolves phlegm on throat to relieve respiratory problems. In Kadugolla tribal the leaf extract is mixed with a pinch of turmeric powder and applied externally on bed sores as well as to destroy worms in wounds. The Budibudike and Koracha tribal apply the leaf juice externally with coconut oil for scabies.

c) Information from literature
Saini (1998) reported the use of leaf juice against pneumonia, whereas Mishra et al. (1996) reported for scabies in cattle and Yoganarasimhan (2000) reported the use of this plant as laxative and as vermifuge.

008. Achyranthes aspera L.
AMARANTHACEAE (Uthrani)

a) Description
A terrestrial weak herb. Leaves opposite, sessile, entire, linear-lanceolate to orbicular-obovate. Inflorescence a terminal and axillary, many-flowered, elongate spike. Flower bisexual, deflexed after anthesis; the subtending bract and bracteoles spinaceous, winged at base. Basal wing of the spinaceous bracteole adnate throughout the length of spine. Perianth segments 5, free. Stamens 5, alternating with fimbriate pseudo-staminodes; filaments united at base into a cup. Ovary 1-ovuled; style short; stigma capitate. Fruit an indehiscent utricle, shed with persistent, pungent perianth. Common weed. Flowering and fruiting during September-April.

b) Ethnobotanical information
The Jogi and Lambani tribals apply fresh root paste externally as an antidote for scorpion sting to alleviate pain. The Koracha tribals use water-based decoction with old jaggery, taken daily in the morning for the treatment of anemia. The Kadugolla tribal employ the whole plant paste with rock salt (to be given orally to expel needles and unwanted material present in the gullet of
cattles); the leaves are ground with cardamom and the juice is mixed with tender coconut water to cure Jaundice.

Information from literature
The roots have been used as dentrifice (Aravinda Saklani and Jain, 1996), with other adjuvants like Calotropis procera and Farula asafoetida to cure bronchitis in cattles (Sikarwar, 1996), stomach disorders (Kothari and Moorthy, 1996), the whole plant decoction to hasten delivery (Satpathy and Brahman, 1996) and root of this plant with Ziziphus xylopyrus and ragi flour as an antiseptic after delivery (Henry et al., 1996). Stem and leaves have been employed against Staphylococcus aureus and Bacillus subtilis (Valsaraj et al., 1996), against dog bite, snake bite, cuts and wounds (Rajendran and Mehrotra, 1996).

Actinopteris radiata (Sw.) Link
ACTINOPTERIDACEAE (Mayurashike)

Description
A small fern, usually of rid places, resembling a miniature palm and generally growing on shaded rocky substrata. The rhizome is erect, generally long, densely covered by closely set persistent leaf bases, small lanceolate paleae and tufts, strong, black wiry roots. The stipes are rough to touch. The leaves are densely clustered and often form rosette. The lamina is semicircular reniform in outline, broad and deeply dissected into narrow three to four times dichotamus segment spreading like a fan. Sporangia occurs marginally on the leaf segments and are seated on a intramarginal vein spores are tetrahedron with broad equatorial collar like ridge, prominent wart-like protuberance on the exine.

Ethnobotanical information
Kadugolla tribals employ the rhizome decoction as a cardiac tonic.

Information from literature
Sharma and Vyas (1985) reported the plant is used in acute bronchitis; the ash of the leaves to taken with honey 2–3 times a day, and in gynaecological disorders. The paste of 5–6 leaves mixed with fresh cow milk is taken for a week or so, to overcome irregularity in menses period. The ash (approximately
2–3 gms) of the plant mixed in fresh cow milk is given to a lady for a fortnight after menses period who wishes to have an issue. On the other hand the paste of leaves mixed with curd is given for birth control. Decoction of its leaves is also used in tuberculosis in the Mt. Abu area by Bhils.

*Adenanthera pavonia* L.
FABACEAE (Aânegulagangi)

Description

Ethnobotanical information
The Kadugolla tribal employ the seeds and are made into coconut oil based paste to apply externally on wounds and boils. The Koracha and Budibudike tribals apply the leaf and bark powder with caster oil externally for rheumatism.

Information from literature
Yoganarasimhan (2000) reported that the seeds and wood is used in pulmonary affections and externally applied in chronic opthalmia.

*Adhatoda zeylanica* Medic. (*A. vasica* Nees)
ACANTHACEAE (Äusoge)

Description
Erect shrubs with branches thickened above the nodes. Inflorescence of elongate, peduncled, spikes; bracts large, herbaceous; bracteoles narrower, longer than calyx. Corolla white, bilabiatae; upper lip emarginate, longer than bracts. Stamens 2, anther cells 2, placed at unequal levels, shortly spurred at

b) Ethnobotanical information
The Kadugolla tribal use the root as an expectorant. The squeezed extract is given with honey for cough and to expel phlegm from the chest. The Nayaka tribal use the leaf decoction with jaggary for asthma and fever. Whereas the JogI tribal use powdered flowers with honey for whooping cough for children.

c) Information from literature
The leaf and root decoction against cough, asthma, diphtheria, pneumonia, tonsillitis, bronchitis, tuberculosis was reported by Dutta and Nath (1999), Rajan (1999), Singh and Pandey (1998), Dixit and Pal (1996), Aswal (1996) and Vinay Ranjan (1996). However, Brij Lal (1986) and Khare and Khare (1999) reported against rheumatism and joint pains. Valsaraj (1996) reported that leaves were used as antifungal and also antibacterial agents and against domestic flies (Dixit and Pal, 1996).

012. *Adina cordifolia* (Roxb.) Bran.
RUBIACEAE (Harisina thega)

a) Description
Large trees. Petiole long; leaf blade cordate at base, ovate-orbicular, pubescent. Heads 1-3 fascicled, axillary; peduncle long, 2-bracteate above the middle. Flowers 5-merous. Calyx 5 angled, calyx tube free. Corolla brownish-yellow, funnel shaped, valvate. Stamens 5, on short filaments at corolla mouth. Receptacle pilose. Ovary 2-locular, with many pendulous ovules. Fruit a globose head of many capsules separating into 2 cocci; seeds winged.

b) Ethnobotanical information
The Nayaka tribal employs the stem bark decoction used as antiseptic to wash wounds and sores.

c) Information from literature
Roy et al. (1925) reported that leaves worn during Birhar friendship ceremonies. Secoy and Smith (1983) reported that, in India sap is used for the
treatment of maggoty wounds. Stem bark extract against malarial fever (Singh, 1996).

*Aegle marmelos* (L.) Corr.
RUTACEAE (Bilva, Bilpathremara)

Description
Spinous trees. Leaves 3-foliate; leaflets chartaceous, petiolate, ovate, round at base, glabrous or grey-pubescent, terminal larger. Panicles axillary. Flowers pedicellated; pedicel articulate. 5-merous, petals greenish white. Calyx campanulate, toothed, deciduous. Stamens many; more than 20. Disc inconspicuous. Ovary ovoid, 8 to many locular; ovules many per locule, 2-seriate; style short deciduous. Fruit berry, large, smooth and woody outside, yellowish brown. Occasional on dry deciduous forests, often cultivated at temple premises. Flowering and fruiting during April to May.

Ethnobotanical information
The Jogi tribal employ the fresh root which is ground in cow's urine to apply externally for abscess. The Budibudike tribal employ the cow milk based leaf juice orally for Jaundice. Traditional healers employ the tendered fruit pulp (endocarp) powdered and mixed with buttermilk and taken orally for dysentery and diarrhoea.

Magico religious beliefs: The leaves and fruits are offered to Lord Shiva. All tribals and local people worship the plant at the time of Mahasivarathri.

Information from literature
Jain and Tarafdar (1970) and Dharma Chandra Kumar (1997) reported that the plant is used for night fever, diseases without symptoms, convulsions, cramps, nausea, constipation, stomach ache, diarrhoea, cholera, dysentery, post natal complaints, puerperal fever, pain in abdomen and thirst, breast pain or suppuration and snake bite.

Yoganarasimhan (2000) reported the use of unripe or half ripe fruits as astringent, digestive and stomach ache, in diarrhoea and dysentery. Singh (1996) reported that the fruits eaten and used in the preparation of sweet drinks. Borthakur (1996) reported that the unripe fruits are substitute for tea. Usha Shome et al. (1996) reported that the fruit pulp for stomach ailments; also reported the sherbet prepared from ripe fruits as a mild laxative.
Viswanathan and Singh (1996) reported that the leaves chewed and swallowed every morning helps on healing stomach ulcers. Borthakur and Sharma (1996) reported the use of about 500 g pulp of ripe fruit given orally twice daily for injury by fire. Kothari and Moorthy (1996) reported that the tender leaves are used for diabetes (Dharma Chandra Kumar, 1997). Singh and Pandey (1998) reported the use of fruits against chronic dysentery.

014. *Aerva lanata* (L.) Juss.

AMARANTHACEAE (Bilihindisoppu)

a) Description

Erect prostrate herbs. Leaves alternate, sometimes fascicled, obovate, entire. Inflorescence usually of panicked spikes, dense. Flowers bisexual. Perianth of 4-5 free, thin and membranous, tepals, psuedo-staminode and stamens 5 each; anther 2-celled. Ovary composed or globose, glabrous, with a long funicle and solitary, pendant ovule; utricle bursting irregularly, compressed one-seeded.

b) Ethnobotanical information

The Nayaka tribal use the water based decoction of the whole plant for the treatment of lithantriptic and dysuria. The traditional healer uses the honey based plant extract for cough.

c) Information from literature

Kothari and Moorthy (1996) reported that the whole plant is given for cholera. The roots are used in urinary calculi, dysuria, polyuria, uterine diseases (Yoganarasimhan, 2000; Dharma Chandra Kumar, 1997).

015. *Agave americana* L.

AGAVACEAE

a) Description

Stem short, thick, leaves radical, fleshy, usually spiny with small prickles along the margin. Inflorescence large, usually paniculate. Perianth white, connate at base, segments narrow and erect, shorter then stamens. Staminal filaments filiform. Ovary 3-4 cm long inferior, ovules many, biseriate; style filiform; stigma subcapitate. A common hedge plant.
**Ethnobotanical information**

The Kadugolla tribals use the leaf sap (juice) with finely powdered red soil to poultice externally for the treatment of swellings and 'black quarter' in cattles. The fibres are obtained from the leaves.

**Information from literature**

The sap of the leaves along with other adjuvants like salt and lemon juice to cure gastric and liver disorders (Singh and Pandey, 1998).

**Allanthis excelsa** Roxb.

**SIMAUROUBACEAE (Hemmar, Hiremara)**

**Description**

Tall tree with fusty tomentose branches. Leaves alternate, imparipinnate, crowded at the ends of branchlets; leaflets alternate, broadly ovate, unequal at base, acute. Inflorescence a panicle; axillary and terminal; bracteolate. Sepals 5, short, acute, petals 5 reflexed, ovate, obtuse, small; disc prominently 10 lobed. Stamens 10 or 5 to 6, inserted at base of disc. Ovary 5 celled, free; ovules solitary; style connate at apex; stigma plumose. Fruit a samara, winged, long, narrow and twisted; seeds compressed. Common in forests and along road sides. Flowering and fruiting during December to March.

**Ethnobotanical information**

The Jagi tribal employ the water based decoction of the stem-bark with pepper and garlic to given orally for bronchitis.

**Information from literature**

Yoganarasimhan (2000) reported the use of stem bark for anthelmintic, febrifuge, expectorant and anti-spasmodic, asthma and bronchitis also in dysentery. Singh and Pandey (1998) reported that the varieties of uses like scorpion-sting, snake-bite, tonic and insecticide. Leaf decoction for debility after delivery (Saini, 1996).
**Alangium salvifolium** (L.f.) Wang.

ALANGIACEAE (Ankole gida)

**Description**

A thorny deciduous small tree with white scented flowers. Leaves oblong or elliptic-lanceolate, more or less 3-5 nerved at base. Flowers fascicled, buds long, tawny pubescent. Calyx tube adnate to the ovary. Stamens as many as the petals alternating with them, filaments free, slightly connate at base. Ovary inferior 1-2 celled; ovules solitary in the cells, pendulous. Fruit a 1-2 seeded berry, ellipsoid, testa thick, albumen fleshy. Common throughout the study area. Flowering and fruiting during February to April.

**Ethnobotanical information**

The Budibudike tribals use the root, ground with rice washed water and given orally with honey to cure dysentery. The root paste is combined with ghee as an antidote for dog bite. The oil extracted from the root is applied externally to treat arthritis. The Kadugolla tribals use the seed powder with honey as an antidote for snake bite. The root-bark powder is taken orally with cow milk as an anti-pyretic.

**Information from literature**

The root-bark powder with other adjuvants against piles (Saini, 1996); diarrhea, leprosy, fever (Yoganarasimhan, 2000); cholera (Kothari and Moorthy, 1996). Seed oil against leprosy (Vinay Ranjan, 1996). The root paste with buttermilk as antidote for dog bite (Satapathy and Brahman, 1996), Singh and Pandey, 1998) and as an antidote for snakebite (Dharma Chandra Kumar, 1997).

**Albizia amara** (Roxb.) Boiv.

MIMOSACEAE (Thuglimara)

**Description**

Unarmed trees. Leaves bipinnate; rachis with glands between the lower pinnae and on the petiole. Pinnae 8-12 pairs long; leaflets 16-25 pairs, less than 1 cm long, membranous sparsely pubescent; rounded at apex; midrib nearly central. Heads 1-few fascicled. Flowers subsessile. Calyx shortly lobed. Corolla yellowish-white, thrice as long as calyx. Stamens 12 to many,

b) Ethnobotanical information
The Kadugolla tribals employ the stem-bark is pounded with rock salt and borax to boils, the decoction is cooled and given orally for haemorrhagic septicemia (HS-disease) in cattle.

c) Information from literature
Yoganarasimhan (2000), reported that, in Siddha – Root, root-bark, and heartwood for cough and dyspnoea.

019 Albizia lebbeck (L.) Willd.
MIMOSACEAE (Doddabāgemara)

a) Description
Unarmed trees. Young parts pubescent. Leaves bipinnate; rachis with a gland near the base of the petiole and one below the upper most pinnae; pinnae less than 6 pairs; leaflets more than 1 cm long, 3-4 pairs; obliquely oblong, retuse or obtuse at apex shining, with eccentric midrib. Heads 1 to few-fascicled. Flowers sessile; calyx shortly lobed. Corolla white twice as long as calyx. Stamens 12-many, monoadelphous. Ovary sessile or not many ovuled. Pod straw coloured. Frequent in dry deciduous forests and often found as an avenue tree. Flowering January to August and fruiting April to November.

b) Ethnobotanical information
The Jogi and Lambani tribals employ the stem bark pounded with hot water to prepare paste and is applied externally for suppuration of boils and abscess. The Kadugolla tribals use hand squeezed juice of fresh leaves to apply externally on spot as an antidote for scorpion sting.

c) Information from literature
Yoganarasimhan (2000) reported that the use of leaves and seeds for eye troubles, bark for boils. Kothari and Moorthy (1996), reported the used of roots and seeds against leprosy. Leaves yield dye used by the Saharia women to decorate their body by tattooing (Ashok and Sharma, 1996).
**Allmania nodiflora** (L.) Wt.

AMARANTHACEAE (Kotnagorachisoppu)

Description
A weak herb. Leaves alternate. Inflorescence of terminal or leaf opposed, sessile or stalked heads, composed of few flowered cymes. Flowers bisexual. Perianth of 5, usually free, subequal tepals. Stamens 5; filaments fused at base into a short cup; anthers 2-celled; ovary compressed with solitary, erect ovule; style short; stigma capitate, sometimes bifid. Utricle circumscissile. Occasionally found in waste lands and roadsides. Flowering and fruiting during October – November.

Ethnobotanical information
The leaves are uses as vegetables by all the tribals and local people.

Information from literature
Nil.

**Aloe vera** (L.) Burm.

LILIACEAE (Lolesara)

Description
Root stock rhizomatous. Leaves simple, fleshy, usually radical and spiny at margin, inflorescence racemose. Pedicel shorter than bracts; perianth red 6-meros; segments connate, stamens equaling perianth. Ovary superior; ovules many; style 1. Fruit a capsule. Occasional in open fields and hedges, often cultivated for its medicinal value. Flowering and fruiting during July to February.

Ethnobotanical information
The Lambani tribal employs the fresh leaf pulp with honey for the treatment of menstrual disorder in women. The Kadugolla tribal employ the fresh leaf juice and is applied externally to cure burning wounds and cuts; the same juice is taken orally with palm jaggary for the treatment of post natal complaints in milk feeding mothers and given with candy sugar and asbestos for leucorrhoea. The traditional healer employ the pulp of the leaf, washed with salt water 3-4 times to taken as raw to promote cooling effect of the body; the mucilage is applied externally as mosquitoes repellent and to make the skin bright.
Information from literature
Secoy and Smith (1983), reported that the use in South India and South Africa for insect repellent, toxic factors. Yoganarasimhan (2000), reported that, the use of fresh leaves of juice as cathartic and refrigerant, liver and spleen ailments and for eye troubles. Leaves in chronic constipation. Aloe spp are used in a host of diseases particularly of the digestive system. Singh and Pandey (1998) reported as an aphrodisiac plant. Usha Shome et al. (1996), reported that the mucilage of leaves kept on forehead to cure headache. Saini (1996) reported that the pulp of leaf (50 g) with sugar candy taken twice a day for one week for piles. Satapathy and Brahram (1996) reported that, 5 ml of leaf juice mixed with 10-15 drops of juice of ginger given twice a day for 3 days for acute indigestion and jaundice.
Banerjee and Pal (1996) reported the use of dried tubers powder and preserved with Kusum oil for a few days. The medicated oil applied on scalp for removing fungal infections and dandruff. Leaf extract with lemon juice reported to kill lice on hairs. Mishra, Jha and Jha (1996) reported that the plant combination with other plant like Lallemantia roylina, Acacia catechu and Thevetia nerifolia are mixed with turpentine oil and heated and the same is applied on swellings on live stocks and also reported that the pith is applied on swollen portion to cure mastitis of cow and buffalo. Barthakur and Sarma (1996) reported that the use of about 10 g leaf pulp mixed with little common salt given as a preventive of miscarriage once or twice weekly, until delivery. Goats are given only ¼ of the dose. Leaf pulp mixed with double quantity of curd given for burn injuries, about 200 ml thrice a daily and also applied externally on to the injured pods.

**Alternanthera sessilis** (L.) R. Br.

**AMARANTHACEAE** (Honagonesoppe)

**Description**
Prostrate branching herb. Stem without long crisped hairs. Leaves opposite, shortly petioled or sessile, elliptic rounded at tip, cuneate at base. Flower heads not prickly globose, become cylindrical later; tepals all similar; glochidiate hairs absent. Stamens 3-5 alternating with filamentous staminodes. Fruit utricle, indehiscent, falling with perianth. Common in wet
situations, like edges of tanks, moist dry tank beds, etc. Flowering and fruiting throughout the year.

b) Ethnobotanical information
The Kadugollas and Jogl tribes use honey based juice of the leaves as galactagogue in nursing mother. The plant is used as spinach by local people as well as tribals.

c) Information from literature
Sainy (1996) and Yoganarasimhan (2000) reported the use of plant decoction as galactagogue. The whole plant used in night blindness (Yoganarasimhan, 2000). Borthakur and Sarma (1996), reported the use of root along with *Centella asiatica* and *Catunaregam spinosa* for peptic and mouth ulcer.

023. *Amaranthus polygamous* L.
AMARANTHACEAE (Kiragasalesoppu)

a) Description

b) Ethnobotanical information
The Nayaka tribals and local people use the water based plant decoction as a laxative and the decoction with caster oil is given orally to expel foetus in womb in cattles. The plant is used as vegetable by tribal and local people. The Kadugolla tribes use water based extract of the whole plant. To this extract, red hot iron rod is dipped and given orally for the treatment of stomach pain.

c) Information from literature
Nil.
Amaranthus spinosus L.
AMARANTHACEAE (Mulluharivesoppu)

a) Description
Profusely branched monoecious herb. Leaves alternate, elliptic, entire; leaf axils with spines. Flowers unisexual. Tepals and stamens 5-merous. Filaments free; anthers 2-celled. Stigma 3; style 1, ovary ovoid compressed enclosing a single erect ovule; seeds dark brown. A common weed on road sides and waste places. Flowering and fruiting through out the year.

b) Ethnobotanical information
The Nayaka tribals employ the root powder with honey for stomach pain. Jogi tribals apply the fresh leaf paste externally to cure itches and rashes. The leaves are used as vegetables by local people and tribals.

c) Information from literature
Saini (1996), and Singh and Pandey (1998) reported the use of this plant against urinary irritation and to remove the kidney stone. The leaves are used for the treatment of myalgia and nervous disorder (Balasubramanian and Prasad, 1996). Meena tribal of Sawalmadhopur district of Rajasthan apply the paste of leaves on wounds caused by the bites of insects, centipedes and leeches, etc. The decoction of roots is given orally to cure stomachache and also applied externally on wounds and boils of the tribals of southern Rajasthan (Singh and Pandey, 1998).

Andrographis paniculata Nees
ACANTHACEAE (Nelabevu)

a) Description
Erect herb or under shrub, the branches often tetragonous. Leaves lanceolate, acute at both the ends, entire, often minutely llineolate. Flowers in axillary and terminal, lax, often panicked, racemes. Calyx lobes glandular pubescent 5-partite, the lobes narrow. Corolla small, usually pale but blotched and spotted with brown and purple, tubular at base, then more or less ventricose, prominently bilipped, the upper slightly 2-fid, the lower usually deflexed, 3-lobed and coloured. Stamens-2; filaments broad, enlarged at base and sometimes in the middle; anthers 2-celled, usually beared at base with a tuft of
white hairs. Ovules 2-6 in each cell. Fruit an oblong or elliptic capsule compressed at right angles to the septum, the retinacula acute or rounded. Seeds hard, deeply rugosely pitted, glabrous. Common, cultivated in gardens for medicinal purpose. Flowering and fruiting during November to December.

Ethnobotanical information
The Kadugolla and Lambani tribals employ the water based decoction of the whole plant with pepper and garlic for the treatment of intermittent fever. The Jogl and Nayaka tribal also use the water based decoction of the root with ginger, taken internally for stomach troubles.

Information from literature
The leaf powder is used as febrifuge (Dharma Chandra Kumar, 1997; Goud et al., 1999; Dash and Misra, 1999; Yoganarasimhan, 2000). The whole plant powder with other adjuvants like goat milk and egg albumin used in bone fracture healing (Rao et al., 1999). Gosh and Dass (1999), Thomas and Britto (1990) and Balu et al. (1999) reported the use of whole plant in diabetes, whereas, Dash and Misra (1999), Girach et al. (1999), Satapathy and Brahman (1999), Brahram et al. (1996) Rajendra and Mehrotra (1990), reported use of leaf paste against skin diseases like scabies, eczema and leucoderma. Usha Shome (1996), Thomas and Britto (1999), revealed the medicated properties against liver ailments.

ACANTHACEAE (Saradalegedde, Kasinasara)
Description
Prostrate herbs radiating from prominent root stock; stem densely hairy. Leaves orbicular-reniform, glabrous. Raceme axillary, slender; flowers often solitary; bracts minute. Calyx glandular hairy. Corolla white, hairy, to 1.5 cm; lower lip with pink nerves. Stamens 2, anther cells parallel. Common weed of road sides and open fields. Flowering and fruiting during March – October.

Ethnobotanical information
The Kadugolla tribals use the whole plant extract with 5 g of pepper and garlic as an antidote for snake and worms bite in cattle.

Information from literature
Nil.
027. *Anisomeles malabarica* (L.) R. Br.  
LAMIACEAE (Heddumbe)

a) **Description**  
White tomentose under shrubs. Stem obtusely tetragonal. Leaves lanceolate, round at base, foliar bracts large, calyx tubular, 10-nerved, equally 5-lobed. Corolla bilipped; tube annulate within; upper lip entire, flat, lower tip larger with 4 spreading lobes. Stamens 4, didynamons; filaments bearded, anterior pair the longest and exserted; anthers dimorphic, ovary superior, 2-locular, seemingly 4-partite lobed. Fruit of 4, 1-seeded, usually erect nutlets, common along the roadsides. Flowering and fruiting during January to April.

b) **Ethnobotanical information**  
The Kadugolla tribes make use of leaves with rock salt with goat milk to treat alopecia (hair fall in cattle). The local medicine men use the leaf juice with garlic and honey for cough and cold.

c) **Information from literature**  
Infusion of leaves used in dyspepsia and fever accompanying teething in children. Decoction of the plant or its oil used in rheumatism (Yoganarasimhan, 2000).

028. *Annona reticulata* L.  
ANNONACEAE (Ramaphala)

a) **Description**  
Trees or shrubs. Leaves acuminate, green beneath; nerves divergent. Flowers pale green, trimerous. Stamens numerous. Ovaries many, sub connate; style oblong; ovule 1 erect. Fruit orange, sub-globose with flat, 5-cornered areoles. Occasional in dry-deciduous forests. Flowers and fruits during January to July.

b) **Ethnobotanical information**  
The Nayaka tribes use the water based decoction of the bark as an astringent. The fruit juice will be administered orally with candy sugar for the treatment of diarrhoea and as vermifuge.

c) **Information from literature**  
Unripe fruits are used as anthelmintic (Yoganarasimhan, 2000).
029. *Annona squamosa* L.
ANNONACEAE (Seethaphala)

a) Description

Trees or shrubs. Leaves obtuse, glaucous beneath; nerves ascending. Flowers greenish, solitary or fascicled, trimerous. Stamens numerous; anther cells narrow. Ovaries many, subconnate; style oblong; ovule 1, erect. Fruit green, many celled, ovoid or globose with many seeded. Common in drier area and cultivated widely. Flowers and fruits during April to July.

b) Ethnobotanical information

The Kadugolla, Nayaka and Jogi tribals use fresh leaf paste to apply externally on wounds to destroy worms. The same paste is applied externally on the body of the cattle to destroy ticks and lice. The fresh leaves are bruised and inhale the smell of leaves to treat to regain consciousness due to fits. The Budlibudlike tribals use the seed powder to destroy lice. The fruits are edible.

c) Information from literature

The seeds powder is a potential abortifacient (Yoganarasimha, 2000; Saini, 1996; Singh and Pandey, 1998), causes blindness (Singh and Pandey, 1998). The root powder is a drastic purgative (Dharma Chandra Kumar, 1997), used against post-natal complications (Girach, 1996; Singh and Pandey, 1998). The paste of leaves is used externally to prevent the loss of hairs (Vinay Ranjan, 1996), as a cream against ectoparasitic growth on the body (Mishra et al., 1996) and to ripen and expel the pus from boils (Satapathy and Brahmam, 1996). The unripe fruits paste is applied to expel the guinea worms (Singh and Pandey, 1998). The leaves are used as bio-pesticides.

COMBRETACEAE (Dindigadamara)

a) Description

Deciduous tree. Leaves alternate, elliptic-ovate, obtuse-acute, rounded-cordate, glabrous. Inflorescence capitate, solitary or in short cymes. Flowers bisexual 5-merous. Hypanthium long - attenuate beyond ovary; lobes deciduous. Petals absent. Calyx yellow or pinkish-yellow; tube long; lobes reflexed. Stamens 10. Ovules 2. Fruit clustered in globose heads; each fruit 2-
winged, compressed, crowned with persistent calyx tube. Fairly common in dry deciduous forests. Flowering and fruiting during August to January.

b) Ethnobotanical information
The Budilbudike and Kadugolla tribals use gum, rubbed with cow urine to apply externally as an antidote for scorpion sting and lizard bite. The Koracha tribal use the gum with hot water to gargle for 5-6 days for toothache.

c) Information from literature
The root is pungent, acrid, stomachic, increases biliousness. The stem bark decoction is given against cough (Seema Malik, 1996). Stem bark paste decoction against dysentery and diarrhoea (Seema Malik, 1996 and Henry et al., 1996). Stem bark paste is used to expel the placenta in animals. As a substitute for gum arabic, used in pharmaceutical preparations (Yoganarasimhan, 2000).

031. *Aponogeton natans* (L.) Engl. & Krause
APONOGETONACEAE (Kunkuligedde)

a) Description
Submerged or floating glabrous, aquatic herb; rhizome tuberous of stoloniferous; tubers usually globose with numerous root fibres. Leaves mostly floating, oblong to linear lanceolate acute or obtuse base rounded. Spike long usually dense flowered; sepals 2, white pink or pale blue obovate or sub orbicular. Follicles 3 subglobose; seeds ribbed, striate. Common in stagnant water and roadsides pools of plains. Flowering and fruiting during June to December.

b) Ethnobotanical information
The Nayaka and Jogi tribals use the water based tuber with candy sugar and asbestos for the treatment of leucorrhoea. The local people and tribals use fried tubers to promote cooling effect on body.

c) Information from literature
Yoganarasimhan (2000), reported that the use of tuber for skin diseases, leucorrhoea and tonic in Siddha system of medicine.
032. **Argemone mexicana** L.

**PAPAVERACEAE** (Dutturigida)

a) **Description**

Glaucous, branched, prickly herbs; with yellow sap. Leaves pinnatifid, basal petioloed and larger, upper sessile, clasping at base and smaller. Flowers yellow, solitary, terminal, subtended by 3 persistent, foliaceous bracts, shortly peduncled, bisexual, regular, sepals 3, free, each with dorsal sub apical horn, caducous. Petals 6, 2-seriate, free, imbricate, often crumpled in bud, obovate, obtuse. Stamens many. Ovary superior, spinous, 1-locular; ovules many on 3-7 parietal placentas; stigma sub sessile, 3-7 lobed, radiate. Fruit a capsule, 7-valved at apex, ovoid or oblong, spinous, many seeded. Common in wastelands, road sides and weed in cultivated fields. Flowering and fruiting through out the year.

b) **Ethnobotanical Information**

The Jogl tribals employ the fresh root is pounded and the paste is applied on swelling due to scorpion sting. The Kadugolla tribal employ the yellow sap which is dropped (1 or 2 drops) into eye for the treatment of opthalmia. The traditional healer, Korachai and Lambani tribals use the seeds powder with neem oil to apply externally for eczema and scabies.

c) **Information from literature**

Rajendran and Mehrotra (1996) reported use of seeds, whole plant, stem peeling and leaf used for single for narcotic, mild headache, fracture, eczema, 1 to 2 g seeds powder mixed with tobacco of cigarettes smoked for headache. Chewed with tobacco as a narcotic, 10 g.plant pasted with water applied on fracture site for a week and applied on whole body for eczema. Balasubramanian and Prasad (1996), reported that the aerial parts cure sores. Kothari and Moorthy (1996), reported that the use of roots, leaves and seeds for scabies. Yoganarasimhan (2000) reported that the plant used in scabies and in ophthalmia. Seed oil In cutaneous troubles it is a cathartic.
033. *Aristolochia bracteolata* Lam. (=*A. bracteata* Retz.)
ARISTOLOCHIACEAE (Katthe Kirubanagida)

a) Description
Perennial herb. Leaves glaucous, reniform or broadly ovate, cordate at base
with a wide sinus. Flowers solitary with a large orbicular bract, tube and limb
long. Stamens usually 6, adnate to and around the style column. Ovary inferior
more or less 6 celled; ovules many; style column thick, divided above the
anthers; stigmatic lobes glandular hairy. Fruit a septicidal capsule. Seeds
flattened but thickened. Occasional in dry black cotton soils. Flowering and
fruiting during April to June.

b) Ethnobotanical information
The Nayaka tribals employ the fresh leaf paste together with limestone
eexternally for abscess and boils. The Kadugolla tribals apply plant paste
externally to cure scabies. The leaves are ground with one or two fruits of
capsicum to be made as pills. Each pill is rubbed with water and applied
eexternally on eye lids to treat snake bite in Jogi tribes.

c) Information from literature
Bruised leaves mixed with castor oil / mustard oil and applied to control
eczema (Yoganarasimhan, 2000; Singh and Pandey, 1998). The dried root is
used internally as an abortifacient and externally as snakebite. The whole
plant cure diabetes (Dharma Chandra Kumar, 1997).

034. *Aristolochia indica* L.
ARISHTOLOCHIACEAE (Eswariballi)

a) Description
Herbaceous twiners. Leaves variable usually obovate, oblong to sub-
pandurate, triplinerved; truncate to attenuate at base. Flower tube inflated or
ventricose, greenish; limb purple or brown. Stamens 6, sessile, fused with
style; ovary 6 locular; style 6-fid. Fruit a 6-valved capsule; seeds flat winged all
round. Common in forests and plains often it will be cultivated for its medicinal
purpose. Flowering and fruiting between August to December.
b) Ethnobotanical information

The Kadugolla tribals employ the fresh root pounded with the fresh root of Tylophora indica L. administered with children’s urine as an antidote for snake bite. The Budhubudike and Jogl tribals use the children’s urine based leaf extract as an antidote for snake bite.

c) Information from literature

The root powder used as an abortifacient, bites and stings of insects, scorpion and snakes (Dharma Chandra Kumar, 1997; Yoganarasimhan, 2000). Fresh leaves paste is applied against acute rheumatic pain (Singh and Pandey, 1998), the juice of the leaves juice against cholera, diarrhoea, leucoderma (Kothari and Moorthy, 1996; Dharma Chandra Kumar, 1997) and the use of root paste against stomach pain (Henry, 1996).

035. Asparagus racemosus Willd.

LILIACEAE (Halavumakkalaballi, Satavari)

a) Description

Woody climbers, root stock with fascicled, tuberous roots; stem branching, smooth, subterete, woody. Leaves reduced to recurved spinescent scales; foliar cladodes arising in the axils of scale-leaves. Cladodes less than 0.6 mm wide; crowded, 2-6 nate, flattened or subterete. Flowers solitary clustered racemes, terminated by flowers; axillary with scarious, keeled bracts. Perianth white, with jointed pedicels. Ovary superior, 3-locular but 2 aborting; style short; stigma 3. Fruit a subglobose berry with 1-6 smooth black seeds. Common in partial shade on thin soil of plains and scrub jungles. Flowering and fruiting during August to January.

b) Ethnobotanical information

The Lambani, Kadugolla and Jogl tribals employ the fresh root tubers washed and made into paste, mixed with cow milk and sugar to given orally as galactagogue in milk fed mothers. The Nayaka and Koracha tribals employ the same preparation taken orally for one or two months for strengthening of uterus and decrease the chances of abortion. The traditional healers employ the tubers pounded with candy sugar and asbestos for the treatment of leucorrhoea in women.
Information from literature
Banerjee (1974) reported that the twigs are worn in caps during festivals in Madhya Pradesh. Yoganarasimhan (2000) reported that the herb as a tonic, diuretic and galactagogue. Fresh root juice mixed with honey and given in dyspepsia. Roots used in nervous and rheumatic complaints. Root paste is used in the preparation of local drinks (Sahu, 1996). Henry et al. (1996), reported the use of rhizome with the bark of Ficus racemosa and F. hispida extract for conception. Stomach disorder and dysuria, loss of appetite may be rectified with the rhizome (Satapathy and Brahman, 1996; Aswal, 1996).

Azadirachta indica A. Juss.
MELIACEAE (Bēvu, Bēvinamara)

a) Description
Evergreen large trees. Leaves alternate estipulate usually even pinnate; leaflet 12-16 pairs, ovate-lanceolate, acuminate, cuneate and unilaterally resected on one side, cuneate-serrate. Flowers-5-merous, elongate, bisexual, regular, bractioles absent. Sepals 5, free; petals obovate, white. Staminal column 10-fid at tip; anthers exserted. Ovary 3-locular; style elongate, stigma 3-lobed with light coloured rim at base. Fruit drupe, pulpy, cylindric mono locular, one seeded; seeds exarillate. Common in plains, forests, usually cultivated. Flowering and fruiting during January to July.

b) Ethnobotanical importance
The traditional healers employ the stem-bark which is pounded with pepper and garlic to prepare water based extract if filtered and taken orally for fever; the leaf paste without water is applied externally for small pox and measles.

c) Information from literature
The leaves are used as antifungal (Valsraj et al., 1996), insecticidal agent (Borthakur and Sarma, 1996). Prolapse of uterus in cattle (Misra, Jha and Jha, 1996), skin disease (Usha Shome et al., 1996). Seed oil as a birth control agent, antidote for snakebite, night blindness with other adjuvants, malarial fever (Singh and Pandey, 1998). A pest resistant commercial timber.
Azima tetracantha Lam.

**Description**

Rambling shrubs; branchlets angular with axillary thorns, dioecious. Leaves opposite; blade simple, entire; elliptic lanceolate, acute, cuspidate. Flowers in axillary clusters passing into a terminal spike of interrupted whorls, regular, 4-merous. Calyx shortly 4-fid hairy or in female flowers irregularly 2-4 partite. Petals free, oblong, imbricate greenish-yellow. Stamens 4; anthers medifixed; pistillode usually present. Staminodes 4. Ovary superior, 2-locular, with 2-basal ovules per locule; stigma subsessile, capitate. Fruit berry globose, white, with 1-2 seeded. Occasional in open fields, sometimes found in hedges. Flowering and fruiting during March to June.

**Ethnobotanical information**

The Budlibudlike tribal employ the root powder with honey to given orally for rat bite; the root is ground with candy sugar, asbestos and cardamom mixed with rice washed water to given orally for haemorrhages in women. The Nayaka and Lambani tribals employ the stem-bark paste as poultice on finger for whitlow; the shoot tips are ground with asbestos and candy sugar for leucorrhoea in women. The Kadugolla tribals employ the 10 g leaves and are ground with the same proportion of Albizia lebbeck bark, and Toddalia asiatica leaves, 20 g pepper and 10 g garlic are made into paste and combines with hot water to given orally for anthrax in cattle. The nipples are beaten by thorns to cure mastitis in cow, sheep and buffaloes.

**Information from literature**

Yoganarasimhan (2000) reported that the bark is expectorant, juice of leaves used to relieve cough in phthisis and in asthma.
SCROPHULARIACEAE (Neeru brahmi)

a) **Description**

b) **Ethnobotanical information**
The Nayaka and Jogi tribes employ the whole plant, the hand squeezed take juice is combines with the juice of *Acorus calamus*, given orally with honey or with jaggry to treat constipation and to promote memory power. The Budibudike tribes employ the plant paste with a common salt to apply externally for suppuration of boils.

c) **Information from literature**
The whole plant used as a nerve tonic, urinary duct inflammation and abdominal pain and as a rejuvenator (Singh and Pandey, 1998; Kothari and Londhe, 1999) and as a stammering, dumbness, epilepsy and febrifuge agent in ayurvedic formulations (Yoganarasimhan, 2000; Satapathy and Brahnam, 1996).

039. *Balanites aegyptiaca* (L.) Del.
BALANITACEAE (Nanjundana mara, Nanjunda)

a) **Description**
A small tree armed with strong sharp thorns. Leaves alternate, 2-foliolate; leaflets entire. Flowers small, green, fragrant, in axillary cymes. Sepals imbricate, deciduous. Petals – oblong, spreading, imbricate. Disk twice, conical, 10-grooved hallowed at apex. Stamens 10 inserted in the furrows at the base of the disk; filaments slender; anthers inserted at the back. Ovary entire globose, 1-celled; style short; stigmas minute; ovules 1 in each cell.
Fruit a large, fleshy oily one seeded drupe. Occasional in scrub forests. Flowering and fruiting during December to July.

Ethnobotanical information
The Nayaka tribes employ the stem bark powder with coconut oil to apply externally to cure wounds, sores and other skin diseases.

Information from literature
The whole plant used against constipation and Conjunctivitis (Diallo et al., 1996 and Sikarwar, 1996). The pulp of the fruit used as a detergent, a contraceptive, a fish poison. The roots and fruits is a good source of disogenin (Singh and Pandey, 1998).

*Barreria buxifolia* L.
ACANTHACEAE (Gubasihuvu, Gubasigida)

Description
Erect under shrub; intrapetiolar spines 1.2 cm, straight, white. Leaves sessile, orbicular, spinous-tipped, hairy. Flowers solitary. Bract and bracteoles 0 or spiny. Calyx lobes 4, outer larger, elliptic, acute, spinous tipped, generally hairy. Corolla lobes rounded, purple. Stamens 2; staminodes 0. Locules 1-2 ovuled. Capsules ovate-oblong, somewhat compressed, with usually hairy seeds. Common in open places and along the roadsides in plains. Flowering and fruiting September to March.

Ethnobotanical information
The Jogi and Budlbudke tribals use the dried flowers powder with a piece of garlic and administered with breast milk for whooping cough and spasmodic diseases in infants.

Information from literature
The leaves and roots are used in cough and inflammations (Yoganarasimhan, 2000). Singh and Pandey (1998), reported the use of leaves in relieving body ache, cough, fever and diarrhoea with cows milk for congestion of liver hepatic dropsy. The root powder with goats milk against rheumatic fever. Flowers with sugar to treat painful menstruation.
1. **Basella rubra** L.

**BASELLACEAE** (Kempu Basalesoppu)

i) **Description**

A glabrous succulent climbing herb with small white or red flowers. Leaves broadly ovate, acute or acuminate, often cordate at base. Flowers hermaphrodite, sessile, spicate; bracts minute, caducous, bracteoles 2 united in a 2-lipped cup, adnate to the perianth; perianth fleshy lobes short, incurved. Stamens 5 on the mouth of the perianth tube, filaments short, erect in bud; anthers versatile. Ovary globose; ovules subsessile; styles 3; stigma linear – clavate, papilllose within. Fruit a globose utricle enclosed in the fleshy perianth; pericarp thin adnate to the seed. Cultivated. Flowering and fruiting during.

ii) **Ethnobotanical information**

The Koracha tribals use water-based extract of the leaves taken orally to treat antispasmodic. The Lambani tribal apply the bruised leaves on forehead to cure headache and giddiness. The leaves are used as vegetable by local people and tribals.

iii) **Information from literature**

It was reported that, the leaves and stems have been in use as spinach, to boost up the memory power and juice of the leaves is given to children and pregnant women to obtain relief from constipation (Balasubramanian and Prasad, 1996).

042. **Bauhinia purpurea** L.

**CAESALPINIACEAE** (Kanchuvala)

a) **Description**

A moderate sized evergreen tree, often bushy. Bark grey to brown. Leaves of 2 leaflets free or adnate into one entire leaf, more or less deeply cleft at the apex and palmately ribbed. Flowers purple or rose, petals all similar, appearing with the leaves. Stamens 10; filaments free, filiform; anthers versatile. Ovary stalked, many ovuled; style short, stigma small. Pod oblong, flattened, seeds orbicular, compressed. Occasional in forests chiefly cultivated in gardens. Flowering and fruiting during April to June.
b) Ethnobotanical information
The Koracha tribals employ the hot water based flower decoction as laxative and an anthelmintic and the limejuice based bark extract is given orally to cure diarrhoea.

c) Information from literature
Flower buds laxative and anthelmintic (Yoganarasimhan, 2000 and Deshmukh, 1999), as vegetable and the preparation of curd (Singh, 1996). Bark and roots with Asparagus racemosus, pounded and administered with cow milk for dysuria and stone in gall bladder (Brahmam, 1998). The root decoction prevents obesity (Yoganarasimhan, 2000), and used in piles and as a haemostatic agent (Dharma Chandra Kumar, 1997). Consumption of leaves will increase the stamina and vigour (Saxena et al., 1988).

043. Bauhinia vahill W. & A.
CAESALPINIACEAE (Arise, Jallaur)

a) Description
A gigantic climber with very thick stem and long branches. Leaves tawny villous beneath leaflets often very large connate for two-third up or higher. Flowers cream coloured with shortly clawed petals in corymbose racemes. Corymbs densely tawny villous. Fertile stamens 3, ovary stalked, many-ovuled; style short or filiform. Pods large, valvety, broad, the seeds flat. Occasionally found in dry-deciduous forests. Flowering and fruiting during February to June.

b) Ethnobotanical information
The Jogl tribals pound the seeds and are powdered and made into water-based decoction with sugar, taken orally for aphrodisiac. The Lambani tribals apply the fresh leaf paste externally on wounds. The leaves are often used as plates.

c) Information from literature
The Seeds are used to control dysentery and the root juice for stomachache (Dharma Chandra Kumar, 1997) and syphilis (Singh, 1996).
44. *Biphytum sensitivum* (L.) DC.
OXALIDACEAE (Horamuni, Horamuchuga)

_Description_
Suffrutescent herbs with unbranched stems. Leaves alternate, pinnately many foliolate, pilose or strigose above, the upper ones larger, glaucous beneath; the main rachis hairy. Peduncle elongate. Inflorescence umbelliform, usually subterminal. Flowers bisexual, regular, 5-merous, bracteolate, sepals free usually imbricate, persistent. Petals yellow, usually imbricate, free. Disc absent. Stamens 10, biseriate, connate below; anthers versatile. Ovary superior, 5-locular; globose, entire. Fruit usually a dry loculicidal 5-valved capsule. Seeds few to many. Common in shade along roadsides, at bases of rocks in open fields. Flowering and fruiting during May to October.

_Ethnobotanical information_
The Jogi and Lambani tribal employ the whole plant and is burned and the ash is combined with limejuice to be given orally for stomach pain. The Nayaka tribal employ the fresh leaf paste externally for wounds, boils and abscess.

_Information from literature_
As a tonic and a stimulant, used in chest pain, convulsions, cramps. Decoction of leaves given in diabetes (Yoganarasimhan, 2000), juice of the plant is given to cure rheumatism and hydrocele (Dharma Chandra Kumar, 1997). Bedi (1970) reported the use of leaves along with tobacco leads to impotency. Henry _et al._ (1996) reported the use of leaf paste with cow's milk in reducing menstrual disorders.

045. *Blepharis repens* (Vahl) Roth
ACANTHACEAE (Sannakodlisoppu, Nalkele soppu)

_a) Description_
Prostrate herbs; stem hairy. Leaves whorled; membranous, glaucous beneath, linear-oblong coriaceous. Flowers solitary; bracteoles 8, the largest at the top, all with acicular spines. Outer calyx lobes 0.8 cm long, one of them bifid at tip; inner linear. Corolla white, bilabiate with the upper lip obsolete. Stamens 4; anthers one celled. Capsule 2-4 locular, with compressed usually hairy seeds.
Occasionally found in forests and open places. Flowering and fruiting during September.

b) Ethnobotanical information
The Nayaka tribal and traditional healers use the water based extract of the whole plant for sprain in cattle.

c) Information from literature
Nil.

046  
**Boerhavia diffusa** L.
NYCTAGINACEAE (Adakaputtina gida, Balivadike)

a) Description
Diffuse and ascending, slender, sparsely pubescent herbs. Petiole long; leaf blade slightly undulate along the margin, ovate, oblong, lanceolate, acute or obtuse at apex, rounded cordate at base, coriaceous. Inflorescence a panicle of subcapitate umbels. Flowers 4-8 together, subsessile. Perianth 2-3 mm long, white, red, or pink constricted at the middle. Stamens 1-3 exserted; filaments unequal and connate at the base. Ovary superior (appear inferior in fruit) stipitate or sessile 1-locular with a basal ovule; style erect; stigma peltate. Fruit clavate, glandular along the 5-ribs. Common weed in open dry places especially on the plain. Flowering and fruiting during May to July.

b) Ethnobotanical information
The Kadugolla tribals employ the root which is ground and given orally and externally on the spot as an antidote for scorpion sting, snakebite, and rat bite. The Lambani tribal employ the root with candy sugar and cardamom to given orally for dysmenorrhoea; the leaves are used as spinach for blood purification. The Jogi and Koracha tribals employ the whole plant powder with cow ghee for abdominal pain; the powder in combination with milk and sugar as aphrodisiac.

c) Information from literature
Root decoction cures night blindness, asthma, stomachache, jaundice (Singh and Pandey, 1998), and maggots (Secoy and Smith, 1983), urinary disorders, piles, anaemia (Yoganarasimhan, 2000), liver ailments (Usha Shome et al., 1996), eye complaints (Aravind Saklani and Jain, 1996) and abortion (Saini, 1996).
47. \textit{Borreria articula}ris (L.f.) Will.

RUBIACEAE (Dhare botu, Gantigana hull. Madanabadane gida)

a) Description

Initially erect, then procumbent hispid herbs. Branches nearly 4 angled. Stipules interpetiolar, connate with the base of leaves into a sheath, pectinate. Inflorescence fascicles axillary and terminal. Bracteoles many, bristly. Flowers 4-merous, sessile. Calyx 4-lobed. Corolla bluish-white, funnel shaped, valvate. Stamens 4 inserted on the throat or tube of corolla. Ovary 2 locular, locule with one axile ovule; stigma capitate. Fruit 2-mericarps, each dehiscing ventrally, pubescent, septum on the mericarp. Fairly common across the plains, open fields and roadsides. Flowering and fruiting during June to December.

b) Ethnobotanical information

The Jogi tribals employ the whole plant which is made into paste with combination of neem oil, warmed, cooled and applied externally for boils and abscess on armpits.

c) Information from literature

The root decoction is employed as a substitute to coffee (Datta and Banerjee, 1978) dysentery and the leaves are mixed with 'ganja' to enhance intoxication (Kothari and Moorthy, 1996).

048. \textit{Boswellia serrata} Coleb.

BURSERACEAE (Madimara, Shallaki)

a) Description

Deciduous tree with papery bark; bark peeling off in thin flakes. Leaves alternate, estipulate, sessile, oblong-ovate, emarginate. Inflorescence axillary paniculate and bracteate; panicles pubescent. Flowers 5-merous, calyx toothed. Petals white, shortly clawed. Stamens dimorphic, free; disc annular. Ovary 3-locular. Fruit a tri-lobed drupe; pyrenes falling from the persistent trigonous axis; seeds flattened; margins winged. A very common throughout the study area. Flowering and fruiting January to March.
Ethnobotanical information
The Budlbudike and Jogi tribals employ the buttermilk based decoction of the bark internally to cure diarrhoea. The same tribal use the paste of the bark with coconut oil externally to treat eczema.

Information from literature
Gum considered being an expectorant (Dharma Chandra Kumar, 1997 and Yoganarasimhan, 2000) in rheumatism (Samavatsar and Diwanji, 1999), coconut oil based gum against rheumatism and to promote hair growth (Kothari and Londhe, 1999). Stem bark against diabetes (Dharma Chandra Kumar, 1997) and dysentery, scorpion sting and snakebite (Singh and Pandey, 1998).
Leaf powder with coconut oil and butter is used as a skin care ointment especially to remove the burned scars.

*Bridella crenulata* Roxb.  
EUPHORBIACEAE (Mullu Honnemara)

Description
Small deciduous trees; shoots brown, tomentose. Leaves often with parallel main veins. Blade, elliptic-oblong, obtuse, sub-cordate below. Flowers usually dioecious, axillary, clustered. Calyx 5-lobed, valvate. Petals 5, free, usually clawed, cuculate and dentate in male, oblong, spathulate and persistent in female. Disc reddish cupular in male, in female usually with an inner corona enclosing ovary. Stamens 5, on a gynandrophore bearing a pistillode at tip. Ovary 2-locular; ovules 2 per locule; style 2; stigma deeply 2-fid. Drupe usually globose, enclosing 1-2 usually 1-seeded pyrenes, turning black when ripe.
Common in plains. Flowering and fruiting during May to October.

Ethnobotanical information
The Koracha tribals use the root powder in combination with cow ghee to apply externally to relieve pain in lumbago.

Information from literature
Root powdered in sciatica (Yoganarasimhan, 2000). Bark with gingily oil as a external liniment in muscular disorders (Samavatsar and Diwanji, 1999).
**Buchanania lanzan** Sprengel

**ANACARDIACEAE**

**Description**


**Ethnobotanical information**

The Kadugolla tribals use the fresh leaf paste externally to treat glandular swellings, and itches. The Budlubidue and Lambani tribals use the fruit with a piece of garlic to apply externally on acne (pimple) and burst opening of boils.

**Information from literature**

The seeds are relished like pistachio nuts (Singh and Pandey, 1998), seed oil to remove the scars (Usha Shome et al., 1996) and the ripe fruits are eaten by Kani tribals of Kerala (Radhakrishna et al., 1996) kernel is consumed as sweet meals (Tribed et al., 1982). The infusion of the bark is administered to cure mouth sores and, the tender leaf and flower buds paste is given as a laxative for the treatment of chronic constipation (Saxena et al., 1988). The leaf extract is given to control spermatorrhoea (Singh, 1996).

**Butea monosperma** (Lam.) Taub.

**FABACEAE** (Müthuga)

**Description**

Large deciduous tomentose tree. Leaves pinnately 3-foliolate, long petioled; leaflets rhomboid or broadly ovate, retuse, rounded at base with the nerves raised beneath. Racemes long, flowers showy, flame-coloured. Calyx broadly campanulate, shortly lobed; upper 2 lobes connate into lip lowest calyx tooth shortest. Standard ovate and equalling keel. Stamens 9+1, ovary sessile, 2-ovuled, pod distinctly stalked, rounded at base, compressed, woody dehiscence at apex. Frequent in dry deciduous forests. Flowering and fruiting during January to May.
Ethnobotanical information

The Koracha tribal employ the 50 g leaves, and are boiled with 500 ml water for long time, distilled and reduced to half; the decoction is taken orally for a week to treat anthelmintic. The JogI tribal collect the gum oozes from this tree is rubbed with a piece of onion to apply externally as an antidote for scorpion sting. The Kadugolla tribal employ the seeds are made into paste with lemon juice to apply externally for eczema; the same tribals use the stem-bark and the leaves of Tylophora indica, Leucas aspera in equal proportion and made into paste, is mixed with goats milk to given orally as an antidote for snakebite in cattle.

Information from literature

Bark astringent, used in piles and menstrual disorders (Yoganarasimhan, 2000), as fish poison and the gum is used as a tonic (Singh and Pandey, 1998). Seeds pounded with lemon juice acts as a rubefacient and used to cure for a form of herpes "Dhobies itch". Seeds, flowers and leaves have contraceptive property (Yoganarasimhan, 2000). Seed ash with cold water as a abortifacient (Satapathy and Brahman, 1996; Singh and Anwar Ali, 1996). Seed powder as a potential vermifuge in cattles, and the flowers extract as cooling agent (Singh and Pandey, 1978) and yield dye (Bedi, 1978 and Deshmukh et al., 1999). Majority of the villagers make and use the plates from the leaves.
052. *Cadaba fruticosa* (L.) Druce 
CAPPARACEAE (Maragade)

a) **Description**

b) **Ethnobotanical information**
The traditional healer employ the leaves, they are pounded with rice washed water and the extract is taken orally to cure leucorrhoea in women. The Nayaka tribals also use for the same purpose with ingredients of candy sugar and asbestos. The Budibudike tribals use water-based root decoction for anthelmintic.

c) **Information from literature**
The leaves and fruits have been used against skin diseases and the root decoction for chronic fever (Dharma Chandra Kumar, 1997). The leaf extract against fever and dysentery and for indigestion (Diallo, 1996 and Henny et al. 1996).

053. *Caesalpinia bonduc* (L.) Roxb. (= *Caesalpinia crista* L.)
CAESALPINIACEAE (Gajjuga, Sannagejuga) Caesalpinia gista L.

a) **Description**
Ethnobotanical information

The Jogi tribals use the hot water extract of the leaves as an anthelmintic. The fresh leaf paste is combined with a piece of garlic and a pinch of salt applied externally to burst open the unripened boils and abscess. The Budlbudlike tribals use 3-4 drops of seed oil dropped into ear to cure ottorhoea. The tendered shoot tips are shade dried and powdered with candy sugar and asbestos to taken orally with milk to induce fertility in women.

Information from Literature

The seeds powder is used for fever and malaria (Kothari and Moorthy, 1996) and after removing the toxic effects of seed (boiled in cows milk) against filariasis for there months (Girach, 1996). The seed powder used as antidote for scorpion sting (Dharmachndra Kumar, 1997) and seed oil in controlling the white discharge from the ear (Yoganarasimhan, 2000)

*Calotropis gigantea* (L.) Dryand.

**ASCLEPIADACEAE** (Kariekkadagida)

Description

Large woody shrubs with milky sap. Leaves opposite, simple ovate-ovobate. Cymes subumbellate, lateral. Corolla lobes purple to white, rotate; slightly imbricate to the right, glabrous. Corona of 5-keel shaped lobes adnate to the gynostegium, each with a recurved vesicle at the base and a pair of auricles at the apex gynostegium elongate, but not strictly stipitate. Pollinia pendent from dark horny corpuscula, 2 per anther, waxy, without pellucid margins. Gynoecium of two superior unilocular carpels united only by the enlarged style apex. Fruit a single follicle. Seeds flattened, comose. Common weed in disturbed areas. Flowering and fruiting during December to May.

Ethnobotanical information

Kadugolla tribals employ the shade dried leaves and they are burn, the ash is given orally with honey to cure cough and cold. The Jogi tribals apply the fresh leaf paste externally to cure burning or wounds and swellings. The traditional healers and local people apply the latex externally to expel the thorn hidden in the feet (as muscular relaxant).
The latex has been used to relieve scorpion sting (Viswanathan and Singh, 1996), with cumin seeds against asthma (Saxena, 1996) to expel guinea-worms (Bhuyan, 1994) and white cloth soaked in latex is burnt and the ash mixed with mustard oil to cure scabies (Satapathy and Brahman 1999) and to expel the foreign bodies (Rosakutly et al, 1999). The burnt root powder, mixed with Sesamum oil to cure shoulder wounds due to yoke in cattles (Sikarwar, 1996) as anthelmintic, depurative and laxative (Nayak and Choudhury, 1999) against scorpion sting and snake bite (Singh and Pandey, 1998; Thomas and Britto, 1999).

The leaves with common salt against stomachache, to cure inflammation with mustard oil (Mishra et al., 1996) against paralysis (Nayak and Choudhury, 1999) body ache (Suryanarayana et al, 1999) leaf therapy against jaundice (Singh and Pandey, 1998) and as an antidote for snake poisoning and insect bites (Rosakutty et al, 1999). The flower paste against cough (Pandey and Shrivastava, 1993) flower buds were wrapped in caster leaf and salt for dysentery in animals (Mishra and Jha, 1996), Kamti women chew the flowers to reduce post natal pains with honey to control the mental disorder (Bhuyan, 1994).

055. *Calotropsis procera* R. Br.
ASCLEPIADACEAE (Biliekkadagida)

a) Description
Morphologically it resembles *Calotropsis gigantea* except in having pink or purple corolla, staminal columns glabrous on the back, the apex bifid without aurides, curved acute

b) Ethnobotanical information
The Kadugolla and Lambani tribes use the root, powdered with jaggary and cardamom to prepare tablets for Apositia (avertion of food). The plant is adorned by tribals and local people to believe prosperity of the family. Kadugolla tribals worship this plant at the time of marriage ceremonies. The flowers are used for making garlands.
Information from literature
The root, with other adjuvants to cure syphilis (Saini, 1996), decoction against malarial fever (Singh, 1996), for the treatment of "noareae disease" for destruction of Cyclops and larvae in the intestine (Sharma, 1990) and as antidote against snakebite (Jamir, 1991).
The latex with caster oil cure scabies (Heevan Ram et al., 1999), the leaves against fever (Diallo et al., 1996), the flowers with honey against whooping cough and asthma (Gupta et al., 1999).
The plant is in use in Africa as lice repellent (Secoy and Smith, 1983) and for spleen complaint, rheumatism, epilepsy, hemiplegia, small pox and protracted labour (Jain and Tarafdar, 1970)

Canscora diffusa (Vahl) R. Br.
GENTIANACEAE (Nelabevu)

Description
Herbs. Stem 4 angled, not winged. Leaves ovate, elliptic narrowed at both the ends. Inflorescence in cymes, sometimes solitary flowers. Bracts sometime foliaceous. Flowers 4-meros, irregular. Calyx sometime winged on back; corolla pink, lobes unequal, imbricate. Staminial filaments unequal; one produced into a clavate tip, which bear the anther on a filamentella. Style simple, linear; stigma globose, 2-lobed. Capsule septicidally 2 valved or dehiscing irregularly; seeds many. Fairly common herb in moist, rocky sandy terrain, sometimes amongst glasses in plains. Flowering and fruiting during October to November.

Ethnobotanical information
The Kadugolla tribals use the shade dried whole plant powder and adjuvants like pepper and garlic. The paste is administered with water in empty stomach to cure fever.

Information from literature
The fresh juice prescribed in insanity, epilepsy and nervous debility (Yoganarasimhan, 2000) and in nervous disorders (Balasubramaniam and Prasad, 1996).
057. *Canthium parviflorum* Lam.
RUBIACEAE (Khare, Balasukhre)

a) Description
Armed shrubs. Spines very conspicuous, long. Leaves ovate-ovate, obtuse and apex. Inflorescence a few flowered cyme; peduncle thick, long. Flowers 4-meros. Calyx obscurely toothed. Corolla greenish-white. Throat with deflexed hairs; lobes as long as tube, valvate. Stamens attached in the throat of corolla; filaments short. Ovary 2-locular, with solitary pendulous ovule per locule. Fruit a drupe of one/2-seeded pyrenes; obcordate. Common in open dry forests and plains. Flowering and fruiting during June to September

b) Ethnobotanical information
The Lambani tribals prescribe the root powder with children's urine given orally as an antidote for snakebite and the water-based leaf decoction against dysentery. The fruits are eaten by tribals as well as local people. The Kadugolla tribals employ the root powder taken orally with hot water for destroying worms in stomach and the leaf powder is mixed with buttermilk to be given orally to cure blood mixed dysentery in cattles.

c) Information from literature
Leaves and stem smoke against skin rash (Anderson, 1988), inflammation, body swelling and dysentery (Rosakutty et al., 1999). The roots as anthelmintic and the berries are edible (Yoganarasimhan, 2000).

058. *Capparis sepiaria* L.
CAPPARACEAE (Thotlamullu, Thotlu balli)

a) Description
Erect or climbing shrubs stipules of curved spines. Leaves simple; ovate-elliptic, acute-emarginate, cuneate. Flowers in umbels, axillary. Outer sepals ovate, concave; inner broadly rounded. Petals linear, spathulate, ciliate. Stamens 6-many, free or basally connate with gynophore. Gynophore as long as staminal filaments, tipped by the globose, sometimes beaked ovary. Fruit an indehiscent 1-marjy seeded berry with hard rind, usually globose and beaked. Common in open scrubs. Flowering and fruiting during April to July.
b) Ethnobotanical information
The Kadugolla tribals employ the leaves ground with salt peter (KNO₃) and is mixed with goats milk, given orally to cure haemorrhagic septicemia (HS – disease). The Nayaka tribals use root powder with coconut oil to be applied externally to cure scrofula.

c) Information from Literature
The leaf juice with honey to cure fever (Yoganarasimhan, 2000; Satapathy et al., 1999) and to cure skin ailments. The stem bark with the root of *Scutia myrtina*, jaggery, fenugreek, pepper and dried ginger against abortion as well as antifertility against (Henry et al., 1996). The fresh root with ginger and asafoetida paste is applied against mumps in children, by chewing of leaves or roots may prevent the decaying of teeth and sunstroke swellings; root paste against snakebite, pneumonia, intestinal worms, headache and other skin disease (Singh and Pandey, 1998).

059. **Capparis zeylanica** L.
**CAPPARACEAE** (Atundikayl, Tharta)

a) Description
Climbing shrubs. Leaves ovate-elliptic, cuneate-cordate, with recurved callus tip. Flowers sometimes appearing before leaves, corymbose or racemose. Outer sepals ovate, rounded, fulvous-tomentose; inner rounded. Petals 4, ovate to orobicular. Stamens 6-many, free or basally connate with gynophore. Gynophore as long as staminal filaments, tipped by the globose, sometimes beaked ovary. Fruit-berry. Common in plains and hedges and shrubs. Flowering and fruiting during October to August.

b) Ethnobotanical information
The Kadugolla tribals use the fresh leaves and are made into paste, (without adding water) and mixed with honey to treat dysuria or diuretic. The Jogi tribals use the fruits, it is made into juice with sugar to take orally against cough. Lambani tribals employ the leaves and are ground with pepper, a piece of garlic and a pinch of common salt to prepare tablets and they are taken orally against fever.
The bark against cough and breast pain due to excessive lactation in women (Kothari and Rao, 1999), the root bark paste is against scabies (Girach, 1996), in the treatment of cholera (Saini, 1996) and as a sedative, stomachic and cholera (Yoganarasimhan, 2000).

060. *Caralluma adscendens* (Roxb.) HK. ASCLEPIADACEAE (Sihimangati, Mangti)

a) Description
Succulent herbs with erect, tall quadrangular stems and clear viscous sap. Leaves much reduced, caducous. Flowers borne singly or laterally; corolla lobes free for most of their length; corolla lobes folded back along the midrib, pilose or glabrous with some yellow markings. Outer corona lobes meeting and arching apart as long thin horns. Gynoeclum short sessile. Pollina erect from dark horny capsule. Fairly common in scrubs. Flowering and fruiting during May to January.

b) Ethnobotanical information
The Kadugolla tribes eat tendered stem tips at the time of scarcity of water to alleviate thirst. The stem juice is taken orally with honey to cure indigestion and also to promote cooling effect of the body.

c) Information from literature
Nil.

061. *Cardiospermum halicacabum* L. SAPINDACEAE (Bekkina buddegida, Agniballi)

a) Description
A herbaceous climber. Stem and branches furrowed. Leaves biternate; leaflets coarsely toothed; ovate acuminate, glabrescent; petiole long. Inflorescence axillary, 2-tendriliferous at base, 3-branched; branches racemiform with a few flowers near apex. Flowers small, yellow, 4-merous. Sepals in opposite pairs; outer pairs smaller. Petals unequal, with scales on the inner side of their bases. Disc unilateral of 2 glands opposite the lower petals. Stamens eccentric; filaments free or connate below, unequal. Ovary villous, 3-locular;
ovules axillary; style short. Capsule winged, loculicidally 3-valved, membranous. Seeds often arillate at base. Fairly common throughout the district. Flowering and fruiting during July to December.

Ethnobotanical Information
The Budlibudike tribes employ the root powder as an antidote for scorpion sting. The leaves are ground and the paste is applied externally to treat rheumatism. The Lambani tribes employ the water-based extract of the whole plant with candy sugar to treat dysmenorrhea in women. The Jogi tribes drop the leaf juice (3-4 drops) into ear for Otitis media (pus discharged from ear).

Information from literature
The roots are diuretic, diaphoretic and used in rheumatism (Yoganarasimhan 2000; Khare, 1999; Thomas and Britto (1999), and Singh and Pandey, 1998) and filariasis (Sikarwar, 1996) The decoction of the whole plant with pepper to cure pain in joints and gas troubles (Viswanathan and Singh, 1996). The leaves fried in castor oil is taken to control rheumatism (Rosakutty et al., 1999 and Samvatsan Dwanj, 1999), against hydrocele (Thomas and Britto, 1999), and filariasis in animals (Sikarwar, 1996). In order to prevent the immature baldness and graying of hairs, the whole plant paste is effective (Viswanathan and Singh 1996). Administration of leaf extract with cuminum seeds facilitate easy delivery in women (Rosakutty et al., 1999).

Careya arborea Roxb.
LECITHIDACEAE (Kaulmara, Guddadippe, Hennumathi)

Description
Deciduous trees. Leaves alternate, often crowded at apices of branchlets; crenate-denticulate, obovate, shortly acuminate, glabrous. Inflorescence a few-flowered spike; peduncle woody. Calyx lobes ovate, obtuse at apex. Petals yellowish-white elliptic oblong, obtuse. Stamens long, numerous, subcordate at base; filaments subulate; outermost longer; innermost shorter and sterile; anthers short, medifixed. Disc intrastaminal. Ovary inferior, 4-5 locular; locule with 2 rows of many, ovules; stigma capitate. Fruit a globose, berry, crowned with calyx lobes, many-seeded. Occasional in forests. Flowering and fruiting during March to April.
Ethnobotanical Information
The Nayaka tribals employ the powdered stem bark and prepare water based decoction to be taken orally for cough, cold and conyza. The Kadugolla tribals use the bark, the paste is applied externally on bone fracture in cattle; and the fruit pulp (without seeds) is made into juice with sugar and given orally to cure indigestion. Jogi tribals apply leaf paste externally to cure wounds.

Information from literature
The stem sap decoction against asthma, burning, dental disorders and snake bite (Kothari and Londhe, 1999), the bark, dry calyx and fruit are used to cure stomachache and diarrhoea (Kothary and Moorthy, 1996). Flowers bark, root, leaf astringent, antipyretic, antidote for snakebite, fish poison (Rama Prasad and Pandey, 1993). Aried persistent calyx to cure fever (Bidi 1978).

Carica papaya L.
CARICACEAE (Parangi mare)

Description
A soft wooded branchless, latex bearing tree. Leaves spirally arranged often large pulvinately veined and lobed palmate. Cymes solitary and axillary rarely bisexual calyx and corolla 5, the tube very short in females lobes convolute. Stamens 5 or 5+5 attached to corolla tube. Gynoecium 5-carpellary syncarpus superior ovary with deeply intrusive parietal placentas. Ovules many. Fruit a large berry (pepo); seeds many with gelatinous coat. Flowering and fruiting throughout the year.

Ethnobotanical Information
The Budibudike tribals employ the leaves, and are bruised externally to relieve nervous pain and general pains. The Jogi tribals use the latex and is ground with potash alum to apply externally to cure corns and warts on the feet. The latex is applied externally as an antidote for scorpion sting. The traditional healer use seeds combine with other ingredients like the whole plant of Phyla nodiflora, Salamonic (NH₄Cl) are pounded with jaggery to prepare in the form of pills for abortion. It is also used against fever. The Nayaka tribals eat excessively the tendered fruits to induce abortion for 1-2 months pregnancy.
Information from literature
The root powder in water against kidney stone (Saini, 1996). The dried latex powder is used to terminate 2-3 months pregnancy (Singh and Anwar Ali, 1996), as antidiabetic (Balu et al., 1999) and to control spleen enlargement and to promote Indigestion (Baburaj et al., 1999).

**Carissa congesta** Wight
APOCYNACEAE

Description
Erect or scandent spinous, woody shrub. Leaves broadly ovate, spines straight or slightly curved. Corolla white, tube long. Stamens inserted near the top of the tube; filament short, free. Stigma fusiform, apically bifid, pubescent; ovary single, bilocular, glabrous. Fruit a fleshy berry, spherical or slightly ellipsoid; seeds naked. Occasionally found in dry-deciduous forests. Flowering and fruiting in August.

Ethnobotanical information
The Kadugolla tribals use the water based decoction of leaves with a piece of garlic to cure fever and the fruits are edible.

Information from literature
The leaves are used for the treatment of asthma and the root paste in lime juice against skin diseases. The fruits are edible and pickled (Kothari and Rao, 1999).

**Carissa spinarum** L.
APOCYNACEAE

Description
A large thorny shrub with zigzag branches, spines straight, stout, usually forked; leaves ovate, sub-orbicular, obtusely slightly acute and ovate, sub-orbicular, obtusely slightly acute and mucronate at apex, sometimes emarginate, rounded or slightly acute at base, nerves about 6 pairs and prominent. Flowers in terminal and axillary pedunculate trichotomus cymes. Corolla salver shaped. Stamens 5 on the corolla-tube included, anthers lanceolate. Ovary 2-celled, 1-4 ovules in each cell. Fruit an ovoid or globose berry. Common in dry scrub forests. Flowers and fruiting during April to May.
b) Ethnobotanical information

The Lambani tribal use the decoction of root with ginger as purgative. The fruits are often edible by tribals and local people.

c) Information from literature

The roots are used as purgative agent (Yoganarasimhan, 2000).

068. *Cassia auriculata* L.

*(Thangadisoppu, Olletangadi, Avarike)*

a) Description

A large shrub. Leaves with subulate glands between all the 8-12 pairs of elliptic obtuse leaflets and a pair of large obliquely cordate stipules at their bases. Flowers in sub-terminal but axillary corymbs, large, yellow. Bracts and bracteoles present. Calyx tube very short; lobes 5, imbricate. Petals 5 imbricate. Stamens 10, but rarely all perfect and equal, sometimes reduced to staminodes. Ovary stalked, many ovuled, style incurved, stigma terminal usually truncate. Pods flat, papery, obtuse at each end, stalked, 4-5 in long. Common in dry-deciduous scrubs, fields and open places. Flowering and fruiting during March to December.

b) Ethnobotanical information

The Kadugolla tribals use goat milk-based extract of the tendered shoot tips to treat lactifuge in sheep and goats. The bark is often chewed with betel leaves instead of tobacco. The Nayaka tribals use fresh bark of the stem put in a buttermilk overnight and taken orally with empty stomach to treat gastric troubles.

c) Information from literature

The leaves and flowers have been used against diabetes (Balu *et al.*, 1999) the leaves to check obesity, as a shampoo (Rosakuty *et al.*, 1999) and the leaves are burnt with peacock feathers; and the powder is mixed with coconut oil against burns (Rao, Rajendran and Henry, 1999) and as anthelmentic in children (Singh and Pandey 1998). The crushed stem bark for stupefying of fishes and the root bark to cure cold and cough, skin diseases, diarrhoea, as tooth brush and the flowers to treat the diabetes & urinary troubles (Singh and Pandey, 1998).
The seeds are used in the preparation of coffee (Sudhakar and Vedavathy, 1999), decoction against ophthalmia and conjunctivitis (Singh and Pandey, 1998).

*Cassia fistula* L.
CAESALPINIACEAE (Kakkemara, Betemara)
Description
A medium sized tree with pale smooth bark when young, darker and rough when old. Leaves abruptly pinnate, leaflets 4-8 pairs, ovate, acute. Inflorescence long racemes with yellow flowers. Sepals broad, obtuse, petals 5 imbricate, the lower one is largest. Stamens all antheriferous, but the 2-3 lowest larger than the others and with longer filaments; ovary stalked, many ovuled; style incurved. Pods long, terete, indehiscent, cylindrical, transversely septate. Common in dry-deciduous forests, open places, often in cultivated fields. Flowers and fruits during April to June.

Ethnobotanical information
The Kadugolla tribals use the juice of the fruit pulp (without seeds) with sugar taken orally for the treatment of constipation. The dried fruit pulp is powdered with pepper and prepare water based decoction to cure rinder pest in cattle. The bark is powdered and boiled with mustard oil, cool and dropped into ear to cure otorrhoea. Traditional healer use the bark, and it is powdered and add a pinch of turmeric powder mix with coconut oil to apply externally for syphilis.

Information from literature
The fruit pulp with salt as purgative (Dixit and Pal, 1996) against anthrax in cattle (Sikanvar, 1998), to cure stomachache, constipation, diarrhoea, typhoid, jaundice, and tuberculosis as vermifuge to cure childblain (Singh and Pandey, 1998), and an excellent purgative (Pandit *et al.*, 1996). The stem or the bark against filariosis (Satapathy and Brahmam, 1999), Coagulation of semen (Bhatt and Parwar, 1990). The root as febrifuge (Deshmukh *et al.*, 1999), as astringent, purgative (Rama Prasad and Pandey, 1993), as cooling agent, skin diseases, syphilis (Nayak and Choudhury, 1999) and with limejuice in controlling round worms (Suryanarayana *et al.*, 1999). The leaf juice to cure cataract (Gupta *et al.*, 1999) against scabies (Kothari and Moorthy, 1996), antidiabetic (Balu *et al.*, 1999). Jain and Tarafdar (1970) reported the various uses like cancer, epilepsy, convulsions, delirium febris, pimples, burns, syphilis, dysuria, haematuria, gravel and diarrhoea.
**Cassia italica** Mill.

**CAESALPINIACEAE (Kadusonamukhi, Nelatangate)**

*Description*


*Ethnobotanical information*

The Kadugolla tribals use water-based extract of root given orally to treat constipation in cattle. The leaves and fruits are shade dried powdered and mixed with lemon juice to cure eczema and rashes. The traditional healers use the leaf decoction as purgative / deworming.

*Information from literature*

The leaves are used for the treatment of constipation; fever and body pain (Diallo *et al.*, 1996), with *Triandema decandra* leaves, for gasteral disorders (flatulence).

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**Cassia montana** Roth

**CAESALPINIACEAE (Bettathangadi)**

*Description*

Shrubs. Leaves eglandular; leaflets 8-12 pairs, oblanceolate, obtuse, conspicuously tipped with a bristle. Petals usually yellow. Antheriferous stamens 6-7 subequal, the rest staminodial or absent; anther poricidal. Ovules many. Pods with thin sutures, uniformly flat. Occasional in dry deciduous forests. Flowering and fruiting during June to December.

*Ethnobotanical information*

The local traditional healer use the leaf powder with the leaves of *Terminalia arjuna* and *Tarenna asiatica*, mixed with cow ghee or Guizotia oil to apply externally to treat bone fractures.

*Information from literature*

Nil.
070. *Cassia occidentalis* L.
CAESALPINIACEAE (Kottagarl, Dendragace)

a) Description
Shrubby herbs, all parts glabrous. Leaves long, with a gland at the base of the petiole; leaflets in 3-5 pairs elliptic-ovate, acuminate, round at base. Bracts ovate, acuminate. Stamens 6-7, 2 larger. Pod linear, turgid, but compressed, pale brown at center, pale yellow along the margin. Ovules many, frequent on waste land across plains. Flowering and fruiting during March to October.

b) Ethnobotanical information
The Jogi tribals employ the water-based decoction of the leaves, taken orally with sugar to cure fever and the fresh leaf paste applied externally for the treatment of burning wounds and boils.

c) Information from literature
The roots with lemon against stomachache (Henry et al., 1996), as antidote in snakebite (Rama Prasad and Pandey, 1993), scabies (Jeevan Ram et al., 1999). Whereas, the leaf juice mixed with buttermilk against jaundice (Rao, Rajendran and Henry, 1999) against antidiabetic (Balu et al., 1999), against scabies (Secoy and Smith, 1983), warmed extract of the leaves against diarrhoea (Mohato et al., 1996) foot and mouth disease of cattle (Singh and Pandey, 1998) and with *Vitex negundo*, *Glycosmis pentaphylla* and *Azadirachta indica* extract used to develop immunity against skin diseases in a new born baby. The seeds are used in non alcoholic beverage preparation (Paliwal and Badoni, 1988), pickles and chutney (Brijlal et al., 1996) and the seeds with cow milk and castor oil to wound heal up (Satapathy and Brahman, 1996).

171. *Catunaregam spinosa* (Thunb.) Thirv. (=*Xeromphis spinosa* (Thunb.) Keay)
RUBIACEAE (Maggare, Mangare kayl)

a) Description
Shrubs or trees; spines axillary, absent on older parts. Leaves elliptic-ovovate, subacute, often with bearded domatia beneath. Stipules interpetiolar caduceus. Inflorescence fascicle, on apex of brachy blasts. Flowers 5-merous, calyx shortly lobed. Corolla pale yellow campanulate; tube with a
band of hairs within; lobes contorted, longer than tube. Stamens as many as corolla segments; anthers exserted. Ovary two locular with many ovules, axile placentation. Fruit a berry, ellipsoid. Occasional in forests. Flowering and fruiting during March to September.

b) Ethnobotanical information
The Kadugolla tribal employ the stem bark which is powdered and boiled with water the decoction is taken orally for blood mixed dysentery. The Nayaka and Budlibudike tribal employ fruit and ground with lemon juice and apply externally for Herpes.

c) Information from literature
The roots emetic and acts as expectorant and diaphoretic. Bark astringent, used in diarrhoea, dysentery and rheumatism. Seeds are given to induce appetite (Yoganarasimhan, 2000).

072. *Celastrus paniculatus* Willd.
**CELASTRACEAE** (Bhāvanga bīja; Gangurrehambu)

a) Description
Unarmed shrubby climber with alternate leaves ovate elliptic, crenulate. Inflorescence of usually terminal cymes collected into thyrosoid panicles. Flowers polygamous, 5-merous. Disc cupular lobed. Sepals fimbriate at tip. Petals usually free, imbricate. Stamens free, inserted just outside the disc. Ovary not immersed in disc, 2 to 3 locular; ovules 2 in each cell, basal; stigma 2-3 lobed and spreading. Fruit capsule tipped by persistent style, 3-valved, loculicidal, 1-6 seeded. Seeds crimson-arillate. Common in dry-deciduous forests. Flowering and fruiting during April to June.

b) Ethnobotanical information
The Jogi tribals use the stem-bark powder with lime juice as an antidote for scorpion sting. The seed oil is applied externally on forehead to cure headache. The Nayaka tribals also uses root-bark powder with sugar as tonic.

c) Information from literature
The seeds are used in rheumatic pain, piles and stomach disorders and its oil as nerve stimulant and brain tonic. The bark is used in wound healing, cough,
Cold (Yoganarasimhan, 2000; Kothari and Londhe, 1999; Singh and Pandey, 1998), the stem bark and root as antidote for snakebite (Singh and Pandey, 1998 and Kothari and Londhe, 1999) and root as abortifacient (Yoganarasimhan, 2000).

*Celosia argentea* L.
**AMARANTHACEAE (Annesoppu)**

**Description**
Annual, erect, glabrous herbs. Leaves alternate entire. Inflorescence a dense flowered, terminal spike. Flowers bisexual. Perianth of 5 free tepals. Stamens 5; filaments fused at base to form a short cup; the free part alternating with small pseudostaminodes. Ovary broad, with many ovules; style long; stigma capitate, utricle thin, circumscissile; seeds many black. Common weed in cultivated fields and open places. Flowering and fruiting during September to December.

**Ethnobotanical Information**
The Jogi and Koracha tribals use the water based leaf decoction with common salt for the treatment of liver complaints, and water based leaf paste as anti-opthalmic disorders.

**Information from literature**
Both red and yellow tops mixed with *Ipomoea* and applied to painful bones as poultice. Tops also mixed with *Ricinus* and another unknown plant to treat mottled skin (Anderson, 1986). The plant is used as a pot herb although the inferior one. The seeds are used by the Chinese for adorning cakes. They are also considered useful for diarrhoea, blood diseases, mouth sores and eye troubles (Datta and Banerjee, 1978). The leaves and tender are used as vegetables (Misra and Dash, 1999; Singh and Pandey, 1998). Seeds are used for urinary disorders, mouth sores, eye and blood diseases and catalyster in sexuality (Kothari and Londhe (1999).
074. *Centratherum anthelminticum* (L.) Kuntze
ASTERACEAE (Kaadujeerige, Vanajeerige)

a) **Description**

b) **Ethnobotanical Information**
The Kadugolla tribals employ the fresh leaves or root pounded and the paste is applied externally on knee joints to treat arthritis. The water based leaf decoction is mixed with jaggery to taken internally to purify uterus and promote milk in nursing mothers. The Jogl tribals apply the squeezed leaf juice to hairs to destroy lice. The traditional healer use the 4 parts of the fruits with yellow orpiment powdered and mixed with cow urine to treat leucoderma.

c) **Information from literature**
Garlic to cure diarrhoea (Narayana Rao et al., 1991), used in asthma (Bedi, 1978) and in infective hepatitis (Dixit and Pal., 1996). It is a household insect repellent plant in India (Secoy and Smith, 1983).

075. *Centella asiatica* (L.) Urban.
APIACEAE (Ondelaga)

a) **Description**

b) **Ethnobotanical Information**
The Kadugolla tribals employ the juice of leaves with honey for the treatment of fever and chest pain. The traditional healer employs the leaves with capsicum, piece of garlic and common salt to prepare water based extract,
which is taken with cooked rice for one or two months to improve memory
power. The Nayaka and Jogl tribal chews 3-4 leaves daily to improve memory
power.

Information from literature
Juice of fresh leaves against eye disorders (Aswal, 1996), as nervine tonic
(Suryanarayana et al., 1999), inflammations and to improve memory
(Rosakutty et al., 1999), leprosy (Datta and Banerjee, 1978) and the leaf paste
against jaundice (Henry et al., 1996), rubbed on palm and foot of pregnant
women to relieve labraw pain and to facilitate easy delivery (Satapathy and
Brahman, 1996), leaf paste with other adjuvants like Cynodon dactylon,
Tagetes erect flowers and seeds of Nigella sativa against dyspepsia
(Borthakur and Sarma, 1996). The whole plant decoction for stomachache
and fever (Brijlal et al., 1996), against paratyphoid and typhoid (Arvind
Sakdani and Jain, 1996), against Tuberculosis (Kothari and Moorthy, 1996),
against malaria, to increase prolonging life, as galactagogue, insecticidal,
alternative diaretic, cure madness and as an antidote for cholera in India, an
infection against leprosy (Adenson, 1986 and Datta and Banerjee, 1978).
Plant contain an asiaticoside, used against skin disease and psychotropic
(Natesh and Mohan Ram, 1999), against madness (Misra and Dash, 1999).

\textbf{Ceropegia elegans Wall.}
\textbf{ASCLEPIADACEAE (Javalankanaballi)}

\textbf{Description}
Twining herb. Rhizome not tuberous. Leaves glabrous, simple, elliptic, base
rounded, apex slightly acuminate. Cymes mostly 2-4 flowered. Corolla funnel
shaped, dark purple; mouth widely dilated; lobes broad and folded back upon
themselves, long purple ciliate on the margins. Stamens either connivent by
the anthers to form gynostegium. Outer corona lobes deeply bifid, pilose on
the margins extending above the gynostegium; inner lobes linear, less than 2
times the length of the outer. Gynostegium sessile. Gynoecium of 2 superior
unilocular carpels united only by the enlarged style apex. Fruit a pair of
follicles. Seeds flattened, comose. Occasional in scrub jungles. Flowering and
fruiting during September to March.
Ethnobotanical information
The Kadugolla tribal eats fresh leaves to alleviate burning sensation in stomach. The leaf juice with honey is used as tonic to treat indigestion.

Information from literature
Nil.

Chlorophytum tuberosum (Roxb.) Baker
LILIACEAE

Description
Tuberous herb. Leaves crowded at base, membranous, sessile; sheath white, shorter than the scape, terete, naked, long; bracts lanceolate, acuminate. Perianth 3+3, oblong-lanceolate, acute, 7 nerved. Ovary 3-celled, ovules 4 in each cell; style filiform; stigma simple. Fruit a capsule, obovoid; seeds orbicular. Common; often found in rocky slopes, where there is a little accumulated soil. Flowering and fruiting during July to August.

Ethnobotanical information
The Lambani tribal employ the root tubers with a pinch of common salt to apply externally for suppression of boils and abscess.

Information from literature
Roots are used as vegetable by the tribals and are considered to be a tonic (Bedi, 1978) and to control frequent nocturnal emission (Gupta et al., 1999). The tribals of Udaipur consume root powder with milk to cure bone fracture (Singh and Pandey, 1998). As summer cold drinks with other root powder of Asparagus racemosa, Curculigo orchioides, Curcuma angustifolia and fruit pulp of Mangifera indica through the juice of Saccharum officinarum, and consumed with ghee and cane sugar for vitality (Katewa, Nag and Guria 1999).

Chloroxylon swietenia DC.
RUTACEAE (Bitle mara)

Description
A conspicuous, pretty tree with rough yellowish corky bark. Leaves pinnate; leaflets small, numerous, very oblique, entire, gland dotted. Flowers small, in
terminal and axillary pubescent panicles. Calyx short, 5-lobed. Petals 5, clawed, imbricate. Disk thick, 10 lobed, pubescent. Stamens 10, free inserted between the lobes of the disk. Ovary pubescent sunk in the disk 3-lobed, 3-celled; style short, slender, glabrous; stigma capitate; ovules 8 in each cell. Fruit an oblong 3-celled loculicidal capsule. Occasional in dry-deciduous forests; flowering and fruiting during March to April.

b) Ethnobotanical information

The Budibudike tribal employs the crude extract of the leaves and stem-bark and apply externally against rheumatism.

c) Information from literature

Nil.

079. *Cipadessa baccifera* (Roth) Miq.

MELIACEAE (Sithundegida)

a) Description

Shrubs. Leaflets coarsely serrate towards apex; sub ovate, usually hairy on nerves beneath. Inflorescence hairy. Flowers pentamerous. Sepals sparsely ciliate. Petals pubescent. Staminal filaments fused below, forked above with the sessile anthers between forks. Disc patelliform, adnate to the short staminal column. Ovary usually 5-locular; style elongate; stigma globose, 5-toothed. Berry 5-seeded, grooved vertically. Common in dry deciduous forests and open fields. Flowering and fruiting during April to July.

b) Ethnobotanical information

The Kadugolla tribal employ the leaves, and are pounded with rock salt and the paste is mixed with castor oil and administered to hasten delivery problems in cattles.

c) Information from literature

Nil.
**Clampeloa pareira L.**

MENISPERMACEAE (Peddaliputha, Padavali)

**a) Description**

Softly tomentose, herbaceous climbers. Leaves broad, petiole long; leaf blade ovate to orbicular, apiculate, peltate—cordate at base, densely hairy beneath; venation obscure—pistillate inflorescence longer than staminate inflorescence, with many conspicuous imbricate bracts. Flowers greenish white. Sepals 4, free; petals 2-4 connate, almost cupular; stamens 4, connate, anthers forming a terminal ring (synandrium), dehiscing transversely. Pistillate inflorescence: panicles with flowers fascicled on the axil of many foliaceous bracts; flowers irregular, pedicelled; sepal 1; petal 1; pistil 1, villous; style shortly 3-fid. Drupe compressed.

**b) Ethnobotanical information**

The JogI tribal employ the leaf juice with honey, taken orally for fever and diarrhoea, and also to cure urinary disorders. The Nayaka tribal employ the root paste (fresh) applied externally as an antidote for scorpion sting and snakebite.

**c) Information from literature**

The herb is used in dyspepsia, dropy, urinary disorders (Banumathy and Parvathi, 1999) and other ailments like, fever, carbuncle, epilepsy, mad convulsions, delirium, febris, haematuria, stomachache, diarrhoea, cholera, dysentery, bronchitis, cold, bite of dogs and Jackal (Jain and Tarafdar, 1970). (Gupta et al., 1999), to promote menstruation (Narayana Rao et al., 1991) as a febrifuge against snakebite (Lipp, 1971) and the root paste to cure wounds (Bedi, 1978), leucoderma, skin diseases, small pox, pimples and boils (Arvind Saklani & Jain, 1996), fermentation and diarrhoea (Satapathy and Brahman, 1999), root powder with Marsdenia to cure snakebite, diuretic, lithenterptic and febrifuge, diarrhoea, and stomach pain (Singh and Pandey, 1998). Stem and leaf decoction against *Staphylococcus aureus*, *Escheria coli* and *Pseudomonas aeruginosa* and *Bacillus subtilis* (Valsaraj et al., 1999).
Clusus quadrangularis L.
VITACEAE (Mungraballi)

Description
Herbaceous trailer with stout root stock; stem sharply 4-angled. Leaves simple, tendrils leaf opposed, blade orbicular, crenate. Flowers white, bisexual in umbellate cymes, 4-merous. Calyx truncate, berry globose, usually one seeded. Common in scrub jungles, roadsides and often in backyards. Flowering and fruiting during September.

Ethnobotanical Information
The Nayaka tribals employ the stem and root powder, mixed with cows ghee or Guizotia oil to treat bone fracture. The Lambani tribals employ the stem juice combines with pepper and garlic to be given orally with honey to cure Asthma. The Kadugolla tribals employ the whole part of the stem without root, ground with rock salt and mixed with buttermilk to be given orally for whooping cough in cattles and also the tendered stem tips are used as spinach.

Information from literature
The leaves are cooked as vegetables (Jawahar, 1996), stem paste eaten raw for digestion (Sudhakar and Vedavathy, 1999 and Henry et al., 1996), stomach complaints (Balasubramanium and Prasad, 1996). Juice of stem and leaf mix with honey and drink, for menses disorders. Stem juice is applied on affected part of earache and swelling (Thomas and Britto, 1999).

Citrullus colocynthis (L.) Schrad.
CUCURBITACEAE (Erripitchekayi, Doddakayi)

Description
A perennial trailing herb, scabrid; tendrils 2-3 fid. Leaves triangular, ovate, deeply 3-5 lobed, the middle elongate, all sinuately pinnatifid. Flowers monoecious, yellow, both male and female solitary, rather large. Calyx tube broadly campanulate, lobes 5; corolla usually rotate, the petals ovate or obovate, obtuse, or emarginate. Stamens 3; filaments short, free; anthers free or slightly coheasing, 1,1-celled, 2,2-celled, the cells linear flexuous, the connective not produced; in female flowers staminodes 3. Ovary, ovoid, 1-celled, ovules many or 3 vertical placentas; style short, stigma thick, reniform.
In male flowers pistillode glandular. Fruit globose, or oblong fleshy, or dry indehiscent berry. Seeds very much elliptic-oblong, compressed, smooth. Common in dry sandy areas, often in rocky areas. Flowering and fruiting during September to December.

b) Ethnobotanical information

The Kadugolla tribals use the shade dried root powder with goat milk to be given orally as an antidote for snakebite. The Nayaka and Lambani tribes use the same powder with children's urine as an antidote for snakebite. The traditional healer and Kadugolla tribes employ the half ripened fruit to cut equal parts and stuff them with common salt, rock salt, pepper powder, cumin powder in equal proportions leaving over night in the open places. Early morning the fruits are scour on tongue for 3-5 days for bad taste and “blue tongue” disease in cattle. The Jogl tribes applied the root paste externally for Arthritis.

c) Information from literature

The fruits as an insecticide and nodenticide (Secoy and Smith, 1983), to cure haemorrhoids (Narayana Rao et al., 1991), abortion, the commercial drug colocynth is from the fruit and act as hydragogue (Singh and Pandey, 1998). The seeds yield non-edible oil and finds a reputable place in the soap industry (Singh and Pandey, 1998). The root powder is taken to cure jaundice, urinary disease and rheumatism and to cure earache (Singh and Pandey, 1998).

083. Clematis gouriana Roxb.
RANUNCULACEAE (Talejadari, Laghukarni)

a) Description

Woody climbers. Leaves generally bipinnate; leaf axis long, many-foliolate; leaflets less than 2 cm broad, petiolulate, almost entire ovate, acuminate, veins distinct and hairy beneath, 3-5 ribbed. Inflorescence panicled, many-flowered. Flowers bisexual, white, regular. Perianth 4-8, valvate, petaloid segments. Stamens many, filaments linear; anther short. Pistils each with a pendulous ovule; styles pilose. Fruit an aggregate of sessile or stalked ovoid achenes that are terminated with elongated feathery styles. Occasional in dry deciduous forests. Flowering and fruiting during December to January.
b) Ethnobotanical information

The Lambani and Koracha tribals use the leaf juice with honey for 3-5 days to cure fever. The traditional healer employ the root powder as an antidote for snake bite.

c) Information from literature

The Stem and leaves juice mixed with black pepper, to use as an antidote for snake bite (Pandey and Shrivastava, 1993).

084. *Cleome monophylla* L.

CLEOMACEAE / CAPPARIDACEAE (Kādusasuvegida)

a) Description

Glandular pubescent annual herbs. Leaves simple, ovate-lanceolate, acute-acuminate, sub-cordate; basal leaves undivided. Flowers bisexual. Petals purple to white, clawed; receptacle with a small disc. Stamens 6, sometimes basally connate with the gynophore. Ovary usually on a gynophore. Capsule linear, terete, dehiscing by 2 valves; the placentae persisting. Seeds many, tubercled, black. Common weed along roadsides and distributed in open fields. Flowering and fruiting during May to April.

b) Ethnobotanical information

The Nayaka tribal employ the sesamum oil based whole plant juice is warmed and cooled to drop in ear to cure earache. The Jogi tribals use root powder and mix with goat milk to be given orally to treat fits. The leaves are often used as leafy vegetable by tribals and local people.

c) Information from literature

Nil.

085. *Cleome gynandra* L. (*Gynandropsis pentaphylla* DC.)

CLEOMACEAE (Kōlikalinagida, Nārumbalesoppu)

a) Description

Annul hairy herbs. Leaves long petioled, digitately 3-7 foliolate. Flowers white or purple in bracteate racemes. Petals 4, spreading, long clawed, open in bud. Stamens about 6, inserted upon the long gynophore, spreading. Ovary stalked, 1-celled, with 2-many ovuled parietal placenta. Capsule oblong or
linear, valves 2. Seeds attached to the placentas, reniform. An annual weed common in waste places and in plains. Flowering and fruiting during August to February.

b) Ethnobotanical information

The Kadugolla tribal employ the leaves squeezed with garlic juice and the juice is swabbed (wetted) with cotton to close the external ear of nursing mother to check the cold and delirium. Whereas in Nayaka tribals the fresh juice of the leaves is dropped into ear to cure migraine and earache.

c) Information from literature

The seeds are used rubefacient and anthelmintic (Yoganarasimhan, 2000) against painful piles, to improve eyesight, as fish poison and to cure cough, cold. Fever (Singh and Pandey, 1998), round worm expulsion (Nayak and Choudhury, 1999), seed oil against head lice (Secoy and Smith, 1983). Whereas, the leaf juice against earache (Suryanarayana et al., 1999 and Singh and Pandey, 1998), skin diseases (Bedi, 1978), wound of goats (Silkarwar, 1986) and night blindness (Singh and Pandey, 1998). The root decoction against mild fever (Nayaka and Choudhury, 1999) and the whole plant extract against peptic ulcers and easy delivery (Dharma Chandra Kumar, 1997).

086. Clerodendrum inerme (L.) Gaertn

VERBENACEAE (Vishumdhari)

a) Description

Glabrescent straggling shrubs. Leaves entire, obovate-ovate, obtuse at apex, cuneate, chartaceous glandular. Inflorescence of an axillary cyme, occasionally terminal 3-flowered; peduncle long; bracts minute; pedicel long. Calyx small, dentate. Corolla salver form, white; tube long; limb oblique; lobes 6, short, spreading. Stamens 4 dydynamous long-exserted. Ovary imperfectly 4 locular; style elongate; stigma bifid. Drupe 4-lobed, with four 1-seeded pyrenes. Common and cultivated as an hedge plant. Flowering and fruiting during April to May.
b) Ethnobotanical information
The Kadugolla tribals employ the root boiled with sesame oil to apply externally to treat arthritis. The Nayaka tribals employ the root paste as an antidote for scorpion sting; the leaf juice with honey is taken orally for hemorrhages and leucorrhages in Kadugolla and Koracha tribal women. The traditional healer employ the 3-4 fresh leaves to control the diabetes.

c) Information from literature
In India berry juice is used as mosquito repellent (Secoy and Smith, 1983).

087. Clerodendrum serratum (L.) Moon
VERBENACEAE (Nirvisha garudapathala)

a) Description
Sparsely pubescent herb or shrubs; branches sometimes terete. Leaves neither cordate nor tomentose; sharply serrate, obovate, acuminate, cuneate and entire at base, coriaceous. Panicle densely pubescent, long; bracts conspicuous. Pedicles long. Flowers 5-merous, slightly irregular. Calyx truncate, com panulate, dentate. Corolla bluish-purple, lobes longer than tube, subequal. Stamens 4, didynamous, long-exserted. Ovary imperfectly 4 locular; style elongate; stigma bifid. Drupe purple 4-lobed, with four one seeded pyrenes. Frequently found in dry deciduous forests. Flowering and fruiting during May to September.

b) Ethnobotanical information
The traditional healer employ the water based root decoction with pepper powder and taken orally for asthma and bronchitis. The leaf decoction in small doses to cure fever.

c) Information from literature
088. *Clitoria ternatea* L.
FABACEAE (Girikarnike)

**Description**
Glabrascent slender twiners. Leaves odd-pinnate; stipules persistent striate. Bracts at the tip of the peduncle smaller than round bracteoles situated at tip of the pedicel. Leaflets 5-7, elliptic, obtuse or retuse, rounded at base. Flowers upside down, solitary. Calyx with upper 2 lobes connate. Corolla bluish-white, wings adherent to keel. Stamens 9+1 (diadelphous). Ovary stalked many-ovuled; style bearded. Pod compressed, entire, oblong tipped with persistent base of style, pubescent. Frequently found in hedges, bunds of cultivated fields. Often cultivated as ornamental plant. Flowering and fruiting during October to January.

**Ethnobotanical Information**
The Kadugolla tribal employ the water-based root extract is given orally with goats milk as of purgative. The Lambani tribals use the water-based leaf extract with candy sugar and asbestos to given orally for 3-5 days to cure leucorrhoea in women.

**Information from literature**
Seeds are used as purgative (Deshmukh, 1999), seed paste against syphilis (Singh and Pandey, 1998) diuretic and purgative (Rosakutty *et al.*, 1999). The leaf juice as antiseptic (Anderson, 1986), leaf paste to expel fish bone from the throat and the thorns (Rosakutty *et al.*, 1999). The root powder with goat milk against impotency (Rao, Rajendran and Henry, 1999), root powder with cow milk to cure hydrophobia and rat bite (Singh and Pandey).

089. *Coccinia indica* W. & A.
CUCURBITACEAE (Thonde kayi)

**Description**
A pretty climber with large white flowers. Leaves petiolate, deltoid, or sub-rotund, angled or lobed. Sometimes glandular beneath. Flowers, white, oblong dioecious, male solitary or sub-cymose, female solitary, shortly 5-fld. Stamens 3; filaments connate on a column, rarely free; anthers connate, 1, 1-celled, 2,2 celled, cells campanulate; in female flowering staminodes 3, oblong or
subulate. Ovary ovoid, oblong or linear; ovules many, horizontal from 3 placents; style slender, stigma 3; pistillode in male flowers absent. Fruit an ovoid oblong or oblong indehiscent berry. Seeds ovoid compressed, margined, the testa smooth, valvety. Most common in plains especially on hedges, flowering and fruiting during January and August.

b) Ethnobotanical information
The traditional healers squeeze the leaf juice on wounds and abscess. The shade dried root is powdered and given orally with cows milk for diabetes. The Jogi tribals use water based leaf decoction combination with a piece of garlic and pepper powder taken orally for fever. The ripe fruits are eaten as raw and unripe fruits are used as vegetables.

c) Information from literature
The leaf juice against diabetes (Balu et al., 1999), extract with coconut milk and copper sulphate to cure sores, scabies and skin diseases (Rosakutty et al., 1999), with Zingiber officinale into ears against cough, cold and fever in animals (Mishra, Jha and Jha, 1996). Sores, syphilis, menorrhagia (Jain and Tarafdar, 1970). Fruits are used to treat diabetes (Rosakutty, et al., 1999).

090. *Cocculus hirsutus* (L.) Diels
MENISPERMACEAE (Dagadiballi)

a) Description
Pubescent climbing herbs. Leaves not peltate, pubescent on one or both surfaces. Petiole long; leaf blade ovate, obtuse at apex, rounded at base, densely pubescent beneath. Inflorescence a panicle, fascicle or flowers solitary; bracts foliaceous. Flowers pedicelled. Staminate flowers in slender panicles. Pistillate flowers in fascicles. Sepals usually 6, free, imbricate, inner whorl larger. Petals 6, opposite and usually smaller than sepals, generally auricled at base, 2-fid at apex, embracing the stamens and staminodes at base. Stamens 6, free; pistillode absent in staminate flowers. Staminodes 6 or absent in pistillate flowers. Pistil 3-6; styles usually cylindric. Drupelets reddish-purple. Common twining herb on bushes, in forests and hedges. Flowering and fruiting during August to May.
b) Ethnobotanical information
The Nayaka tribal employ the root powder as an antidote for snakebite. The Lambani tribal employ the goat milk-based root extract with pepper is taken daily in the morning for arthritis. The Jogl tribal employ both leaves and root powder is taken orally with honey for asthma, cough, indigestion, stomach pain and fever.

c) Information from literature
The leaf juice against white discharge (Henry et al., 1996), on cuts, sores and wounds, with neem juice as antidote, night blindness, leucorrhoea (Singh and Pandey 1998) and to cure fever, cooling effect (Bedi, 1978), Cholera (Girach, 1996) and prevent nose bleeding (Vinaya Ranjan, 1996), leaf juice against eczema (Dharma Chandra Kumar, 1997). The root powder with honey against rheumatism and veneral diseases (Singh and Pandey, 1998), as antidote for snakebite (Girach, 1996), rheumatism (Rosakutty et al., 1999).

091. **Cochlospermum religiosum** (L.) Alston
**BIXACEAE / COCHLOSPERMAEAE** (Harishinabooruga, Kaaduboogura)

a) Description
Tree. Leaves without red glands, palmately lobed, cordate at base, 7-nerved; lobes acute, usually glaucous tomentose below. Flowers large; petals bright golden yellow, usually emarginate; disc non. Filaments shortly connate at base, anthers linear falcate. Ovary one locular or incompletely 3-5 locular; ovules many, on 3-5 placentas. Capsule obovoid, smooth, 3-5 valved; seeds reniform, brown, woody. Common in dry-deciduous forests and cultivated as an avenue tree. Flowering and fruiting during January to March.

b) Ethnobotanical importance
The Jogl and Budlbudlke tribals employ the leaf juice to wash head, to promotes cooling effect on body. The Lambani tribals used gum with buttermilk taken orally to treat dysentery. The Koracha tribals use the flower powder with sesame oil as an hair dye.

c) Information from literature
Gum, leaves, flower as sedative, used in cough and gonorrhea (Ram Prasad and Pandey, 1993), and against sores, tubercular fistula (Jain and Tarafdar, 1970).
092. *Coleus ambolinius*
LAMIACEAE (Doddapathre, Karpooravalli)

a) **Description**
Herbs or under shrubs, usually aromatic and fleshy. Leaves petioled, thick and fleshy, very villous, broadly ovate, crenate, broad. Flowers shortly pedicelled pale purple, in dense whorl at distant intervals in a long rather slender raceme. Calyx 2 lipped, the tube usually decurved, the throat glabrous within; hispid, small, the upper lip ovate acute, the lower of 4 acuminate lobes. Corolla bilipped; tube exserted, decurved; upper lip short and slightly 4-lobed, recurved; lower lip long, entire, boat shaped narrow or stipitate at base. Stamens 4, didynamous connate below on a sheath around the style; anther cells confluent. Disk enlarged in front. Ovary 4-partite; style slender, 2-fid at tip. Fruit of 4 orbicular, ovoid nutlets. Cultivated in gardens. Flowering and fruiting during November to January.

b) **Ethnobotanical information**
The Kadugolla and Jogi tribals use the leaves for chewing to control tonsillitis; the Nayaka tribal employ the juice of leaves with the powder of *Phyla nudiflora*, and given orally with honey to cure cough and fever in children. The Koracha tribal employ the bruised leaves are applied externally as antidote for bites of honeybees, centipede, and scorpion sting. The traditional healers employ the leaves as "Chutney" to treat lithontriptic.

c) **Information from literature**
The leaves, stem and roots for cuts and wounds (Balasubramanian and Prasad 1996) and the oil is used as scent and flavouring agent or hair oil (Rajendran and Aswal, 1999).

093. *Commelina benghalensis* L.
COMMELINACEAE (Kannesoppu)

a) **Description**
Subscandent herbs with underground stem ending in a cleistogamous white fertile flowers. Leaves subsessile, ovate, acute, often asymmetrical at base; sheath long, with rufous hairs at mouth. Inflorescence a terminal or axillary cyme arising from a spathiform bracts. Underground stem ending ina

b) Ethnobotanical information
The traditional healer use the fresh leaves juice to apply externally on burning wounds. The leaves are used as spinach in large scale by tribals as well as local people.

c) Information from literature
The crushed leaves are applied on wounds for recovery (Brijlal, 1996) and to treat bed sores, breast sores and pimples (Rosakutty et al., 1999).

094. *Corallocarpus epigaeus* (Rottl. ex Willd.) Cl.
*CUCURBITACEAE* (Ginim56thi gedde, Pathalagaruda)

a) Description
A thick stemmed prostrate or climbing herb; with large tuberous root stock. Tendril stout, leaves rough, and variable in their lobes, thick, lobes deeply 3-5 lobed. Flowers monoecious, peduncles of female and male flowers thickened, long; calyx tube campanulate; lobes 5, short. Corolla 5-partite; lobes ovate. Stamens 3; free, inserted on the calyx tube; filaments very short; anthers all 2 celled or 1 1-celled; in females staminodes 0 or minute. Ovary ovoid, beaked, 2-3 celled; ovules few on 2-3 placentas; style straight without disk; stigma 3 lobed. In male flowers pistillode minute. Fruits an ovoid usually beaked fleshy berry, circumsciss near the base. Seeds few obovoid or sub-globose, often appressed pilose, very little compressed. Occasional in dry-deciduous forest. Flowering and fruiting during June to August.

b) Ethnobotanical information
The Nayaka and Lambani tribals use the root tubers as an antidote for snakebites. The root tuber is squeezed to obtain juice with no water, and it is mixed with human urine. The Jogli tribal uses fresh leaves and stem for the
treatment of rashes, eczema and scabies. Root paste is applied externally to heal-up glandular swellings in Kadugolla tribal.

c) Information from literature
Tuberous root used in chronic mucous enteritis and dysentery and also as a liniments for rheumatism (Yoganarasimhan, 2000). Root applied externally on affected parts (Samvatsar and Diwanji, 1999). Tuber is used for animal diseases (Dwarakan and Alagesaboopathi, 1999). The tuber paste is used as an antidote for snakebite. Leaves with one garlic piece and a few peppers is made into paste and squeezed, the juice is dropped into nostrils to cure epilepsy (Kumar and Pullaiah, 1999). Tuber paste given orally / tubers ground with pepper and garlic given orally in insect bite (Reddy and Raju, 1999). Tuber powder equal to the quantity of a wheat grain is given with jaggary for expelling worms. It is given with honey in asthma, fever and cough (Saxena, 1986).

095. Cormona retusa (Vahl) Masamune
BORAGINACEAE (Elsādike soppu, Ennebudige, Kuruvingi)

a) Description
Profusely branched woody shrubs. Leaves fascicled, subsessile, toothed or 3-lobed at apex ovate, with bulbous-based hairs. Flowers usually solitary. Calyx lobes spatulate, bristly hairy. Corolla white, campanulate; lobes broad below acute at tip. Ovary entire; style terminal, branched below middle; stigmas minute. Drupe globose, turning bright red with bony 4-seeded endocarp which remains entire. Rare in dry-deciduous forests and dry-scrub jungles. Flowering and fruiting throughout the year.

b) Ethnobotanical information
The traditional healer employ the fresh water-based root decoction as an antidote for food poisoning. The Kadugolla tribal use squeezed juice of leaves with candy sugar and cardamom to cure smallpox and dysentery.

c) Information from literature
The roots are used in debility and syphilis (Suryanarayana et al., 1999).
FABACEAE (*Antuthogari gida*)

a) Description

b) Ethnobotanical information
The Kadugolla tribal employ the whole plant is ground with blue vitriol and mixed with neem oil to apply externally on shoulder of the oxen to cure wounds caused due to ploughing. The leaf extract is prepared by adding goat milk to given orally for constipation in cattles.

c) Information from literature
Nil.

097. *Crotalaria verrucosa* L.
FABACEAE (*Gijligjlgida*)

a) Description
A much branched herbaceous annual plant, more or less stout shrub or under-shrub. Usually with prominent stipules; stipules semi-lunate, stems and branches angular. Leaves ovate-deltoid, obtuse or acute. Bracts and bractiGoes minute. Flowers in terminal racemes, usually blue colour. Calyx tube short; lobes linear or lanceolate, more or less connate in 2 lips. Corolla equal to or exceeding the calyx. Stamens monoadelphous; staminal sheath cleft above, ovary sessile, 2-many ovuled, style pubescent with many seeds. Long, minutely pubescent with many seeds. Common weed of roadsides, waste places gardens, and fields. Common in waste places and bunds of cultivated fields. Flowering and fruiting during July to October.
b) Ethnobotanical information
The Jogl tribal use the fresh leaf paste without water applied externally for one week to cure scabies. The Budlibudike tribal use the leaf paste externally for impetigo (Pustuluc skin disease).

c) Information from literature
The leaves are used in scabies and impetigo (Yoganarasimhan, 2000).

098. *Crotalaria retusa* L.
FABACEAE (Gejegida)

a) Description
Erect, robust under-shrubs; branches furrowed; white pubescent. Leaves obovate, cuneate, chartaceous, rounded to retuse. Racemes many flowered. Calyx long, minutely pubescent. Corolla yellow, glabrous. Stamens monadelphous; staminal sheath cleft above; alternate, anther long basifixed with flat filaments and short ones versatile with slender filaments. Ovary sessile, 2 to many ovuled, style pubescent towards apex. Pod, turgid with many seeded. Common in plains, and open fields. Flowering and fruiting during all seasons.

b) Ethnobotanical information
The Jogl tribal employs the seeds and is made into paste and applies externally with coconut oil for boils and wounds. The Kadugolla tribal employ the leaves which are boiled with water to take bath to relieve body pain.

c) Information from literature
The whole plant used in scabies and impetigo (Yoganarasimhan, 2000).

099. *Croton bonplandianus* Ball.
EUPHORBIACEAE (Seemegida)

a) Description
Herbs. Leaves ovate-lanceolate, serrate. Inflorescence terminal racemose; calyx usually 5 toothed, lobes membranous, obovate in male; in female lanceolate. Petals small in male; absent in females. Stamens more than 10, on villous receptacle. Ovary white – scaly, ovules 1 per locule; style 3; stigma
bifid. Fruit a schizocarp, glabrous. Common weed in roadsides, fallow fields. Flowering and fruiting during April to August.

Ethnobotanical information
The Nayaka tribal employ the latex externally as an antidote for scorpion sting. In Budlbudike tribal the latex is applied externally for rashes on skin and the leaf paste is used externally for scabies.

Information from literature
The leaf infusion against fever, which is due to infection of glands (Rosakutty et al., 1999) the latex against wounds and cuts for early healing (Singh and Pandey, 1993).

Cryptolepis buchanani R. & S.
ASCLEPIADACEAE (Metulli, Metugulihambu)
Description
Twining herb or shrubs with milky sap. Leaves opposite, simple, elliptic, glabrous, long, apiculate to caudate. Flower bisexual, 5-merous; cymes lateral, paniculate. Corolla pale greenish yellow, campanulate, lobes strongly imbricate to the right with glabrous a corolline corona of blunt fleshy lobes from each sinus. Staminal corona absent. Filaments free broad; anthers sagittate, connivent over the style apex. Pollen in tetrads and falling on to spathulate pollen carrier; pollen granular gynoecium of 2 superior unilocular carpels united only by the enlarged style apex. Fruit a pair of follicle. Seeds flattened comose. Occasional in open places. Flowering and fruiting during April to August.

Ethnobotanical information
The Jogi tribal use water-based leaf decoction with sugar to treat anaemia. The Kadugolla tribal use the leaves and the whole plant of Hemidesmus indicus (L.) R. Br., the goat milk extract of the above is given orally on galactagogue in cattle.

Information from literature
The root paste as an internal and external agent in bone fracture (Singh, 1996) and in polyarthritis, haemorrhage, gout, wounds, leprosy, disorders of blood, anaemia and jaundice (Yoganarasimhan, 2000). The latex has been
used in rheumatism (Henry et al., 1996). Whereas, Jain and Tarafdar (1970) reported the use in dropsy, dysentery and snakebite.

HYPOXIDACEAE / LILIACEAE (Nelathengu, Neila thale)

a) Description

b) Ethnobotanical Information
The Lambani and Koracha tribals employ the root-tuber is ground with buttermilk, the extract is taken orally for diarrhoea and dysentery. The traditional healer employ the decoction of root tuber for treating asthma.

c) Information from literature
The rhizome used in piles, jaundice, diuretic, gonorrhoea and asthma (Prasad and Pandey, 1993), to cure enlarged spleen (Panda and Das, 1999), antidiabetic (Ghosh and Das, 1999), epilepsy and hysteria (Saren, Sen and Pal, 1999), as aphrodisiac (Singh and Pandey, 1998), increase sexual potency and to prevent the loss of semen during urination (Satapathy and Brahman, 1996), gonorrhea (Mishra and Dash, 1999), against nose bleeding (Saxena et al., 1997), asthma and bronchitis (Kothari and Moorthy, 1996), filarial swellings (Suryanarayana et al., 1999), stomachache and dysentery (Maheswari et al., 1997) and against skin ailments, demulcent, diuretic, diarrhoea, piles, jaundice and asthma (Yoganarasimhan, 2000).
102. *Cuscuta reflexa* Roxb.
CUSCUTACEAE (Amaraballi, Badanike)

a) **Description**
Leafless, twining, stout branched yellow herb, parasitic on many species of shrubs or trees. Flowers small, white, sessile or shortly pedicelled, solitary or in lateral fascicles; bracts absent. Calyx 5, sometimes 4, sub equal sepals free or connate at base corolla connate, usually with a ring of fimbriate or lobed scales near the base. Stamens as many as the corolla lobes; inserted on or below the throat of the corolla; filaments linear, anthers oblong exsert. Ovary more or less completely 2-celled ovules 4; style 1, short, stout, stigma 2, ovoid, acute, diverging. Fruits a globose or ovoid succulent capsule. Seeds 4-2, glabrous, albumen fleshy. Common parasite on shrubs and trees. Flowering and fruiting during January to March.

b) **Ethnobotanical information**
The Nayaka and Jogl tribal employ the plant (stem) with a pinch of common salt applied externally for abscess and boils. The Budibudike tribal use the decoction (water-based) of the stem for antiseptic to wash wounds.

c) **Information from literature**

POACEAE (Garike hullu, Garike)

a) **Description**
b) Ethnobotanical information
The Jogi tribal employ the fresh root juice mixed with coconut oil to apply externally to cure wounds. The Budibudike tribal employ the leaf juice with neem oil to apply externally to scalds (burning wounds). The Kadugolla tribal employ the grass with turmeric powder to apply externally for scabies, eczema, itches and abscess; the juice is combined with honey to take orally against vomiting, fever, indigestion and general weakness.

c) Information from literature
The whole plant extract against blood and amoeboid dysentery (Rama Prasad and Sah, 1998 and Datta and Banerjee, 1978), against jaundice (Raju Goel et al., 1999), toothache (Viswanathan and Singh, 1996). The root are in use to control bleeding in piles, leprosy (Ram Prasad and Pandey, 1993) urinary disorders (Suryanaryana et al., 1999), nose bleeding (Saini, 1996 and Saxena et al., 1988).

104. *Cyanotis tuberosa* (Roxb.) J. & J. Schultes
COMMELINACEAE (Emmegedde)

a) Description
Densely villous pubescent herbs with tuberous fasciculated roots and woody stem base, clothed with shining hairs. Leaves radical and cauline, oblong-lanceolate, acute, often pinkish green; sheath long. Cymes solitary or clustered; peduncle long; bracts subtending inflorescence, equaling inflorescence. Flowers partly enclosed in the bracteoles. Sepals free or connate at the base. Petals connate at base purple blue. Stamens 6 with bearded filaments. Ovary 3-locular, often hairy, style naked or pilose, sometimes flattened below the apex. Capsule enclosed in the bracteoles. Seeds 1-2 per locule. Common in sandy soils of plains. Flowering and fruiting during July to October.

b) Ethnobotanical information
The Koracha tribal uses the tubers, they are ground with candy sugar and asafoetida and the fine paste is taken orally with honey as a tonic, for general dibility and weakness of pregnant women.

c) Information from literature
The root tubers used as a febrifuge (Yoganarasimhan, 2000).
105. **Datura metel L.**
SOLANACEAE (Vishummathi)

a) **Description**

b) **Ethnobotanical information**
The Lambani tribals employ the root, ground with water to give orally with small doses as an antidote for scorpion sting. Koracha tribals employ the leaf juice with castor oil to apply on scalp to destroy lice. The Jogi tribals employ the leaf juice with sesame oil blue vitriol, warm, filter and cooled, the filtrate is applied on skin diseases and 3-4 drops are dropped into ear to cure otitis media.

c) **Information from literature**
The leaf juice with lemon is used to prevent greying of hairs (Satapathy and Brahman, 1996). Leaves narcotic, smoked as cigarette in asthma (Yoganarasimhan, 2000; Bedi, 1978 and Balasubramanian and Prasad, 1996) and the root powder is used as a sterilant (Singh, 1996).

106. **Decalepis hamiltonii** Wight & Arn.
ASCLEPIADACEAE (Makali beru)

a) **Description**
Struggling shrub with milky sap. Leaves glabrous, obovate-orbicular, obtuse-emarginate. Cymes lateral, to sub-terminal paniculate. Corolla lobes imbricate to the right, densely white-villous within. Corona of 2 series of lobes, the outer series of 5 broad bifid scales basally adnate to the back of the filaments, the inner series of 5 truncate lobes forming an open ring around the ovaries. Stamens connate only by the anthers; filaments free, anthers connivent
around the style apex. Pollen carriers broad and bluntly shovel-shaped; pollen granular. Gynoecium of 2 superior unilocular carpels united only by the enlarged style apex. Fruit of single (abortion of one) follicles. Seeds flattened comose. Occasional in rocky places of dry deciduous forests. Flowering and fruiting during April to September.

b) Ethnobotanical information
All tribals and traditional healers use the water-based decoction of the root in combination with pepper, garlic, ginger and sugar as a tonic to cure general debility, fever and blood purification. The roots are used in the preparation of pickles.

c) Information from Literature
The roots have been considered as good appetizer and depurative (Yoganarasimhan, 2000).

107. *Delonix elata* L.
CAESALPINIACEAE (Sankeswari, Seemesankeswara)

a) Description
Erect unarmed trees. Leaves abruptly bipinnate, leaflets many, small; flowers large, showy, in terminal corymb; petals yellowish white, turning orange; bracts small, caducous, bracteoles absent. Calyx tube very short; lobes 5, valvate, subequal. Petals 5, orbicular imbricate, clawed, subequal, margins fimbriate. Stamens 10, free, filaments villous below; anthers uniform. Ovary subsessile, many ovuled; style filiform; stigma truncate. Pod, elongate, flat, woody dehiscent, 6-8 in long, 1 in broad. Seeds transverse oblong. Planted as an avenue tree. Flowering and fruiting during February to March.

b) Ethnobotanical information
The Kadugolla tribals use shade dried powder of leaves with honey to treat stomach pain. The bark powder is given orally with honey for the treatment of fever. The Jogi tribals use the boiled leaves with ginger and jaggary to be given orally to treat constipation. The traditional healer use the leaflets against rheumatism.
It is reported that, the leaves are used in rheumatism and flatulence. Bark-powder is given orally against bone fracture and with the bark of *Butea monosperma* and *Tectona grandis* to cure diarrhoea (Singh and Pandey, 1998).

CAESALPINIACEAE (Kattikayigida, Vathanarayana)

a) Description  
The characters are similar to *D. elata* L. except crimson coloured petals, petals crimson, the claws yellow, the upper petal white streaked with red and yellow; leaflets 25 in long; pod up to 2.5 ft. long and 2 in. broad. Common avenue tree found throughout the district. Flowering and fruiting during May.

b) Ethnobotanical Information  
The Nayaka tribals use honey based leaf paste for the treatment of cough and inflammation in stomach. Flowers are used for decoration purpose at tribals marriage ceremonies.

c) Information from literature  
Leaves are used in constipation, inflammations, arthritis and hemiplegia (Yoganarasimhan, 2000).

109. *Dendrocalamus strictus* (Roxb.) Nees  
POACEAE (Bidiru)

a) Description  
Unarmed shrubs or small trees; culm erect from branching root stock. Culm-sheath triangular, with brown shining hairs on the back; ligule narrow minutely hairy; blade trigonous, acute and pungent at tip, hairy. Blade narrow, small, deciduous; sheath glabrous with narrow ligule. Inflorescence a compound panicle; spikelets in congested heads, ovate, acute, few flowered, usually bisexual. Empty glumes at base, 2-3, many-nerved, ovate, acute or mucronate. Lemma like glumes; palea acute, truncate or emarginate or cleft at tip; those of lower flowers keeled and ciliate of upper rounded and glabrous. Lodicules 0; stamens 6; style usually hairy; stigma single. Common in cultivated fields. Flowering and fruiting during once in its life time.
b) Ethnobotanical information
The Kadugolla tribals employ the leaves, which are ground with rock salt and mixed with hot water to given orally for cows, buffaloes to expel foetus.

c) Information from literature
The tribals of Rajasthan use the decoction of leaves to clear the uterus (Singh and Pandey, 1998) and the young shoots are in use as pickles or vegetables (Borthakur, 1996).

110. *Dendroptoe falcata* (L. f.) Etting
LORANTHACEAE (Badanike, Sigare badanike)

a) Description
Stem terete. Leaves opposite, ovate to lanceolate, acute, cordate-amplexicaul to cuneate at base. Bracts lateral, inflorescence an axillary or terminal raceme. Flowers regular, subtended by one bract. Calyx usually reduced to a rim or absent. Corolla tube long, green, sometimes red; 5-lobed, tube somewhat dilated; tube not split on one side; but clavate; lobes reflexed from the narrowed point. Staminal filaments coherent to the corolla, later free. Stamens as many as petals, epipetalous, opposite to lobes. Ovary inferior, 1-locular; ovule 1, on distinct, style 1; stigma usually capitate. Fruit a 1-seeded indehiscent berry or drupe. Common, parasite on *Terminalia butea* and *Bauhinia*. Flowering and fruiting during March to November.

b) Ethnobotanical information
The Budlbudike and Koracha tribals use the cow milk based extract with adjuvants like candy sugar and asbestos for menstrual disorders in women.

c) Information from literature
Juice of the plant is taken orally to cure rheumatism, dropsy (Singh and Pandey, 1998). Bark as narcotic, astringent, used in menstrual disorders and asthma (Yoganarasimhan, 2000). Leaf juice is applied to heal up the wounds (Saxena et al., 1988).
11. *Dichrostachys cinerea* W. & A.
MIMOSACEAE (Vaduvarada gida)

a) Description
A thorny shrub or small tree. Leaves bipinnate; leaflets usually very small and pubescent; stipules lanceolate or subulate. Flowers in cylindric peduncled spikes on short axillary branchlets, the upper flowers bisexual, the lower ones neutor, with pink filiform staminodes. Calyx campanulate, shortly toothed. Petals 5, valvate, connate below. Stamens 10, free exerted; anthers ending in a stalked glands. Ovary subsessile, many-ovuled; style filiform, stigma terminal truncate. Pod linear, compressed, twisted up when ripe. Seeds obovate, compressed. Common in scrub forests and rocky areas. Flowering and fruiting during February to April.

b) Ethnobotanical information
The Lambani tribals employ the root powder and taken orally with hot water to induce hunger and to cure arthritis. The Nayaka tribals employ the fresh water-based root extract, orally for lithin triptic. The tendered shoot tips are squeezed and the juice is dropped into eye for ophthalmic disorders.

c) Information from literature
Roots are used in rheumatism and tender shoots bruised in opthalmia (Yoganarasimhan, 2000).

ASTERACEAE

a) Description
Woody perennial herb or under shrub. Leaves alternate, entire. Oblong, lanceolate, white-woody beneath, hairy above. Heads solitary, sessile homogenous, discoid; involucral bracts many-seriate, spinescent outer shorter, inner ones longer, broader, scarious along margin, all ending in long scabrid spines; receptacle flat, glabrous, pitted; florets white, outer flowers sometimes female. Corolla tubular in both, in female 2-3 lobed. Anthers with a bearded tail at base. Style arms obtuse. Achenes 10 ribbed, densely silky-villous, tipped by many feathery pappus hairs; outer pappus hairs sometimes scaly. Common in plains and on drylands. Flowering and fruiting during August to February.
b) Ethnobotanical information
The Kadugollas and Lambani tribals use the squeezed juice of the whole plant with jaggery to be given orally to treat apositia and abdominal pain. The water-based plant decoction, pepper and garlic powder and a pinch of turmeric powder is taken orally for fever.

c) Information from literature
Root decoction is administered to drive the post-delivery fever, whereas the roots have been used as toothbrush to cure pyorrhoea (Singh and Pandey, 1998).

113. *Dioscorea pentaphylla* L.
DINERACTEA (Kadugumbala)

a) Description
Perennial climbers, stem twining to left. Root stock tuberous. Leaves 3-5 foliate (rarely unifoliate at apex); leaflets digitate, ovate-elliptic, oblique at base. Bulbils sometimes present in the leaf axils. Male spikes in axillary or terminal panicles, 2-3 nate, white tomentose. Stamens 6, 3-alternating with the 3-stamnodes. Female racemes 2-3 nate, on the spike axis pistil hairy outside. Capsule more than 3 cm long, seeds winged only at base. Occasional in dry deciduous forests. Flowering and fruiting during July to January.

b) Ethnobotanical information
The Kadugolla tribals employ the tubers which are made into paste and applied externally for swellings due to poisonous worm bite.

c) Information from literature
The roots are edible with or without boiling (Radhakrishnan *et al.*, 1996; Sahu, 1996; Bedi, 1978; Borthakur, 1996 and Singh, 1996).

EBENACEAE (Thoopremara, Beediele)

a) Description
Shrubs or trees; twigs softly hairy. Leaves alternate, simple, ovate-elliptic, acute, rounded-marginate, sometimes cuneate, pubescent beneath; venation distinct. Flowers regular, usually unisexual, 4-5 merous. Male flowers in
cyms; female solitary. Calyx lobes of 5-acute lobes in male. Female flowers, corolla lobes 5, densely hairy without, cordate, broadly two-winged. Stamens 10; staminodes often present anthers not awned. Ovary globose, 4-locular, fruit globose, glabrous with age. Common in dry-deciduous forests. Flowering and fruiting during March to August.

b) Ethnobotanical information
The Lambani tribals employ the root bark decoction with palm jaggary to be taken orally for stomach pain in women due to menstruation period. The leaves are dried and sold in the market for wrapping beedies, often Lambani tribals wrap local beedies.

c) Information from literature
The flowers are used in various ailments such as urinary disorders, skin diseases and raw fruit juice against wound healing (Kothari and Londhe, 1999).

115. Diospyros montana Roxb.
EBENACEAE (Jagalagantimara, Kalanandi)
a) Description
Shrubs or trees; twigs hairy. Leaves alternate, simple, ovate-elliptic, acute, cuneate-cordate, pubescent beneath; venation distinct. Flowers regular, usually unisexual, 4-5 merous. Male flowers in cyms, female solitary. Calyx lobes 4, rounded in both male and female; corolla lobes 5, ovate, acute sparsely pubescent. Stamens 15; staminodes usually present in female anthers awned. Ovary 2-locular. Fruit berry, glabrous. Common in plains. The flowering and fruiting during March to August.

b) Ethnobotanical information
The Kadugolla and Nayaka tribals use stem-bark decoction mixed with candy sugar to be taken orally for leucorrhoea in women. The tribals as well as local peoples believe this plant or any part of this plant taken inside the home will destroy the prosperity and peace of the family.

c) Information from literature
Seed oil used in dysentery and diarrhoea (Yoganarasimhan, 2000).
116. *Dipteracanthus prostratus* (Poir.) Nees
ACANTHACEAE

a) **Description**

b) **Ethnobotanical information**
At Bukkapatna, the traditional healer use the whole plant, the plant is pounded with lemon juice to prepare cubes and shade dried, tablet is given orally with the lemon juice as an antidote for snakebite. Avoid water during treatment. The same tablet is also given to cure rat bite.

c) **Information from literature**
Nil

117. *Dodonaea viscosa* N. Jacq.
SAPINDACEAE (Bandhregida, andharu)

a) **Description**
Shrubs. Leaves simple, elliptic-oblong or obovate, shining, subcoriaceous. Inflorescence shorter than leaves. Flowers polygamo-dioecious or unisexual, regular. Sepals 2-5. Petals absent. Disc absent in male, small in female flowers. Stamens usually 8, subsessile, glabrous. Ovary 3-6 locular; ovules 2 per locule, ascending at both apices, valves acute or winged. Fairly common in scrub forests, rocky plains. Flowering and fruiting during all seasons.

b) **Ethnobotanical information**
The traditional healer employ the leaves powder with the powder of *Cissus quadrangularis* stem and mix with the yolk of hens egg to prepare paste and apply externally for bone fractures. The Lambani tribals employ the shade
dried leaf powder for wound healing. The Jogi tribals use leaf powder with hot water orally for fever.

c) Information from literature
Leaves used as febrifuge and wound healing (Yoganarasimhan, 2000). The decoction is taken to suppress myalgia. Its branches are good dentifrice (Dharma Chandra Kumar, 1997).
118. *Echinops echinatus* Roxb.

**ASTERACEAE (Brahmadande)**

a) **Description**

Woody annual herbs. Leaves spinous on margin and midrib, lanceolate, amplexicaul pinnatisect with crenations and lobes ending on sharp spines, white-wooly below. Head densely bearded. Florets white, one flowered (discoid), collected into terminal compound heads; involucre oblong; bracts many-seriate, the outer shorter, the middle often spinous, the inner longer; receptacle minute. Anthers usually with a fimbriate tail. Achenes 5-angled, elongate, glabrous. In open places, along roadsides usually in dry sandy areas. Flowering and fruiting during February to March.

b) **Ethnobotanical information**

The Kadugolla and Jogi tribals use the root with the *Butea monosperma* bark, leaf, root, flower, and fruits (panchanga) are powdered to be taken orally with candy sugar and asbestos to treat menstrual disorders in women. The Lambani tribals use the honey based root extract for the treatment of fever and indigestion. The root paste is mixed with common salt to apply externally on abscess to burst open and cure early. The Koracha tribals use root paste with sesame oil to apply externally on warts, and destroy maggots and lice in animals.

All tribals and traditional healers use the eastward root, and is tied around the waist of patient suffering from waist sprain and chanting some mantra and just push the patient, automatically the person will move far-off distances and relieved of sprain.

c) **Information from literature**

The root powder is being used to relieve the pain in bones (Saxena, 1986), for urinary disorders, bronchitis, snakebite and scorpion sting (Kothari and Londhe, 1999), cough, hysteria, dyspepsia and seminal debility, sexual vigour and easy delivery (Singh and Pandey, 1998). The fresh juice of the whole plant is effective against jaundice (Raju Goel et al., 1999; Surayanarayana, 1999; Nayaka and Choudhury, 1999). Leaves and inflorescence to induce fertility (Singh and Pandey, 1998).
ASTERACEAE (Garugada soppu)

a) Description
Creeping and ascending herbs; stem hairy. Leaves opposite, sessile, linear-oblong, sub-entire, with thick based white hairs. Heads few to many flowered, not fascicled, distinctly peduncled, not subtended by a floral leaves; florets white. Involucre cupular, bracts biseriate with the outer layer; receptacle flat, paleaceous. Outer florets many, female. Anthers obtuse below. Style arms longer in female. Achenes in female florets 3-angled, in bisexual 4-angled, oblong, narrowed below, truncate above, tipped by hairy rim, glabrous; pappus zero. Common in plains and in open wet situations. Flowering and fruiting during all seasons.

b) Ethnobotanical information
The Budibudike tribals, drops the juice of leaves into nostrils as an antidote for snakebite. The leaves are (shade dried), powdered with black pepper in equal proportion to be taken orally with buttermilk to cure alopecia and indigestion by Kadugolla tribes. The Koracha tribals apply the leaf paste on skin to treat skin eruption. The leaf juice with sesame oil is applied on hair, as a hair dye and also to promote its growth.

c) Information from literature
The leaf juice against dysentery (Girach, 1996), alopecia (Saini, 1996), jaundice, indigestion and to increase appetite (Viswanathan and Singh, 1996), with coconut oil for the good growth of hair and it is a good source as a tonic, deobstruent, against hepatic and spleen enlargement (Datta and Banerjee, 1978). The whole plant against bronchitis and asthma (Pandit et al., 1996) and tattooing (Datta and Banerjee, 1978). The root extract is used to control dysentery (Rama and Saha, 1998).

120. *Embelia tajarlam* Cottam DC.
MYRSINACEAE (Amti, Choladhanga)

a) Description
Deciduous erect shrubs or small trees. Leaves eglandular, petioled; ovate-ovobate, acute-acuminate, cuneate, glabrous beneath. Racemes linear,

Ethnobotanical information
The Kadugolla tribals employ the stem bark with blue vitriol and brimstone, further, it is mixed with the fat oil of pig to apply externally for foot and mouth disease (Aphthae) in cattles.

Information from literature
Kothari and Moorthy (1966) reported the use of roots in snakebite.

*Emilla sonchifolia* (L.) DC. ex. Wight
ASTERACEAE (Elikivi soppu)

Description
Erect herb. Leaves crenate; well developed lower leaves lyrate or with narrow base and triangular to orbicular terminal segment; upper leaves lanceolate, semiamplexicaul. Involucre equaling the florets. Heads solitary or few, corymbose, peduncled, discoid; corolla long. Anthers obtuse below, prolonged above. Style arms glabrous, appendages penicillate. Pappus abundant, capillary. Achenes narrowly oblong, with 5 open to almost closed internally puberulent grooves; outer achenes fertile and inner ones usually sterile. Common weed in gardens and moist soils of open places. Flowering and fruiting during August to December.

Ethnobotanical information
The Koracha tribals use the water-based decoction of the plant, 3-4 drops are dropped into eye to treat opthalmia and taken internally to destroy tapeworms in abdomen (stomach). The Budibudike tribals use the fresh leaf extract with honey to cure cough. The leaves are ground with caustic potash to apply externally to treat swellings in feet.

b) Ethnobotanical information
The Kadugolla tribals employ the stem bark with blue vitriol and brimstone, further, it is mixed with the fat oil of pig to apply externally for foot and mouth disease (Aphthae) in cattles.

c) Information from literature
Kothari and Moorthy (1966) reported the use of roots in snakebite.

121. *Emilia sonchifolia* (L.) DC. ex. Wight
ASTERACEAE (Elikivi-soppu)

a) Description
Erect herb. Leaves crenate; well developed lower leaves lyrate or with narrow base and triangular to orbicular terminal segment; upper leaves lanceolate, semiamplexicaul. Involucre equaling the florets. Heads solitary or few, corymbose, peduncled, discoid; corolla long. Anthers obtuse below, prolonged above. Style arms glabrous, appendages penicillate. Pappus abundant, capillary. Achenes narrowly oblong, with 5 open to almost closed internally puberulent grooves; outer achenes fertile and inner ones usually sterile. Common weed in gardens and moist soils of open places. Flowering and fruiting during August to December.

b) Ethnobotanical information
The Koracha tribals use the water-based decoction of the plant, 3-4 drops are dropped into eye to treat opthalmia and taken internally to destroy tapeworms in abdomen (stomach). The Budlbudlke tribals use the fresh leaf extract with honey to cure cough. The leaves are ground with caustic potash to apply externally to treat swellings in feet.
the laterals. Inflorescence a raceme; terminal; bracts and bracteoles ovate, small, caducous. Calyx tubular slightly bilipped, lobes spreading. Corolla 5 scarlet-red; standard large, ovate-oblong. Fruit a pod, dull brown; seeds reniform. Occasional in forests. Flowering and fruiting during January to February.

b) Ethnobotanical information

The Nayaka tribals use fresh leaves, which are boiled with water and eaten; one or two boiled leaves are made into paste and poultice on nipples as galactagogue in milk-fed mothers. The Lambani tribals employ the paste of fresh leaves and apply externally to destroy worms in wounds and also heal-up early. The Koracha tribals employ the hand squeezed juice with honey taken orally as anthelmintic.

c) Information from literature

NIL


ERETHROXYLACEAE (Javadaregida, Chambalike)

a) Description

Shrubs. Leaves alternate; sometimes fascicled on short shoots; obovate, rounded emarginate, drying glaucous brown-below; stipules emarginate. Inflorescence of solitary fascicles, sometimes of solitary flowers. Flowers bisexual, regular, pedicel thickened near tip with a pair of bracteoles at base. Sepals 5, shortly fused, persistent; lobes imbricate. Petals 5, white with an emarginate, erect ligule attached to the tip of the claw. Stamens 10, monoadelphous. Ovary superior, 3-locular (usually 1 locule only fertile); ovules 1-2 in each, pendulous; styles as many as locules, basally connate; stigma capitate. Fruit 1-celled, 1-seeded drupe, cylindric, smooth, tipped by persistent styles. Common in open dry hilly tracts and scrub jungles. Flowering and fruiting during May to December.

b) Ethnobotanical information

The root is ground with the root of *Plumbago zeylanica* and the paste is given orally with jaggary for stomach problems by Kadugolla and Koracha tribals. The Jogi and Nayaka tribals use the stem bark powder with honey for
the laterals. Inflorescence a raceme; terminal; bracts and bracteoles ovate, small, caducous. Calyx tubular slightly bilipped, lobes spreading. Corolla 5 scarlet-red; standard large, ovate-oblong. Fruit a pod, dull brown; seeds reniform. Occasional in forests. Flowering and fruiting during January to February.

Ethnobotanical information
The Nayaka tribals use fresh leaves, which are boiled with water and eaten; one or two boiled leaves are made into paste and poultice on nipples as galactagogue in milk-fed mothers. The Lambani tribals employ the paste of fresh leaves and apply externally to destroy worms in wounds and also heal-up early. The Koracha tribals employ the hand squeezed juice with honey taken orally as anthelmintic.

Information from literature
NIL

**Erythroxyllum monogynum** Roxb.
**ERYTHROXYLACEAE** (Javadaregida, Chambalike)

Description
Shrubs. Leaves alternate; sometimes fascicled on short shoots; obovate, rounded emarginate, drying glaucous brown-below; stipules emarginate. Inflorescence of solitary fascicles, sometimes of solitary flowers. Flowers bisexual, regular, pedicel thickened near tip with a pair of bracteoles at base. Sepals 5, shortly fused, persistent; lobes imbricate. Petals 5, white with an emarginate, erect ligule attached to the tip of the claw. Stamens 10, monoadelphous. Ovary superior, 3-locular (usually 1 locule only fertile); ovules 1-2 in each, pendulous; styles as many as locules, basally connate; stigma capitate. Fruit 1-celled, 1-seeded drupe, cylindric, smooth, tipped by persistent styles. Common in open dry hilly tracts and scrub jungles. Flowering and fruiting during May to December.

Ethnobotanical information
The root is ground with the root of *Plumbago zeylanica* and the paste is given orally with jaggary for stomach problems by Kadugolla and Koracha tribals. The Jogl and Nayaka tribals use the stem bark powder with honey for
EUPHORBIACEAE (Bedhi soppu)

a) Description
Erect, simple or branched herb; stem cylindrical, hallow, fleshy. Leaves opposite, simple, broadly ovate, entire acute; stipules small scale like. Inflorescence a terminal cyme; involucre cup-like, mouth fimbriate, reddish brown. Ovary 3-celled, 3 lobed, ovules solitary on each cell; styles 3, connate or free to the base, branched; stigma capitate. Fruit a capsule dehisces into single seeded cocci; seeds black, sub-globose. Common in plains, especially in moist soil. Flowering and fruiting during June to September.

b) Ethnobotanical information
The Jogi tribals employ the leaf juice with honey as a purgative and to cure abdominal pain.

c) Information from literature
Henry *et al.* (1996), reported that Soliga tribes consume leaf juice to cure stomach disorders.

127. *Euphorbia tirucalli* L.
EUPHORBIACEAE (Kolukalli, Kalii)

a) Description
Trees or shrubs. Stem terete, green, cladode. Leaves linear, oblong, narrow, thick, scaly; early caducous. Not seen in flowers and fruits; leaves are seen only in the rainy season. Common hedge plant.

b) Ethnobotanical information
The Jogi tribals apply latex externally on swellings due to injuries and warmed with naturally heated quartz rock to relieve pain. The Kadugolla tribals employ the scaly leaves squashed with a pinch of common salt to apply externally as an antidote for scorpion sting and boils on body. The tribals believe that the branches of the cladodes are hang just inside the house to expel evil spirits and also attract mosquitoes.

EUPHORBIACEAE (Bedhi soppu)

a) **Description**
Erect, simple or branched herb; stem cylindrical, hallow, fleshy. Leaves opposite, simple, broadly ovate, entire acute; stipules small scale like. Inflorescence a terminal cyme; involucre cup-like, mouth fimbriate, reddish brown. Ovary 3-celled, 3 lobed, ovules solitary on each cell; styles 3, connate or free to the base, branched; stigma capitate. Fruit a capsule dehisces into single seeded cocci; seeds black, sub-globose. Common in plains, especially in moist soil. Flowering and fruiting during June to September.

b) **Ethnobotanical information**
The JogI tribals employ the leaf juice with honey as a purgative and to cure abdominal pain.

c) **Information from literature**
Henry *et al.* (1998), reported that Soliga tribes consume leaf juice to cure stomach disorders.

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127. *Euphorbia tirucalli* L.

EUPHORBIACEAE (Kolukalli, Kalli)

a) **Description**
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129. *Ficus benghalensis*

MORACEAE (Ailadamara)

a) **Description**

Large tree with numerous aerial roots, sometimes spreading widely. Petiole 2–3 cm long; leaf blade elliptic-ovate-lanceolate, obtuse at apex, rounded at base, glabrescent, coriaceous. Lateral nerves less than 6 pairs, distinct from smaller nerves (Figs in axillary pairs, sessile, globular, silky-pubescent, bright red when ripe; basal bracts round, well developed). Inflorescence a hypanthodium, variously arranged; receptacle flask shaped, sessile subtended by 3 bracts, provided with a terminal mouth. Flowers inside the fig, unisexual, numerous, minute, sessile or pedicelled, of 4 kinds (staminate, pistillate, gall and nectar) often intermixed with scales and hairs, all the 4 types occur in the same receptacle. Perianth segments 2-6, connate, stamens 1-2, rarely more, with ovoid 2-celled anthers. Staminodes absent in pistillate flowers. Ovary sessile; style lateral. Fruit a fleshy synonomy of tiny drupes or achenes. Fairly common across plains along roadsides. Flowering and fruiting during December to June.

b) **Ethnobotanical information**

The Kadugolla tribes and traditional healers employ the tendered prop roots which are ground with pepper, a piece of garlic and clove, is mixed with buttermilk to be taken orally for dysentery, rheumatism, lumbago and aphrodisiac (Singh and Pandey, 1998).

c) **Information from literature**

The latex is used in rheumatic pains (Kothari and Londhe, 1999). Ash of the leaves with karanj oil (Pongamia oil) against eczema (Pandit et al., 1996). Decoction of the bark is used as a mouth wash against pyorrhoea (Satapathy and Brahman 1996). The prop roots with curds for better health and to enhance memory (Satapathy and Brahman, 1996). Prop root powder against syphilis (Gupta et al., 1999) and to prevent vomiting (Kothari and Londhe, 1999; Khanna and Ramesh Kumar, 2000).
129. *Ficus benghalensis*
MORACEAE (Aśūdamara)

a) **Description**

Large tree with numerous aerial roots, sometimes spreading widely. Petiole 2–3 cm long; leaf blade elliptic-ovate-lanceolate, obtuse at apex, rounded at base, glabrescent, coriaceous. Lateral nerves less than 6 pairs, distinct from smaller nerves (Figs in axillary pairs, sessile, globular, silky-pubescent, bright red when ripe; basal bracts round, well developed). Inflorescence a hypanthodium, variously arranged; receptacle flask shaped, sessile subtended by 3 bracts, provided with a terminal mouth. Flowers inside the fig, unisexual, numerous, minute, sessile or pedicelled, of 4 kinds (staminate, pistillate, gall and nectar) often intermixed with scales and hairs, all the 4 types occurs in the same receptacle. Perianth segments 2-6, connate, stamens 1-2, rarely more, with ovoid 2-celled anthers. Staminodes absent in pistillate flowers. Ovary sessile; style lateral. Fruit a fleshy synconium of tiny drupes or achenes. Fairly common across plains along roadsides. Flowering and fruiting during December to June.

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c) **Information from literature**

The latex is used in rheumatic pains (Kothari and Londhe, 1999). Ash of the leaves with karanj oil (Pongamia oil) against eczema (Pandit *et al.*, 1996). Decoction of the bark is used as a mouth wash against pyorrhoea (Satapathy and Brahman 1996). The prop roots with curds for better health and to enhance memory (Satapathy and Brahman, 1996). Prop root powder against syphilis (Gupta *et al.*, 1999) and to prevent vomiting (Kothari and Londhe, 1999; Khanna and Ramesh Kumar, 2000).
130. *Ficus racemosa* L.
MORACEAE (Hattimara)

a) Description
Small or large trees with few aerial roots. Petiole 3 cm long; leaf blade elliptic-lanceolate, obtuse or acute at apex and base, chartaceous, glabrous, triplinerved; lateral nerved 5-6 pairs. Figs on short, warted, tubercled, leafless branchlets, peduncled, obovoid, pubescent, reddish when ripe; peduncle 1 cm long; bracts lateral, at the middle of the peduncle, small. Common throughout the district. The flowering and fruiting during August to December.

b) Ethnobotanical information
The Koracha tribals employ the latex with jaggary to alleviate vomiting sensation and to cure fever. The bark is ground and warmed to take orally with curds for dysentery in Nayaka tribals. The fruits are edible. The twigs are used at the time of puberty ceremony of tribal girls and marriage ceremony of local peoples.

c) Information from literature
The leaf juice is used against paralysis (Singh, 1996) and to prevent blood dysentery in cattle (Mishra, Jha and Jha, 1996). Soliga and Kurumbar tribals use the extract of the bark to promote fertility in women (Henry et al., 1996). Where the roots are used in dysentery and root sap for diabetes, and as carminative (Kothari and Rao, 1999), in leucorrhoea (Khanna and Ramesh Kumar, 2000), and the ripe fruits as aphrodisiac (Kshirasagar and Singh, 2000).

131. *Ficus religiosa* L.
MORACEAE (Āralimara)

a) Description
Large trees, with or without aerial roots. Petiole slender to 8 cm long; blade slightly repand along the margin, broadly ovate, or suborbicular, caudate, truncate-acute at base, glabrous, chartaceous, with 5-7 basal nerves and 8-10 pairs of lateral nerves; cusp 6 cm long. Figs in axillary pairs, sessile, tomentose, when young, dark purple when ripe basal bracts distinct. Fairly
common along the road across plains, usually cultivated near temples. Flowering and fruiting during March to May.

b) Ethnobotanical information

The Lambani tribals employ the stem bark which is burnt and the ash is taken orally with water to stop vomiting; and the bark fibre is ground with *phyle nudiflora*, ginger and cumin seeds with curd taken orally to cure fever. The Kadugolla tribals employ the latex and apply externally to treat swellings and bleeding of wounds. The Jogl tribal use the leaves, which are ground with jaggary and taken orally to cure abdominal pain. The tree is often worshipped by tribals as well as local peoples.

c) Information from literature

The latex is applied over boils for suppression (Khann and Ramesh Kumar, 2000). The stem bark paste is used in aphthae (Saini, 1996), bark decoction against foot and mouth disease of a ungulates (Mishra, Jha and Jha, 1996) and bark ash for asthma and itches (Kothari and Londhe, 1999) and the bark decoction against typhoid and leaves to cure pneumonia (Singh and Pandey, 1998). The leaves and the receptacle as contraceptive (Singh and Anwar Ali, 1996). The leaves are being used for the treatment of bronchitis and to bring the cow to heat period (Mishra, Jha and Jha, 1996). Fruit as a laxative and to improve voice (Kothari and Londhe, 1999).

132. *Flaveria trinervia* (Spreng.) C. Mohr (*Flaveria australasica* Hooker)

ASTERACEAE (Kaadu sabhaseege soppu)

a) Description

Annual herbs; stem terete, grooved, glabrous. Leaves oblong spatulate, sometimes obovate, subcrenate, palmately 3-ribbed. Heads few-flowered, clustered, sessile, subtended by floral leaves; florets yellow. Involucre of 2-4 plicate bracts; receptacle naked. Anther obtuse. Style arms slender, truncate. Achenes ribbed, glabrous; pappus 0. Common in plains, open places, and in swampy soil amongst grasses. Flowering and fruiting during May to September.
b) Ethnobotanical information
The Komcha tribals administered the leaf juice of this plant with cow milk to treat jaundice in children. The leaf paste used externally to cure rashes and itches. The whole plant is cooked and used as leafy vegetables by local people and tribals.

c) Information from literature
The leaf juice is administered orally to treat jaundice (Yoganarasimhan, 2000).

133. *Flemingia strobilifera* (L.) Aiton
FABACEAE {Bundara (H)}

a) Description
An erect branching shrub. Leaves unifolliate; leaflets lanceolate, lateral nerves of leaflets close, usually more than 8 pairs. Flowers in axillary and terminal distichous racemes of small cymes, each of which is hidden within a large folded persistent cordate floral leaf; the cymes with many bracteoles. Flowers 2-3 inch long, rachis of inflorescence flexuose. Calyx tube short, teeth subequal or the lowest lanceolate. Corolla little or not exerted; standard obovate or orbicular, auricled at base; wings obliquely oblong or obovate, sometimes short, adnate to the obtuse or slightly rostrate keel. Stamens diadelphous, anthers uniform. Ovary subsessile; short, 2-ovuled; style filiform or thickened above; stigma capitate. Pod small, oblique, turgid, usually 2-seeded. Seeds orbicular, estrophiolate. Occasional in dry deciduous forests. Flowering and fruiting during November to January.

b) Ethnobotanical information
The Lambanl tribals employ the root decoction orally with jaggary to induce sleep and relieve body ache/pain. The Kadugolla tribals employ the leaf juice orally to destroy tapeworms in stomach.

c) Information from literature
The root powder is given against pre and post-natal leucorrhoea (Saxena, 1988) and in epilepsy and hysteria and as a sedative and vermifuge (Yoganarasimhan, 2000).
**134. Gardenia resinifera**

Rubiaceae (Kadubikke)

*a) Description*

Unarmed shrubs or small trees, covered with yellow resin. Leaves opposite or ternate, subsessile, coriaceous; obovate, obtuse, cuneate-rounded, nerves 10-20 pairs; nervules parallel. Inflorescence a cyme, flowers solitary. Calyx lobes 5. Corolla yellow with age, 5-lobed; tube 3-4 cm long. Stamens 5, inserted on the throat of corolla; filaments short. Ovary one locular with numerous ovules on 2-placentas. Fruit berry, elliptic, woody. Seeds compressed. Frequent in scrub jungles and forests. Flowering and fruiting during January to June.

*b) Ethnobotanical information*

The JogI tribals use the fruit pulp juice with the combination of sugar, cardamom and ginger taken daily in empty stomach to cure diarrhoea and abdominal pain. The fruits are edible, eaten by local people as well as tribals. In Kadugolla tribals the leaves are ground with salomonic (NH₄Cl) to be given orally with buttermilk to cure anthrax in cattle.

*c) Information from literature*

The resin is used to cure cough, fever, headache (Balasubramian and Prasad, 1996).

**135. Gisekia phameceoides L.**

Aizoaceae (Maladesale soppu)

*a) Description*

A diffuse usually prostrate herb. Leaves opposite or falsely whorled, fleshy, spatulate, abounding in raphides; stipules 0. Flowers small, hermaphrodite or polygamous, in axillary fascicles or short cymes. Sepals 5, ovate, herbaceous with membranous margins, many white raphides. Petals 0. Stamens 5-15, hypogynous; filaments dilated at the base; anthers oblong. Carpels usually 5, distinct, sessile on a small torus, 1-celled; ovules one in each cell, basal; style simple. Fruit of 5 free, membranous, white papillos, indehiscent, 1-seeded carpels and black minutely pitted compressed, subreniform seeds. Rare, collected only from sandy, cultivated fields. Flowering and fruiting during May to September.
b) Ethnobotanical information
All tribals and local people use as leafy vegetables.

Information from literature
The plants are used as aperient and anthelmintic (Yoganarasimhan, 2000), and to expel the roundworms (Singh and Pandey, 1998).

136. *Gliricidia sepium* (Jacq.) Kunth
FABACEAE (Kaaduthangadi)

a) Description
Deciduous tree. Leaves alternate, grey pubescent when young, stipules absent; leaflets, opposite, 12-14 pairs, elliptic-ovate, entire, subacute, base unequal, strongly odorous. Inflorescence a branched raceme, in axils of fallen leaves. Calyx cup-shaped, glabrous, truncate. Corolla much exserted, rosy white; standard sub-orbicular, narrow at base, wings narrow stamens diadelphous. Fruit a pod, thick, woody narrow at both ends, slightly constricted between the seeds. Common, cultivated as an hedge plant and bunds of cultivated fields. Flowering and fruiting during February.

b) Ethnobotanical information
The Kadugolla, Lambani and Jogi tribals make use of the leaves, made into paste, mixed with cooked rice to destroy rats (rodenticide) in the cultivated fields. The plant is also used as green manure.

c) Information from literature
The leaves, stem, and bark against psoriasis and headache (Rajendran and Mehrota, 1996).

137. *Gloriosa superba* L.
LILIACEAE (Karadikannina gedde, Kolikutumanagedde, Agnishikhe, Akkatangiballi)

a) Description
Herbaceous climber with tuberous roots. Leaves subsessile, cauline, alternate simple, ending in tendrils. Oblong to ovate-lanceolate. Flowers solitary, axillary. Perianth segments free, red and orange, strongly undulate. Stamens spreading equaling perianth segments, with dorsifixed anthers. Ovary
superior; style long, trid, bent at base at right angles to ovary axis. Stigma introrse. Fruit, green, smooth, oblong; loculicidal, many seeded, capsule. Occasionally found in scurb jungles and in plains. Flowering and fruiting during August to September.

b) Ethnobotanical information
The Jogi tribals make use of the tuberous root, which is made into fine paste and applied externally as an antidote for snakebite and scorpion sting. In Kadugolla tribals the leaves are ground without water and the paste is applied to hair to destroy lice. The tuber is given orally in small doses to cattle as anthelmintic. [The tuber is highly poisonous. The fresh tuber is washed and sliced into small pieces, then soaked in a salt-mixed buttermilk for 4-5 days after that, the tuber is sun-dried till the water content is removed completely, then collect it to use for a small dose].

c) Information from literature
Saini (1996), reported the use of tuber to cure jaundice, Nayak and Choudhury (1999), reported the use as a potential medicine against promoting labour pain, as a abortifacient, leprosy, expulsion of placenta. Kothari and Londhe (1999), reported the use in scabies, piles, leprosy, neurological pains, snakebites and the seeds are used in the treatment of cancer. Yoganarasimhan (2000), in addition to the above, reported the use against rheumatism and gout.

138. **Glossocardia bosvallea** (L. f.) DC.
ASTERACEAE (Parapataka)

a) Description
b) Ethnobotanical information
Kadugolla tribals prepare tablets of whole plant with candy sugar and asbestos to be given orally to treat supressed mensus, leucorrhage and haemorrhage.

c) Information from literature
Used as an emmenagogue (Yoganarasimhan, 2000).

139. *Gmelina arbores* Roxb.
VERBENACEAE (Shivanimara, Shivani, Guludumara)

a) Description
Deciduous unarmed trees; young parts tomentose. Leaf venation subpalmate, ribbed. Petiole 7 cm long; blade entire, ovate, acuminate, sub-cordate and slightly decurrent at base, chartaceous. Inflorescence cymose, centrifugal. Flowers irregular, pedicelled, pedicels more than 5 mm. Calyx lobes 5; with 2-7 glands on the anterior part. Corolla brownish yellow, pubescent; limb distinctly 2-lipped. Stamens 4, didynamous, slightly exserted from the corolla tube; filaments with glandular hairs; anthers attached towards apex. Ovary 4-locular; stigma sub entire. Drupe fleshy, obovate turning yellow with age. Common avenue tree often cultivated in gardens. Flowering and fruiting during March to May.

b) Ethnobotanical information
The Budibudlke tribals employ the leaves ground into paste and applied with Pongamia oil externally for bedsores. The Korach tribals employ the leaves, which are boiled with water to take bath for 5-10 days for itches and skin rashes.

c) Information from literature
The fruits are edible (Bedi, 1978 and Singh and Pandey, 1998). The decoction of the root is used in catarrh of bladder, as a tonic, stomachic and as laxative (Tribedi *et al*., 1982).
140. *Gmelina asiatica*
VERBENACEAE (Kiru shivani, Kallu shivani)

a) Description
Shrubs, armed with axillary divaricate thorns (abortive branchlets). Leaves small, opposite, entire ovate, often irregularly lobed glabrous but glaucobent beneath with minute round glands, short petioloed. Flowers large. Calyx lobes 4; tube with large glands. Corolla bright yellow, pubescent without, tube slender. Stamens 4, didynamous, inserted below the throat, included; ovary 4-celled, the cells 1-ovuled; style slender; stigma shortly bifid. Fruit a succulent drupe. Common in the scrub forests and rocky soils. Flowering and fruiting during February to August.

b) Ethnobotanical information
The Kadugolla tribals employ the tendered shoot tips made into paste, mixed with goat milk to be taken orally for strangury. The JogI and Budibudike tribals employ the root powder, which is boiled with cow milk and taken orally with sugar in empty stomach for impotency. The Nayaka tribals employ the paste of the leaves to promote wound healing.

c) Information from literature
The roots are used in rheumatism and catarrh of bladder (Yoganarasimhan, 2000).

141. *Gymnema sylvestre* (Retz.) R. Br. ex Schultes
ASCLEPIADACEAE (Madhunashini)

a) Description
Twining shrubs with milky sap. Leaves ovate to oblong, sparsely to densaly pubescent, base rounded to cordate, apex short acuminate. Cymes corymbose lateral. Corolla pale yellow companulate; lobes imbricate, margins not revolute at anthesis; corolline cora of a fleshy projection from each sinus which is incumbent upon the exerted style apex; each projection with a decurrent base flanked by 2 rows of short stiff hair with ciliolate margins. Gynostegium elongate, without a corona. Pollinia erect from dark horny corpuscula, 2 per anther, waxy, without pellucid margins. Gynoecium of 2 superior unilocular carpels united only by the enlarged style apex. Fruit of
paired follicles. Seeds flattened comose. Common throughout the district, but in the wettest areas. Flowering and fruiting during all seasons.

b) Ethnobotanical information
The Nayaka tribals and traditional healer use the shade dried powder of leaves with water daily for the treatment of diabetes. When the leaves are chewed, one temporarily loses the taste for sweet substances.

c) Information from literature
The leaf powder is used for curing diabetes, as a diuretic and as an antidote in snake and scorpion bite (Dharma Chandra Kumar, 1997; Singh and Pandey, 1998; Yoganarasimhan, 2000). Saxena (1986) reported the use of leaf paste for corneal opacity.
142. *Hardwickia binata* Roxb.

FABACEAE (Hāsalu mara, Kamra)

**Description**

Large tree. Leaves paripinnate, leaflet 1 pair with a minute bristle between; stipules small caducous. Flowers small, numerous, in panicked racemes; bracts minute, bracteoles scale like. Calyx lobes usually 5, orbicular, petaloid, round the small basal disc, much imbricate. Petals absent. Stamens 10, alternately longer and shorter; filaments filiform; anther versatile. Ovary sessile, free, 2-ovuled; style filiform; stigma large peltate. Pod a dry 1-seeded follicle. Common in open forests and roadsides. Flowering and fruiting during June to October.

**Ethnobotanical information**

The Kadugolla tribals employ the stem bark and cut into small pieces and boiled for long time, the decoction is given orally for sheep and goats to cure dysentery.

**Information from literature**

Seeds are used in dysentery (Balasubramanian and Prasad, 1998). The decoction of the leaves as purgative and the gum in the treatment of gonorrhoea (Dharma Chandra Kumar, 1997).

143. *Helicteres isora* L.

STERCULIACEAE (Edamari)

**Description**

Arborescent shrubs, stellately tomentose. Leaves alternate, oblong-ovate, shallowly cordate and unequal, acute-acuminate at tip, crenate-serrate, 3-5 ribbed from base. Inflorescence of fascicles, sometimes a solitary flower, pedunculate, axillary. Flowers pedicelled, bisexual. Calyx brown tomentose; petals dissimilar, clawed, reflexing, glandular on the inside, red fading to grey. Receptacle produced into an elongate gynandrophere. Stamens 10 on a short staminal tube, terminating the gynandrophere, hiding the 5, inwardly placed staminodes; filament short. Pistils 5, each many-ovuled; styles 5, stigmatose at tip. Fruit of 5, often spirally twisted, many seeded follicles. Common along
roadsides and undergrowth of forests. Flowering during September to November and fruiting during December to January.

b) Ethnobotanical information

The Nayaka tribals employ the fruits, which are powdered and applied externally for healing of wounds and sores. The root paste is mixed with Guizotia oil to apply externally or to massage for treating sprain in Koracha tribals.

c) Information from literature

Fibre is obtained from the bark and stem (Dash and Misra, 1999) and the bark decoction is given to cure dysentery (Bedi, 1978). Fruit paste against relieving breast pain during lactation (Dash and Misra, 1999) and against diarrhoea, dysentery (Kothari and Rao, 1999; Pandit, 1996) and the fruit infusion with mustard oil is applied externally against ricketing in children (Tribedi et al., 1982 and Saxena et al., 1988).

144. *Heliotropium indicum* L.

**BORAGINACEAE** (Chelukondigida)

a) Description


b) Ethnobotanical information

The Koracha tribals use the poultice of the leaves externally to cure wounds and ulcers. The Lambani tribals use the water based decoction of the leaves for fever.

c) Information from literature

The leaves yield an important black colour dye and the stem contains tannins probably alkaloidal principle. The plant is astringent and bitter, having diuretic, emollient, properties. It is used locally for gum boils, sores, ulcers, wounds,
etc. A leaf decoction is used in urticaria and fevers. A root decoction, in fevers and cough and a fruit decoction in asthma, leprosy, and other diseases. The flowers are abortifacient in large doses and emmenagogue in small doses (Dutta and Banerjee, 1978).

The leaves are used in boils, ulcer, wounds and antidote for scorpion sting and seed paste against stomach ache (Kothari and Rao, 1999), against eye diseases, rheumatism and wounds (Jain and Sharma, 2000) and as a vermifuge (Iwu, 1993).

145. Hemidesmus indicus (L.) R. Br.
ASCLEPIADACEAE (Sogade beru, Sugandha phala)

a) Description
Usually twining herb with milky sap. Leaves glabrous, variable, mostly elliptic linear, long, mostly apiculate. Cymes lateral subsessile. Corolla lobes yellow to nearly brown; lobes valvate, glabrous; corolline corona of 5 fleshy lobes from below the sinuses. Staminal corona absent. Filaments free; anthers connivent by their tips over style apex. Pollen carriers obconical, doubled; pollen granular but usually adhering into masses (4 per anther). Gynoecium of 2 superior unilocular carpels united only by an enlarged style apex. Fruit a paired follicles. Seeds flattened comose. Common throughout the district. Flowering and fruiting during July to January.

b) Ethnobotanical information
The Lambani and Nayaka tribals use the cow milk based extract of the whole plant to cure stomach pain and ulcer and burning sensation in stomach. The Kadugolla tribals use the water based root extract with candy sugar to cure leucorrhoea in women. The root decoction is mixed with sugar, is used as a tonic by local people and tribals to alleviate excess of heat.

c) Information from literature
The root paste with black pepper against stomach pain, diarrhoea (Tribedi et al., 1982), root decoction against leucorrhoea (Saini, 1996) diabetes (Singh, 1996), body pain and fever (Brahman et al., 1996 and Sai Prasad Goud et al., 1999) with other adjuvants like Balanites roxburghii, Withania somnifera against impaction (Reddy and Raju, 1999), lactation (Gupt et al., 1999),
rheumatism (Khare and Khare, 1999; Samavatsar and Diwanji, 1999) and to arrest impotency (Rao et al., 1999).

146. **Hibiscus rosa-sinensis** L.
**MALVAACEAE** (Kempudāsavāla)

a) **Description**
Shrubs. Leaves alternate, simple, ovate, acuminate, serrate, glabrous, dark-green. Flowers axillary, solitary; epicalyx 6-7, linear; green, connate at base. Calyx campanulate, green; lobes triangular, acute. Corolla 5, obovate, staminal column long, lobed at apex. Ovary conical, obtuse, 5-celled; ovules many in each cell; style slender, divided at apex; lobes 5, stigma capitate, hairy; fruit a capsule. Cultivated in gardens and public parks. Flowering throughout the year.

b) **Ethnobotanical information**
The Koracha tribals employ the juice of flowers with cow milk to cure haemorrhages and fever. The Nayaka tribals employ the flowers with the coconut oil, warmed and applied externally for scrofula. In Kadugolla tribes the leaves are ground with the leaves of Ocimum sanctum and are mixed with milk, boiled to be given orally to treat flatulence in cattles, and the root is ground with buttermilk and the extract is given orally to treat mastitis in cattles.

c) **Information from literature**
Banerjee and Pal (1996), paste of young leaves with that of seeds of *Trigonella foenum-graecum* L. applied as hair wash to stop falling of hairs due to fever and other ailments. Mucilage paste of petals makes grey hair black.
Rosakutty et al. (1999), milk boiled with 10 flowers is taken to cure leucorrhoea and anaemia. The flowers are eaten raw to purify blood and check high blood pressure. Leaf paste is used as a hair shampoo to cure dandruff. Flowers boiled with coconut oil used to blacken the hair. Dharma Chandra Kumar (1997) reported the use of flower paste against swell and boils.
147. *Holarrhena antidysenterica* (Roth.) A. DC.
APOCYANACEAE (Beppale mara, Kodagasale mara)
a) Description
Shrubs or small trees. Leaves broadly ovate to elliptic, pubescent or glabrous; base rounded to obtuse; apex acuminate. Calyx with small basal glands within. Corolla white, salver form. Stamens inserted near the base of the tube; filaments short; anthers linear-oblong, free. Stigma not thickened, ovaries separate. Fruit a paired follicles, somewhat divergent; seeds comose. Common in plains. Flowers and fruits March to October.

b) Ethnobotanical information
The medicine men employ the water based decoction of the bark with honey for the treatment of dysentery. The Jogl tribals apply the latex externally around the neck to treat tonsillitis.

c) Information from literature
Bark against antidysenteric (Yoganarasimhan, 2000), diarrhoea (Mahato et al., 1996), amoebic dysentery (Gupta et al., 1999), malarial fever (Singh, 1996) and against anthrax in cattles (Sikarwar, 1998). The latex has been used to prepare instant curds (Bedl, 1978).

148. *Holoptelea integrifolia* (Roxb.) Planchon
ULMACEAE (Tapasi, Kadādri, Rasabīja)
a) Description
Deciduous trees. Leaves entire, pinninerved, with ascending side nerves; stipules lateral, scarious. Elliptic, oblong, acute, glabrous. Inflorescence fasciculate on previous years shoots. Flowers brownish. Tepals imbricate, occasionally unequal. Stamens as many as tepals with hairy anthers. Ovary stipitate, compressed, tipped by stigmatic style arms. Fruit a samara; wing membranous or chartaceous, usually reticulate. Occasionally found in dry-deciduous forests and isolated open places. Flowering and fruiting during January to March.
b) Ethnobotanical information
The Jogi tribals employ the leaves which are made to paste is applied for suppuration of boils and abscesses and heal up early. The Nayaka tribals employ the bark paste against knee joints to cure arthritis.

c) Information from literature
Leaf paste is used for suppuration of boils (Singh, 1996), leaf poultice against aching bones (Samavatsar and Diwanji, 1999) and the pills are made with Cymbopogon, black pepper and garlic bulbs to cure dysmenorrhoea and stimulate fertility (Dharma Chandra Kumar, 1997). Bark is used against tuberculosis, leprosy, polyuria and vomiting (Yoganarasimhan, 2000).

149. **Hybanthus enneaspermus** (L.) F.V. Muell.
**VIOLACEAE** (Purusharathna)

a) Description
Fruiticose, branching herbs. Leaves alternate, linear-lanceolate, shallowly crenate. Flowers pink, generally solitary, bisexual, irregular, bracteolate. Pedicel jointed near bracteoles above middle. Sepals 5, free or shortly connate, imbricate, petals 5, free, one of the petal larger and spurred clawed towards base and an obovate, broad limb above. Stamens 5; free; filaments short; anther 2-celled; connective produced into narrow, membranous appendage usually free from anther. Ovary superior, 1-locular; ovules few to many, on parietal placentation. Fruit capsule, 3-valved. Seeds striate.

Common in dry rocky sandy plains. Flowering and fruiting during July to December.

b) Ethnobotanical information
The Kadugolla tribals employ the root is boiled and given orally for abdominal pains. In Jogi tribals the whole plant is ground with the camphor and bile of ox (Gouroujan) to be given externally for sores and poultice on forehead to cure headache. The Budibudlike tribals employ the root which is mashed with hot water taken orally for 41 days for kidney disorders.

c) Information from literature
The whole plant is used against impotency (Tribedi et al., 1982 and Rajendran and Henry, 1999). Decoction of the leaves used in gonorrhoea and diabetes
(Satapathy and Brahamam, 1996). Roots are diuretic, used in urinary infections (Yoganarasimhan, 2000).

150. *Hyptis suaveolens* (L.) Poit.

**LAMIACEAE** (Kaadukamakasturi)

a) Description

Aromatic herbs. Blade ovate, obtuse, rounded at base, soft, densely hirsute beneath. Flower whorls axillary. Calyx subequally 5-toothed. Calyx throat villous; campanulate or tubular, 10-ribbed. Corolla blue, obscurely 2-lipped; upper lip 2-lobed, erect or spreading; lower lip shorter, mid lobe emarginate. Stamens decline, didynamous; anther cells confluent. Disc prominent. Ovary superior, 2-locular, seemingly 4-partite lobed, with solitary, basal ovule in each lobe; style 1, usually in depression of ovary between 4 lobes (gynobasic); stigma usually 2-fid. Fruit of 4, 1-seeded, usually erect nutlets; scar usually small and basal. Common in waste places. Flowering and fruiting during September to January.

b) Ethnobotanical information

The Kadugolla tribals make use of the juice as an external antidote for honeybee bite.

c) Information from literature

The leaf juice against conjunctivitis (Sikarwar, 1996), against migraine (Jain and Sharma, 2000) and the whole plant as a stimulant and lactogogue (Yoganarasimhan, 2000).
Indigofera tinctoria L.

FABACEAE

a) Description

Grey pubescent under shrubs. Leaves 3-to many foliolate; leaflets 11 or less, obovate-oblong. Racemes long 15-more flowered. Flowers solitary in the axil of bracts. Calyx lobes subequal. Corolla pink or red. Standard with a short claw, usually pubescent on the back; wings slightly coherent with keel; keel petals each spurred. Stamens 9+1, anthers gland-tipped. Ovary sessile 1-many ovuled; stigma often penicillate. Pod linear, slightly curved, sparsely hairy with 8-10 seeded. Common in dry rocky regions and open places. Flowering and fruiting during August.

b) Ethnobotanical information

The Lambani tribals employ the paste of leaves with a pinch of common salt to apply on boils and ulcers. The root decoction is taken orally with sugar candy to treat stranguiry in Budibudike tribes.

c) Information from literature

The root powder against cardiac, renal and hepatic dropsy (Singh and Pandey, 1998), urinary complaints and hepatitis (Yoganarasimhan, 2000) and inflammation of the liver and a nerve tonic (Deshmukh et al., 1999 and Thomas and Britto, 1999).
152. *Jasminum multiforum* (Burm. f) Andr. (=*Jasminum pubescence* Wild.)
OLEACEAE (Kakada)

a) Description
A climbing shrubs. Leaves opposite, rarely alternate, simple trifoliolate, ovate, cordate at base. Flowers usually handsome white, in dense capitate cymes. Bracts ovate, green, often absent. Calyx tube campanulate; lobes 5-9 usually linear. Corolla tube narrow, more or less elongate, corolla-lobes about 8, elliptic-oblong, acute. Stamens 2, usually included in the corolla tube; anthers oblong, connective usually produced. Ovary 2-celled; ovules 2 in each cell, attached near the base; style filiform long; stigma usually bifid. Fruit a didynamous berry or simple by suppression of one carpel. Seeds in each carpel 1; rarely 2. Common, cultivated in gardens and backyards, kitchen gardens. Flowering and fruiting during December to July.

b) Ethnobotanical information
The Nayaka tribals use the dried leaves powdered and made into paste with castor oil to apply externally to cure ulcers. The Jogi tribals use the root, which is grounded with children's urine and the extract is given orally as an antidote for snakebite.

c) Information from literature
The dried leaves used in poultice form for indolent ulcers (Yoganarasimhan, 2000).

153. *Jatropha curcas* L.
EUPHORBIACEAE (Turukaharalu, Doddaharalu)

a) Description
Shrubs with bark peeling off in thin white flakes. Leaves palmately lobed, ovate, acute, cordate, shallowly 3-7 lobed. Inflorescence cymose of axillary corymbs, usually monoecious with female flowers in forks of cymes. Calyx 5, nearly free; petals yellow, hairy on the inside near middle, usually larger than calyx, recurved. Disc of free glands sometimes united, opposite petals. Stamens 10, outer usually shorter, subconnate. Ovule 1 per locule, style branches 2-fid. Fruit a schizocarp or drupaceous. Seeds ellipsoid, generally carunculate. Commonly grows as a hedge plant; often in open places. Flowering and fruiting during May to August.
b) Ethnobotanical information
The Kadugolla tribal employ the latex applied externally for 41 days to cure piles. The leaves are warmed and applied externally for suppration of wounds.

c) Information from literature
The Seed oil used in sciatica, dropsy, paralysis, rheumatism and abortifacient (Gupta et al., 1999 and Yoganarasimhan, 2000). The tender twigs are used as tooth brush to relieve jaw-ache (Singh and Pandey, 1998 and Dharma Chandra Kumar, 1997). Roots are used in cool drinks (Sudhakar and Vedavathy, 1999), and as an anthelmentic (Girach et al., 1999).

154. **Jatropha gossypifolia** L.
**EUPHORBIACEAE** (Hattiele haralu, Chikka kadu haralu)

a) Description
Erect branched sticky glandular shrub. Leaves alternate, simple, 3-lobed. Petiole with crowded gland tipped bristles; stipules long. Inflorescence a terminal cyme; bracts foliar. Sepals 5 lobed, free, greenish red, linear-lanceolate, acute, enlarged in fruit, margin ciliate. Petals 5 lobed, dark red, free, slightly connate at base, obovate, rounded, base narrow disc entire. Stamens many white, filaments connate at base, anthers ovate-oblong. Ovary 3-celled; ovules solitary in each cell; style connate at base, free above; stigma sometimes lobed. Fruit a capsule, oblong. Seeds oblong, generally curculculate. Common on roadsides, near villages. Flowering and fruiting during February to August.

b) Ethnobotanical information
The Nayaka tribal uses the leaf paste against carbuncles. The latex is taken with cotton wool and applied on jaw teeth for toothache. The Jogi tribal use the seed oil for the treatment of leucoderma.

c) Information from literature
The leaf decoction is used as purgative, stomachache, antiseptic and for veneral diseases and the roots are used in leprosy, eczema, snakebite (Yoganarasimhan, 2000 and Kothari and Rao, 1999) and the latex used against syphilis (Dharma Chandra Kumar, 1997).
155. *Kalanchoe pinnata* (Lam.) Persoon
CRASSULACEAE (Kādubasale)

a) **Description**
Fleshy under-shrubs or herbs. Leaves opposite, simple or pinnately 3-5 foliate, elliptic-oblong obtuse at both ends. Inflorescence terminal paniced lax cymes. Flowers pendulous; regular, 4-merous, bisexual. Calyx tubular, inflated, shortly lobed, connate for more than 3/5 of their length. Corolla gamopetalous, constricted below the middle, green. stamens 8, biseriate, epipetalous, inserted below the middle of corolla. Pistil 4, almost free, each subtended by a lanceolate scale; ovary glabrous, with 2 seriate ovules attenuated into subulate style; stigma obliquely truncate. Fruit follicles, many seeded. Occasional in plains often cultivated in gardens. Flowering and fruiting during December to February.

b) **Ethnobotanical information**
The Kadugollas and medicinal men crush the succulent leaves and apply externally on burning wounds. The Lambani tribals apply the mucilage on face to treat Acne and face becomes bright.

c) **Information from literature**

156. *Kirganella reticula* (Poiret) Baillon
EUPHORBIACEAE (Karioolikaddi, Karisooli)

a) **Description**
Pubescent stragglers. Leaves elliptic-orbicular, rounded at both the ends, glabrescent. Inflorescence of axillary fascicles, usually monoecious. Perianth 5-lobed, unequal, oblong scarious-margined; outer 2 larger and inner 3 smaller. Disc fleshy of larger glands. Stamens 5, the outer 2 smaller, free, the inner 3 connate. Staminal filaments fleshy. Ovary globose, 5-locular, 10-
ribbed; ovules 2 per locule, stigma sessile. Fruit fleshy. Common in plains usually in scrub, jungles. Flowers and fruiting during September to April.

b) Ethnobotanical information
The Kadugolla tribal employ the whole plant paste with buttermilk to be given orally for blood dysentery in cattle. The Lambani tribals apply the paste with Pongamia oil for skin rashes. The plant is used for weaving baskets in Koracha, Nayaka, Jogl and often by local people.

c) Information from literature
The berries yield a blue dye (Singh and Pandey, 1998).
157. **Lagerstroemia reginae** Roxb.
LYTHRACEAE (Hole dasavâla)

a) Description
Deciduous trees, woody. Petiole long; blade elliptic-oblong, rounded at base, glabrous, thickly characeous. Pedicels articulate. Flowers usually 6-merous. Calyx tube ribbed outside, without any ring inside, lobes persistent. Petals purple and 2.5 cm long. Stamens many, subequal. Ovary globose or ellipsoid, sessile, 3-6 locular, with many axillary ovules. Capsule globose-ellipsoid, apiculate, 6-valved. Fruiting calyx lobes thickened at margins, spreading. Cultivated in gardens and as an avenue tree. Flowering May; fruits in cold season and persists till next flowering season.

b) Ethnobotanical information
The Kadugolla tribals employ the stem-bark and leaves, ground with Dhobi’s earth (washing soda) and brimstone (Sodium carbonate) to apply externally for foot and mouth disease in cattles. The traditional healers employ the dried root powder decoction with honey to be given orally as purgative.

c) Information from literature
The Leaves purgative, diuretic and deobstruent and the decoction of leaves and fruits used in diabetes (Yoganarasimhan, 2000).

158. **Lantana camara** L.
VERBENACEAE (Bēlisoppu, Padhrigida, Kādujola)

a) Description
Rambling shrubs with short, recurved prickles. Leaves opposite, ovate, acuminate, cordate-acute at base, pubescent, crenulate along the margin. Inflorescence corymbose-umbellate; bracts lanceolate, 3-5 nerved; flowers 4-5 merous, small. Calyx membranous, tubular, truncate dentate. Corolla pink (Red) or yellow, not white; salver shaped, lobes spreading subequal, stamens 4, didynamous. Ovary globular 2-locular, 2-ovulate; style short; stigma thickened. Drupe with 2 one seeded pyrenes. Fairly common in disturbed areas. Flowering and fruiting during all seasons.
b) Ethnobotanical information
The Lambani tribal employ the fresh leaves ground with calcium to apply externally for healing of cuts due to sharp knife, blade or sickle.

c) Information from literature
The leaves are used as a diaphoretic agent, itching, malaria, rheumatism and jaundice (Jain and Sharma, 2000), as an antiseptic agent (Sagari et al., 2000), and Nayak and Choudhury (2000), whereas the roots have been employed to drive against malaria (Pernet, 1957).

159. *Lawsonia inermis* L.
LYTHRACEAE (Goranti, Goravanti, Mehendhi soppu)

a) Description
Erect shrub. Leaves opposite, simple, entire, ovate or lanceolate, acute, base narrow, almost sessile. Inflorescence a terminal cymose panicle; bracts minute, early caducous. Flowers green, 4-merous; calyx attached at the base to the hypanthium, green, glabrous, campanulate; lobes 5, ovate-acute. Corolla 5, green, shortly clawed. Limb crumpled. Stamens 8; filaments long, white. Ovary four-celled; ovules numerous on an axile placentarion; style and stigma simple. Fruit a capsule, red, coriaceous when dry, calyx persistent. Cultivated as an hedge plant in gardens. Flowering and fruiting during March to May.

b) Ethnobotanical information
The Lambani tribal employ the root, which is ground and filtered, the filtrate is taken orally with cows milk for jaundice and the same tribal employ the leaves and ground with a piece of garlic, pepper and mix with lemon juice to be apply externally to cure whitlow. The leaf powder is mixed with water and applied on palms for decorative purpose, but it also promotes cooling effect of the body.

c) Information from literature
Leaves with other adjuvants to treat menstrual disorders (Henry, et al., 1996), an antibacterial properties (Banerjee and Pal, 1998; Viswanathan and Singh, 1998), cattles foot and mouth diseases (Sikarwar, 1996), anaemia, oedema and jaundice (Satapathy and Brahmam, 1996). The bark decoction is used for the treatment of jaundice (Pandey and Srivastava, 1993).

ACANTHACEAE (Gowrimudi, Gantakalugededde)

a) Description

b) Ethnobotanical information
The Kadugolla tribal use the coconut oil based plant extract for the treatment of eczema. The Nayaka and Jogi tribals use the *Pongamia* oil based plant ash for the treatment of eczema. The Lambani tribal use the plant paste for healing of wounds.

c) Information from literature
The plants is used as a tonic in fever, and used against itchy infections of the skin (Yoganarasimhan, 2000; Jewan Ram *et al.*, 1999 and Jain and Tarafdar, 1970). The globose head of the flowers are burnt and used as an ointment for burns and the extract of the roots are taken orally to control dysentery (Singh and Pandey, 1998).

161. *Leptadenia reticulata* (Retz.) W. & A.

ASCLEPADACEAE (Jeevahale)

a) Description
A twining herb or shrubs. Sap watery. Leaves ovate to lanceolate, puberulent above and below; base rounded to slightly cordate; apex acute to acuminate. Corolla lobes pale greenish white, valvate, margins revolute at anthesis. Corolline corona of a fleshy bilobed protuberance at each sinus. Stamens more completely connate. Staminal corona of an inconspicuous, undulating ring on the lower part of the stipitate gynostegium. Pollinia erect from dark, horny, corpuscula, waxy, with pellucid curved appendages at the tips. Gynoecium of 2 superior unilocular carpels united only by the enlarged style
apex. Fruits of paired or single (abortion of 1) follicles. Seeds flattened comose. Occasional in plains often in hedges. Flowering and fruiting during July to April.

b) Ethnobotanical information
The Nayaka tribal use the leaves in their diet as vegetable to enhance milk secretion in nursing mother and the fresh leaf paste is applied externally on rashes and sores. The water based root extract with sugar is used as a tonic to cure for diarrhoea, cough and cardiac disorders.

c) Information from literature
Plant useful in habitual abortion, stimulant, restorative (Yoganarasimhan, 2000). The twigs as expectorant, headache and cold (Suryanarayana et al., 1999).

162. *Leucas aspera*
LAMIACEAE (Thumbe)

a) Description
Erect or diffuse herb. Leaves opposite, simple, shortly petioled, linear or lanceolate, pubescent, crenate or entire, obtuse. Flowers axillary and terminal whorls, bracts linear, spinulose, pubescent, equaling the calyx tube. Calyx tubular constricted at base, hispid, ciliate; mouth oblique; teeth triangular, spinulose, pubescent. Corolla tubular bilipped; upper lip hood-like, hairy outside, lower spreading. Stamens 4, long, exerted; filaments slender. Ovary 4-celled; ovule solitary in each cell. Fruit a nutlet, smooth brown. Common weed of waste places and cultivated fields. Flowering January to August and Fruiting February to December.

b) Ethnobotanical information
The Kadugolla tribal employ the pounded leaves with limejuice to be taken orally for 20 days to destroy tapeworms in stomach. The Nayaka tribal employ the equal proportion of leaves, pepper and garlic grounded, and the juice is dropped into opposite ear to cure migraine. The JogI tribal employ the flowers paste with honey to be given orally for infants to cure whooping cough.
The leaves are used against stomach disorders (Henry et al., 1996), psoriasis and other skin eruptions (Yoganarasimhan, 2000), rheumatic swellings and fever (Dharma Chandra Kumar, 1997), and scorpion sting (Suryanarayana et al., 1999).

**Limonia acidissima** L. (*Feronia elephantum* Corr.)

**RUTACEAE (Byaladamara)**

**a) Description**
Erect shrub or small trees, armed with axillary thorns. Leaves odd pinnate; leaf axis distinctly winged; leaflets sessile, crenulate, chartaceous, 2-4 pairs. Inflorescence a raceme short, pubescent. Flowers white, pedicelled, 4-merous. Stamens 8-10, anthers dorsifixed. Disc pulvinate. Ovary 4-locular, oblong, ovule 1-per locule; style short; stigma capitate. Fruit berry, globose, bluish-black. Occasional in forests. Often cultivated in the vicinity of villages. Flowering and fruiting during March to December.

**b) Ethnobotanical information**
The Kadugolla tribals make use of root paste with the root of *Cassia occidentalis* and clove, the extract is taken orally with curd to cure stranguiry. The Lambani tribals employ the bark, which is ground with rice washed water and mixed with honey to take orally for 3-4 days to cure menstrual disorders. The Koracha tribals employ the shade dried leaves are finely powdered with sugar and mixed with cows milk taken daily for seminal increase; leaves are bruised with garlic and pepper to inhale smell once in 10-15 min to cure fever and hiccup. The fruits are edible. The juice of the fruit increases digestive power.

**c) Information from literature**
The bark extract as expectorant (Kshirasagar and Singh, 2000). The leaves are carminative and antiseptic (Yoganarasimhan, 2000). The fruits are edible (Ravi Upadhyya and Chauhan, 2000), as tonic, antiscorbutic and alepharmic (Yoganarasimhan, 2000). The fruits are used to control diarrhoea and dysentery and the bark against diabetes (Dharma Chandra Kumar, 1997).
164. *Mallotus philippensis* (Lam.) Mueller
EUPHORBIACEAE (Kunkumada mara)

a) **Description**
Trees with dull sap. Leaves alternate, with less than 10 primary nerves; leaf blade not peltate; ovate-elliptic, acute-acuminate, cuneate, glaucous, and red-glandular beneath; sinuately toothed. Inflorescence of axillary racemes. Flowers usually dioecious; male flowers not fascicled, female flower solitary. Perianth lobes generally 4, valvate, disc absent. Stamens many; anthers usually versatile. Ovary generally 3-locular; ovule 1-per locule; style shortly connate, papillose within, pubescent without. Fruit a 3-4 valved capsule globose, covered with red powder. Seeds smooth. Occasional on dry-deciduous forests and often in open places. Flowering and fruiting during August to January.

b) **Ethnobotanical information**
The Jogl and Nayaka tribal8 employ the fruits powder made into paste with honey and taken orally as an anthelmintic. The Kadugolla tribals use the leaves with neem oil to apply externally on carbuncles.

c) **Information from literature**
The seed oil against parasitic insects in the hair (Banarjee and Pal, 1996), seeds and fruit powder against urinary and menstrual disorders (Nayak and Choudhury, 1999) and diarrhoea, dysentery of animals (Singh and Kaushal Kumar, 2000). The decoction of stem bark with other adjuvants like *Cuscuta reflexa*, *Mangifera indica*, *Dendrocalamus strictus* for jaundice (Singh, 1996). The leaves and seeds are used in external application of skin diseases (Dharma Chandra Kumar, 1997).

165. *Martynia annua* L.
PEDALIACEAE (Chālikondigida)

a) **Description**
Erect viscid-pubescent herbs. Leaves usually opposite, membranous; venation palmate. Leaf blade irregularly dentate, broadly ovate, cordate. Inflorescence a short raceme. Flowers showy, bisexual, irregular, distinctly pedicelled, subtended by persistent bracteoles. Calyx 5-partite, segments
unequal. Corolla gamosepalous ventricose. Stamens epipetalous 2; anthers coherent, medifixed; staminodes 2-3. Disc fleshy. Ovary superior, spuriously 4-locular by the intrusion of 2 opposite, T. shaped. Parietal placentas; each locule with a solitary pendulous ovule. Style erect; stigma 2-lamellate. Fruit with hooked beak, usually 4-seeded; pericarp fleshy and deciduous; endocarp persistent, 8-ribbed. Common herb in roadsides, and manure heaps. Flowering and fruiting during June to August.

b) Ethnobotanical information
The Jogi tribals employ the paste of the fresh leaf as an antidote for scorpion sting. The Lambani tribals employ the plant paste with a piece of garlic to apply externally for sores and carbuncle.

c) Information from literature
The leaves are used in epilepsy, tubercular glands of the neck, sore throat (Nayak and Choudhury, 1999 and Bedi, 1978). The nut is beneficial against venomous insect bite (Nayak and Choudhury, 1999), rheumatism (Tribedli, 1982) and toothache (Sharma and Singh, 2000). The whole plant is used against hairfall due to fever, scabies, sores and carbuncle (Jain and Tarafdar, 1970). Sahari tribals take orally the decoction of plant with black pepper to cure pneumonia and fever (Singh and Pandey, 1998).

166. *Maytenus emarginatus* (Willd.) Ding Hou
CELASTRACEAE (Eremusregida)

a) Description
Usually armed erect scandent shrubs. Leaves usually obovate, and emarginate, serrate, crenulate, drying a gleasous green or reddish brown. Inflorescence axillary or extra axillary or born at tip of spines, pedunculate. Flowers white, sepals 5, disc flattened, sinuate lobed. Stamens inserted outside disc or on margin. Ovary sunk on disc, 3-locular; ovules 2, basal; stigma sessile. Capsule usually concave at tip. Common in open dry-deciduous forests. Flowering and fruiting during August to February.

b) Ethnobotanical information
The Kadugolla tribals employ the buttermilk based leaf powder given orally for dysentery in cattle and also as galactagogue. The paste of the stem bark is
mixed with neem oil to apply externally to hair to destroy lice and also heal-up boils in head.

c) Information from literature

The leaves are used in the treatment of jaundice and diabetes (Pandit, 1996), cough, diarrhoea and vermifuge. The bark decoction against dysentery. Fruits as blood purifier (Kothari and Londhe, 1999).

167. *Michelia champaka* L.

**MAGNOLIACEAE** (Sampigemara)

a) Description

Woody tree. Leaves alternate, ovate-lanceolate, acute to acuminate at apex; blade simple, usually entire; venation pinnate. Flowers generally solitary, axillary, bisexual, regular. Perianth segments 9 or more, oblong, fleshy yellow. Receptacle elongate, columnar, bearing stamens at base and pistils above, naked in between forming a gynophore. Stamens many; filaments short; anthers introrse. Carpels usually numerous, spirally arranged on the receptacle, superior, subsessile, usually free, each one locular; with 2 to many ovules; style short; stigma simple. Fruit an aggregate of follicles dehiscing dorsally; seeds pendulous from the carpels by long threads. Occasional in dry-deciduous forests often cultivated. Flowering and fruiting during March to August.

b) Ethnobotanical information

The Kadugolla tribals employ the paste of seeds and apply externally on the shoulder of the Oxen to cure wounds caused due to ploughing.

c) Information from literature

The Stem bark powder is used only to prevent conception (Saini, 1996), as febrifuge, purgative and emmenagogue (Yoganarasimhan, 2000). Seeds pounded with castor oil used as leech repellent (Kshirasagar and Singh, 2000).
168. *Mimosa pudica* L.

MIMOSACEAE (Mutildaremuni, Nachikegida)

a) Description

Prickly woody herbs. Petiole long; pinnae 1 pair or 2 subdigitate pairs; leaflets 12-14 pairs, linear, Heads 1-few; bracteoles persistent. Flowers sometimes polygamous. Calyx minute. Petals 4, united. Stamens, usually 4. Ovary sessile, few ovuled. Pod compressed, oblong; valves separating from persistent margins; joints one seeded. Common along moist places, and roadsides. Flowering and fruiting during March to November.

b) Ethnobotanical information

The Kadugolla tribals employ the water-based root decoction for 10-15 days to treat dysuria. The Lambani tribals use the leaf powder with coconut oil which is applied externally on wounds due to injuries.

c) Information from literature

Leaf juice after meal to control burning micturation (Girach et al., 1996), as a contraceptive (Singh and Anworthi, 1996), the decoction against gravel and other urinary complaints (Banumathi and Parvathi, 1999), root paste against insect and snakebite (Jamir, 1991).

169. *Mirabilis jalapa* L.

NYCTAGINACEAE (Vibuthigida, Sanjemallige)

a) Description

Moderate sized under shrub, stem woody at base, otherwise fleshy, green or brownish, enlarged at nodes. Leaves alternate, simple, broadly ovate entire, acute. Inflorescence a cyme flowers pink, white, or yellow; bract and bracteoles green, foliar, cordate. Perianth tubular, petaloid, tube narrow at base; lobes broad, sub- orbicular, plicate in bud. Occasionally found wild as an escaped often cultivated in gardens. Flowering and fruiting during January to May.

b) Ethnobotanical information

The Lambani tribals employ the root paste externally on glandular swellings to relieve pain. The Kadugolla tribals use the leaves warmed and tied on boils
and abscess to heal-up. The Nayaka and medicine men use the leaves ground with sesame oil and apply externally to heal-up whitlow.

Information from literature
In order to boost up yield of the egg in hens, the leaves are fed with garlic (Bedi, 1978), bruised leaves are applied to boils and abscesses (Yoganarasimhan, 2000). Rhizome decoctions against piles, dysentery (Henry et al., 1996 and Kothari and Londhe, 1999), as cooling and resistance agent to cattles (Singh and Kaushal Kumar, 2000).
170. *Nelumbo nucifera* Gaertner
NELUMBONACEAE (Tāvare, Kamala)

a) **Description**
Aquatic, perennial, stoloniferous herbs. Leaves alternate, with long fleshy, petiole; leaf blade circular, waxy, glaucous beneath, simple entire, when mature immersed above water. Veins radiating from the center, bifurcating. Flowers solitary, bisexual, regular on long spongy peduncle. Outer tepals greenish white. Inner tepals rosy white, or white. Stamens many; filaments slender; anthers linear, with clavate connective. Receptacle turbinate, fleshy. Pistils many free, superior, ovoid, loosely embedded in pits of the flat tip of receptacle; each one locular; ovule-1, pendulous; style short, stigma peltate. Fruit an aggregate of indehiscent single-seeded nutlets. Common in open tanks. Flowering and fruiting during May to November.

b) **Ethnobotanical information**
The Budlbudike tribals make use of the tuberous root paste and apply externally on ringworms. The Nayaka tribals administer the leaf juice orally as an antidote for poisoning.

c) **Information from literature**
The leaves and seeds are cooked and eaten (Borthakur, 1996), sweet prepared from the seeds as cardio-tonic after child birth (Usha Shome et al., 1996), and tubers are used to cure dropsy (Kshirasagar and Singh, 2000).

171. *Nerium oleander* L. (= *Nerium indicum* Miller)
APOCYNACEAE (Kanagilu, Kempu kanagile)

a) **Description**
Erect woody shrubs, leaves whorled, 3 per node; linear-lanceolate, long, sparsely pubescent Inflorescence terminal corymbose. Calyx with subulate basal glands within. Corolla, red, white, or occasionally yellow, funnel form; tube with rows of bristles below the filament within, with deeply laciniate scales at mouth; lobes obliquely rounded, imbricate to the right. Stamens inserted at the base of the widened part of the tube; filaments short; anthers sagittate, with sterile tail and a long terminal pilose appendage; anthers connivent and somewhat adnate to the stigma. Ovaries separate, glabrous. Fruit a pair of
follicles, nearly parallel, seeds comose. Flowering and fruiting December to March.

b) Ethnobotanical Information
The Nayaka tribals make use of the root paste and apply externally on vagina to induce abortion. The Jogi tribals employ the fried leaves and made into blackened (carbon) ash, is mixed with lemon juice to apply externally on warts. The traditional healer employ the leaves and are ground with butter and mix well with calcinum to tied with clean white cloth to heal-up whitlow and the paste of the leaf to apply externally to treat ringworm.

c) Information from literature
The roots are resolvent and attenuant, oil from root bark used in skin diseases of scaly nature (Yoganarasimhan, 2000).

172. *Nyctanthes arboristis* L.
OLEACEAE (Parijatha)

a) Description
Shrubs or small trees. Leaves opposite, ovate, entire and rough. Flowers in small sessile bracteate heads deposed in the terminal trichotomous cymes. Calyx ovoid, cylindric, sub-truncate, finally splitting or deciduous. Corolla salver shaped, yellow, which comes out in the evening and fall off in the morning; lobes 4-8, contorted in bud, spreading white. Stamens 2, subsessile near the top of the corolla-tube. Ovary 2-celled; ovule 1 in each cell, style cylindric, stigma shortly bifid. Fruit an orbicular capsule, compressed parallel to the septum, separating when ripe. Occasional in dry-deciduous forests often cultivated. Flowering and fruiting during December to March.

b) Ethnobotanical information
The Kadugolla tribals make use of the leaf powder with the juice of betel leaves and given orally for cough, and whooping cough. The Koracha tribals employ the parts of the seeds applied on scalp to stop hair falling. The Lambani tribals employ the stem-bark juice to apply externally for wound healing.
Information from literature
The leaves are used against deworming (Usha Shome, 1996), rheumatism and deworming (Ravi Prasad and Pandey, 2000). The leaves are bitter, antibacterial, anthelmintic, febrifuge and tonic (Nayak and Choudhury, 1999). The bark chewed against mouth ulcer, gum bleeding and throat pain (Satapathy and Brahman, 1999). The seed powdered against cold and cough, lice-cidal (Dixit and Pal, 1996) and against scurvy, piles and skin diseases (Nayak and Choudhury, 1999).
173. **Ocimum americanum** L. (=*O. canum* Sims)  
**LAMIACEAE** (Nayi tulasi)

**a) Description**
Herbs. Blade, ovate-acute at both ends, Raceme 10-15 cm long; flowers whorls, in terminal spike. Calyx tubular bilipped, calyx tube hairy within. Corolla white, 2-lipped; tube included not annulate; upper lip 4 lobed; lower lip entire, flat, stamens declinate; anther cells confluent. Fruit nutlet mucilaginous when wetted. Common in roadsides, cultivated fields, and open places. Flowering and fruiting during all season.

**b) Ethnobotanical information**
The Nayaka tribals employ the whole plant with buttermilk to be given orally for flatulence in cattles.

**c) Information from literature**
The leaf paste is applied to skin diseases and as mosquito repellents (Suryanarayana *et al*., 2000), as purgative (Sharma and Singh, 2000), as fumigant to kill the lice of chicks (Saxena *et al*., 1988), leaf decoction against stomach troubles (Brij Lal *et al*., 1996). Root paste against wound in animals and seed decoction for dysentery (Girach *et al*., 1996), diarrhoea (Saini, 1996).

174. **Ocimum sanctum** L.  
**LAMIACEAE** (Srithulasi, Thulasi)

**a) Description**
An erect much branched softly pubescent under shrub, with aromatic oil glands. Leaves opposite or whorled, usually toothed, petioled; floral leaves small, bract-like usually caducous. Flowers small in whorl of 6-10 on the axis of elongate spikes. Calyx ovoid or campanulate, deflexed in fruit and then usually enlarged and hardened, 2-lipped; upper lip broad, flat, lower lip with 4 mucronate teeth. Corolla 2-lipped, tube short, not annulate within; upper lip subsequently 4 lobed. Stamens 4 didynamus, declinate, exerted; filaments free, anthers 1-celled, later on flattened out. Disk entire, 3-4 lobed. Ovary 4 partite style slender, bifid, at apex. Fruits nutlet, small, nearly smooth, not mucilaginous when wetted. Common and cultivated in pots. Frequently found
in wild. Flowering and fruiting during August to September and January to April.

b) Ethnobotanical Information
The Jogl tribals employ the root decoction with jaggary taken orally to cure cough and cold. The Lambani tribals employ the whole plant paste with garlic and pepper taken orally for conyza and the paste as poultice on forehead to cure headache.

c) Information from literature
The powdered leaves with sugar candies in milk is used to cure all types of tuberculosis (Dharma Chandra Kumar, 1997), the leaf paste against dysentery (Ram and Saha, 1998), the leaf juice with ginger to increase vitality in aging males (Gupta et al., 1999) and to enhance the effect of wine (Kshirasagar and Singh, 2000). The seed decoction as a good laxative (Siddique et al., 1995), as against jaundice (Raju Goel et al., 1999) and the seeds are placed in the eye to remove foreign particles (Anderson, 1988). The root paste as anti-venom (Malti and Mishra, 2000). The root soaked water for menorrhoea.

175. *Olea dioica* Roxb.
**OLEACEAE**

a) Description

b) Ethnobotanical information
The Nayaka tribals and traditional healers use the shade dried stem bark with garlic and jaggary against boils and the decoction against fever.

c) Information from literature
The bark and leaves used as a febrifuge (Yoganarasimhan, 2000).
176. **Opuntia dillenii** (Kar-Gawler) Haworth
CACTACEAE (Papachi hannu)
a) Description
Erect, succulent branching shrubs with sub-flattened joints; segments flat with many areoles bearing flattened yellowish spines. Spines 3-7 per areole, thick, the larger often flattened and curved, entirely translucent yellow more or less mottled brown, 3-7 per areole. Flowers solitary on a spiny areole, diurnal. Petals long, bright yellow. Stamens many, free, arising from base or side of the perianth tube, filaments elongate; anther cells 2. Ovary areolate longer than perianth, inferior, 1-locular with many ovules on 3-more parietal placentas; style simple; stigmas 5-7, berry globose, fleshy, areolar and glochidiate. Introduced from America. Common in scrub jungles, roadsides, and neglected lands. Flowering and fruiting during January to August.

b) Ethnobotanical information
The Kadugolla, Jogl and Budibudike tribals prepare juice from the fruit with sugar to treat constipation. The fruits are eaten by the tribals and local people.

c) Information from literature
The fruit used in whooping cough, syrup as antispasmodic and expectorant. Mashed up stem used as poultice to allay inflammation and hot ones applied to boils to enhance suppuration and the pulp used in opthalmia (Yoganarasimhan, 2000).

177. **Oroxylum indicum** Vent.
BIGNONIACEAE (Thigadumara, Bunepale, Aanemungu)
a) Description
A glabrous small tree. Leaves large, opposite, 2-3 pinnate; leaflets entire. Flowers large in long terminal racemes. Calyx large leathery conpansulate, the limb truncate. Corolla large fleshy; lobes 5, sub-equal crisped. Stamens 5 perfect, the posterior one the shortest; filaments inserted near the base of the tube; anthers 2-celled, the cells parallel, oblong. Disk large, cushion-like. Ovary subsessile, contracted at the base, compressed; ovules many; style slender; stigma 2-lobed. Fruit a very large broadly linear, septifragally 2-valved capsule, compressed parallel to the septum. Seeds many, flattened,
surrounded by a broad hyaline papery wing. Common in moist places of the dry deciduous forests. Flowering and fruiting during March to July.

b) Ethnobotanical information

The Kadugolla tribals employ the root-bark powder with buttermilk to be taken orally for treating gastrics, dysentery, flatulence and cough. The Lambani tribals apply the bark extract on knee joints to cure arthritis. The bark is boiled with sesame oil dropped into ear to stop otitis-media.

c) Information from literature

The bark paste is applied to cure wounds of cattle (Bedi, 1978), to relieve muscular pain (Sharma and Singh, 2000) with Mucuna, to treat cuts and wounds. The decoction is administered for an easy delivery. If the decoction is consumed by the pregnant women, it causes abortion (Anderson, 1986). The bark decoction with butter for polyuria (Satapathy and Brahmam, 1996), with honey for vitality (Brahmam et al., 1996), with mustard oil against wounds, cracks on the nipples (Borthakur and Sarma, 196), diarrhoea, dysentry, rheumatism and ear complaints (Kothary and Londhe, 1999). The seeds smoke against relieving the pain of piles, seed paste against mumps and stomachache (Saxena et al., 1988). The roots against tuberculosis (Kothari and Moorthy, 1996).

178. Orthosiphon rubicundus (D. Don) Bentham

LAMIACEAE (Kallukemaregida)

a) Description

Pubescent herbs. Leaves ovate, cuneate, Racemes 12-15 cm long; bracts 2-3 cm long, pubescent. Flowers whorl in terminal spike or raceme. Calyx tubular, bilipped, upper lip large, lower lip 4-lobed; lateral lobes aristate; middle lobes subulate. Corolla bilipped, pink, tube exerted from calyx tube; upper lip 3-4 lobed; lower lip entire. Stamens 4, declinate, exerted; anther cells confluent. Stigma capitate, sub entire. Fruit nutlet, brownish. Common herb on rocky slopes. Flowering and fruiting during May to January.
b) Ethnobotanical information
The Kadugolla employ the leaves of juice with the cattle urine to apply externally for joint pain in cattle. The leaves are ground with pepper and garlic, the paste is taken orally with jaggary to cure fever.

c) Information from literature
The stem bark juice to cauterize bleeding wounds (Dharma Chandra Kumar, 1997), and tubers for colic (Yoganarasimhan, 2000).

179. Oxalis corniculata L.
OXALIDACEAE (Hulisoppu)
a) Description

b) Ethnobotanical information
The Nayaka and local medicine-men boil the leaves with water, and the decoction is combined with palm jaggary to be given orally for post-natal problems in women. The leaf juice is taken internally with buttermilk to cure gastritis.

c) Information from literature
The leaves are used in dysentery and cholera (Jamir, 1991; Jain and Sharma, 2000), with egg albumen in dysentery (Kaul et al., 1991), leaf infusion to cure opacity of the cornea and the counter-act Datura poisoning (Yoganarasimhan, 2000). The decoction of leaves as an appetizer and as a febrifuge (Kshirasagar and Singh, 2000) and in jaundice (Raju Goel et al., 1999). The root paste with garlic against cold (Saxena et al., 1988). The whole plant juice against jaundice (Raju Goel et al., 1999). The plant sap is used to cure scurvy and other skin diseases, as a cooling refrigerant in stomach disorders, fever and acute headache (Chowdhury, 1996; Yoganarasimhan, 2000; Kothari and Moorthy, 1996).
**Pandanus fascicularis** Lamarck
PANDANACEAE (Kēdige, Tālegida)

**Description**
A much branched bushy shrub or small tree. Leaves crowded in tristichous spirals, sessile, encliform, long acuminate, caudate, sheathing at base; mid nerve keel-like, with spines up or down pointed; spines on margin mostly up-pointed. Stamine inflorescence a terminal, branched spadix, each branch subtended by a spathe; perianth absent; stamine spike fragrant, stamens many. Stemonophores with racemose anther. Pistils naked, connate in groups (phalanges) each pistil with cavities in upper portion, 1-locular with 1-central or basal ovule; style terminal with stigma. Fruit drupes connate in phalanges, long, yellowish to olive orange with age. Occasional in stream banks, and banks of channels and paddy fields. Flowering and fruiting during February to June and August to September.

**Ethnobotanical information**
The flowers and leaves are highly fragrant, worn by local and tribal women to repel lice from hair. The Jogi tribals employ the fresh root paste and apply externally to treat ringworm.

**Information from literature**
Juice of the inflorescence against rheumatism in veterinary medicine and the leaves are used in leprosy, scabies and diseases of heart and brain (Yoganarasimhan, 2000).

**Passiflora foetida** L.
PASSIFLORACEAE (Kukke balli)

**Description**
Silky pubescent tendrillar climbers. Petiole long; stipules divided into filiform segments; leaf blade ovate in outline, usually 3-lobed; lobes subacute at apex, terminal lobe larger. Flowers - white, solitary, peduncle 4-6 cm long; involucral bracts bipinnatifid surrounding flowers and fruits. Calyx deeply 5 lobed. Petals 5, inserted at the throat of calyx tube. Corona of 1 to many rows of filiform appendages, 1 to few membranous folds lower down and a shallow cup surrounding gynandrophiore. Stamens 5 or more, form a gynandrophiore;
anthers dorsifixed. Ovary generally on a gynandrophore; style 3, stigmas capitate. Fruit a berry globose smooth. Occasional hedges. Flowering and fruiting during March to October.

b) Ethnobotanical information

The Lambani tribals employ the leaves, made into paste, applied on the forehead to cure headache and giddiness. The Koracha tribals employ the leaf paste with neem oil to apply externally to heal-up old wounds.

c) Information from literature

The decoction of the leaves for billiousness and asthma. Leaf powder with milk to increase the memory power. Leaf paste applied on forehead relieves the headache (Jerry Thomas and Britto, 1999). Decoction of leaves and roots to hysteria patients (Banumathy and Parvathi, 1999; Yoganarasimhan, 2000). Fruits are used against stomachache (Brahman et al., 1998). The whole plant as a fodder to goats is poisonous (Singh and Pandey, 1998).

182. Pavonia zelianica (L.) Cav.
MALVACEAE (Autukadale, Chittamutti, Kadlesoppu)

a) Description

Woody herbs. Leaves shallowly to deeply palmately lobed, 3-5 palmately veined; upper leaves lobed. Epicalyx of 8-10 segments, setaceous, hairy. Flowers with jointed pedicels. Calyx campanulate, 5-lobed. Corolla rotate, white, staminal column rarely longer than petals, antheriferous wholly or in upper part. Carpels 5, each 1-ovuled; styles 10; stigma capitate papilllose. Coccus, keeled glabrous. Common weed of waste places and bunds of cultivated fields. Flowering and fruiting during March to November.

b) Ethnobotanical information

The Nayaka tribals employ the leaves which is ground with sugar candy and mixed with water and boiled. The decoction is taken orally to cure haemorrhages. The whole plant paste is mixed with honey and taken orally for cough and fever.

c) Information from literature

The paste of the leaves is used for wound healing in live stock (Sagari and Ramadas et al., 2000), inflammation of joints in cattle (Sudhakar Reddy and
Raju, 2000), if the leaves are chewed to cure cough (Suryanarayana et al., 1999) and as a febrifuge and anthelmintic (Yoganarasimhan, 2000).

\textit{Pedallum murex} L.
PEDALIACEAE (Aăneneggulu)

Description
A viscid annual herb. Leaves opposite repant dentate. Flowers axillary, solitary, yellow; pedicels short, 2-glandular at the base. Calyx small, 5-partite. Corolla tube slender below, enlarged above; limb sub-bilabiatae, lobes 5, round, spreading. Stamens 4, didynamous with a 5\textsuperscript{th} rudimentary; anther cells ovate, pendulus. Disc large, oblique. Ovary 2-celled, ovules 2 in each cell; style slender, stigma 2 lobed. Fruit hard, indehiscent, 2-celled; the upper part ovoid obtuse above, tetragonal below with sharp conical spines at the angles. Occasional in plains often in roadsides. Flowering and fruiting during July to November.

Ethnobotanical information
The Nayaka tribals employ the decoction to gargle to relieve from toothache. The traditional healers also use the leaf for the same purpose.

Information from literature
The leaves are used in gonorrhoea (Kothari and Moorthy, 1996), leaf and fruits decoction as diuretic and to regulate menstrual cycle (Suryanarayana et al., 1999). The mucilaginous infusion used in dysuria, urino-genital disorders and the fruit is given to prevent nocturnal emissions, spermatorrhoea and impotency (Yoganarasimhan, 2000; Banumathy and Parvathi, 1999; Singh and Pandey, 1998).

\textit{Pergularia daemia} (Forskal) Chioq
ASCLEPIADACEAE (Kuntiganaballi, Halukuritige)

Description
Plants usually twining herbs with milky latex. Leaves ovate, sparsely hispid below; base deeply cordate; apex acuminate. Cymes corymbose to racemose, lateral. Corolla campanulate greenish white; lobes slightly imbricate to the right, with a wide pubescent margin above, otherwise glabrous. Corona of 2
series of lobes, the outer 5 membranous truncate flaps; the inner of 5 fleshy lobes; each provided with 2 spurs, one directed outward and downward and the other upward with the tip hooking over the gynostigium. Gynostegium elongate. Pollinia pendent from dark horny corpuscula, 2 per anther, waxy, with pellucid margins. Gynoecium of 2 superior unilocular carpels united only by the enlarged style apex. Fruit of paired follicles echinate. Flowering and fruiting during July to January.

b) Ethnobotanical information
The Kadugolla tribals apply the latex externally on boils to burst open. The traditional healers apply the leaf paste externally on wounds in cattle caused due to ploughing.

c) Information from literature
The leaf powder is used as expectorant, decoction in asthma (Suryanarayana et al., 1999) and the leaf juice applied against rheumatism (Yoganarasimhan, 2000). The flowers are fried in ghee and administered to cure whooping cough (Saxena et al., 1988). The root paste to induce abortion, to increase gastric juice (Satapathy and Brahman, 1996; Singh and Pandey, 1998). The whole plant extract given in uterine and menstrual disorders and to facilitate parturition (Yoganarasimhan, 2000).

185. *Peristrophe paniculata* (Forsk.) Brum. (*Peristrophe bicalyculata* Retz.) Nees
ACANTHACEAE (Cibirasoppu)

a) Description
Straggling herbs; stem angled, hairy. Leaves ovate, hairy. Inflorescence usually of panicles of cymes; bracts linear-spatulate, glandular hairy; bracteoles shorter, scarious-margined. Calyx lobes 5, linear, acute. Corolla pink, tube elongate, thin; limb bilabiate. Stamens 2, exserted, filaments hairy below; locules 2-ovuled. Capsule stipitate; seeds papillose, glochidiate. Common in plains along roadsides and ditches in the open place. Flowering and fruiting during October to January.
b) Ethnobotanical information
The Nayaka tribals apply leaf paste externally as an antidote for scorpion sting. The Jogi tribals use the plant decoction with sugar for the treatment of indigestion and fever.

c) Information from literature
The oral intake of decoction of the leaves for fever (Singh and Pandey, 1998) and the root paste against rheumatism and gout (Singh, 1996) and Yoganarasimhan, 2000). The plant paste has an external application in bone fracture and sprains (Maheswari et al., 1981).

ARECACEAE (Eachalumara)

a) Description
Tree to 10 m height. Stem cylindrical with persistent leaf-bases. Leaves crowning the stem; spathe macrescent. Flowers unisexual. Peduncle of pistillate spadix 0.2 m and staminate spadix 1 m. drupe 1-seeded, fleshy, orange-red, turning black with age; seeds hard, ventrally grooved. Common on tank bunds of paddy fields and along roadsides across plains. Flowers and fruiting during October to February.

b) Ethnobotanical information
The local people and tribals often extract toddy from the aerial part of the tree used as a local drink to alleviate inflammation and as a laxative. The leaflets are used for weaving mats. The fruits are edible.

c) Information from literature
The fruits are edible. The alcoholic liquor is tapped from inflorescence, locally known as "Kallu" (Raviupadhyaya and Chauhan, 2000) and from pith "Chhind" (Sahu, 1996). The roots are used in toothache (Yoganarasimhan, 2000), to cure heartburn, diarrhoea and heartburn (Singh and Pandey, 1998).
187. *Phyla nodiflora* (L.) Greene

VERBENACEAE (Nelahippali, Karchippall)

a) Description

Slender, diffuse herbs, often rooting at lower nodes. Leaves obovate, coarsely serrate towards apex. Inflorescence terminal, cylindrical, short, spike; bracts imbricate, small. Flowers 4-5 merous, irregular, sessile, dense, very small. Calyx deeply bipartite lobed. Corolla white, tinged with purple, 2-lipped. Stamens 4, didynamous, short. Ovary globular, 2-locular, 2-ovuled; style short; stigma capitate. Fruit dry, enclosed by calyx, breaking up into 2 cocci. Common marsh herb, gregarious in drying-up tanks and in shady marshy places and along the edges of tanks. Flowering and fruiting during April to October.

b) Ethnobotanical information

The Kadugolla tribals employ the whole plant with pepper, garlic and ginger, the paste is mixed with honey to be taken orally for bronchial infections and cough. The Lambani and local medicine men employ the plant paste as external ointment for skin diseases and also employ the powder of this plant with *Xeromphis spinosa* shoot tips, the decoction is taken orally for sterility in women. The Nayaka tribals employ the whole plant powder with the rind of *Punica granatum*, jaggary and pearl ash (K$_2$CO$_3$) given orally with hot water to cure cough.

c) Information from literature

An infusion of leaves and tender stalks is given to women after delivery and to children suffering from indigestion (Datta and Banerjee, 1978), urinary disorders (Suryanarayana *et al.*, 1999), diuretic and febrifuge, the paste of the leaves applied to boils, swollen cervical gland and chronic ulcers (Banumathy and Parvathi, 1999). The juice of stem is used as cooling beverage and the root to alleviate toothache (Ramaprasad and Pandey, 1993).
Phyllanthus fraternus Webster (*Phyllanthus niruri* L.)

**EUPHORBIACEAE** (Kirunellisoppu, Jaundice soppu)

a) **Description**

Herbs. Leaves ovate or obovate; stipules, not peltate, lanceolate, acuminate, basally attached, leaf blade oblong-elliptic, rounded, sub cordate. Flowers solitary, 5-merous; stamens 3, fused. Anthers transversely dehiscent. Ovules 2-per locule; styles usually 3, bifid. Fruit dry, capsule, smooth. Seeds minutely tubercled in concentric lines. Occasionally found along roadsides. Flowering and fruiting during July.

b) **Ethnobotanical information**

The Nayaka tribals employ the whole plant mixed with sugarcane juice to be given orally for jaundice. The Kadugolla tribals use the same purpose with cow milk. The Jogl tribals employ the whole plant with palm jaggery to be given orally for menstrual disorders in women. The root are powdered and boiled, the decoction is mixed with sugar to be taken orally for fever, in Koracha tribals.

c) **Information from literature**

The juice is used against offensive sores and ulcers (Datta and Banerjee, 1978). The roots are used for treating digestive disorders in camels, fresh root against jaundice (ibid), against fever (Ravi Upadhyay and Chauhan, 2000). The infusion of young shoots and leaves against dysentery and ophthalmic disorders, to cure scabies, herpes and other skin diseases, leucorrhoea (Datta and Banerjee, 1978; Dash and Misra, 1999; Raju Goel *et al.*, 1999; Usha Shome *et al.*, 1996; Viswanathan and Singh, 1996; Balasubramainan and Prasad, 1996). The whole plant against urino-genital disorders (Suryanarayana *et al.*, 1999) and the fruits against asthma (Ravi Upadhyay and Chauhan, 2000). The leaves and stem yields dye, and the paste of leaf against gonorrhoea and syphilis (Singh and Pandey, 1998).
189. *Pistia stratiotes* L.
ARACEAE (Antaragange)

a) Description
Floating, stoloniferous, rosulate, evergreen herbs. Leaves obovate, pubescent; venation flabellate. Spathe whitish, sessile, less than 1 cm long. Spadix less than 1 cm long with a single pistil adnate to the spathe and a few stamens up to 6, gathered into a synandrium. Ovary superior, usually one locular, ovules many, basal or sub parietal. Seeds oblong, common on tanks and old wells. The flowering and fruiting during December to February.

b) Ethnobotanical information
The Nayaka tribals employ the leaves and Thoordhal (gram), boiled without adding salt, the decoction is taken daily once for 41 days to cure piles and also the tender shoot tips of *Wrightia tinctoria* and fruits of *Citrullus colocynthis* are ground with neem oil for external application to cure piles.

c) Information from literature
The leaves are used in the treatment of dysentery, haemorrhoids, asthma, cough and skin diseases (Datta and Banerjee, 1978). Leaf poultice in skin ailments and the juice is boiled with coconut oil and apply externally in chronic skin diseases (Yoganarasimhan, 2000; Singh and Pandey, 1998).

190. *Plumaria rubra* L.
APOCYNACEAE (Deepkanagile)

a) Description
Large shrub or small tree. Stems thick and fleshy above, woody below. Leaves oblong lanceolate to obovate, glabrous to sparsely pubescent below. Corolla white, yellow, rose or combination of these colours, salver form; stamens inserted near the base of the tube. Ovaries separate glabrous; nectary absent or poorly developed. Fruit of paired, linear-lanceolate follicles. Seeds with basal wing. Occasionally found in natural habitat. Flowering and fruiting during January to April.
other adjuvants like roots of *Carrissa congesta*, *Oroxyllum indicum* bark for jaundice (Sharma and Singh, 2000). The leaf paste against snakebite, ephemeral fever, abortion (Dash and Misra, 1999; Pandey and Shrivastava, 1993). The whole plant juice against night blindness (Brahman et al., 1996). As an abortifacient, and with the roots of *Erythroxylum monogynum* to treat elephantiasis (Dharma Chandra Kumar, 1997).

CARYOPHYLLACEAE (Poudemullu)

a) Description
A tomentose erect annual or perennial branching herb. Leaves opposite or fascicled in whorls at nodes; linear, 1-nerved with a small mucro at tip; stipules scarious. Cymes terminal and axillary. Flowers bisexual. Calyx scarious, silvery, free. Petals 5 entire or erose, completely enclosed in calyx. Stamens 5, free or basally cohering with petals. Style 3-fid. Ovary superior, 3-valved ovules many on a free central placenta; styles free or jointed. Fruit generally a capsule. Seeds usually many. Common in open, sandy or rocky ground. Flowering and fruiting during August to December.

b) Ethnobotanical information
The Kadugolla and Koracha tribals employ the leaves which are ground without water and applied externally as an antidote for poisonous worm bites. The leaves are poultice on abscesses and swellings.

c) Information from literature
The leaves are used in jaundice and the poultice on boils and other inflammation swellings (Yoganarasimhan, 2000; Banumathy and Parvathi, 1999; Jevan Ram et al., 1999).

193. *Polygala elongata* Klein
POLYGALACEAE (Belekalinasoppu)

a) Description
Erect herbs. Leaves alternate; usually estipulate, hairy, membranous. Racemes usually terminal. Much longer than leaves. Flowers yellow. Irregular, pedicelled, bracteolate; petaloid sepals falcate; outer 3 shorter, inner 2 larger.
Pellis, fused at base, lateral 2 petals obovate. Stamens 8, all fused below into flat, hyaline sheath; anther 1-celled by confluence, dehiscing by apical pore. Ovary 2-locular, superior, laterally compressed; ovule 1 per locule, pendulous; style elongate, curved; stigma entire. Capsule oblique at tip with one locule larger. Fairly common, on moist, sandy soil, sometimes in open waste lands. Flowering and fruiting during August to November.

b) Ethnobotanical information

The Nayaka tribals employ the whole plant which is ground with Acorus calamus, and the extract is taken orally with honey to cure diarrhoea and stomach pain. The plant is used as leafy vegetables by local people.

c) Information from literature

The root paste is rubbed against body to bring down temperature and shivering (Kshirasagar and Singh, 2000), and the decoction of leaves given in biliousness and constipation (Yoganarasimhan, 2000).

194. *Pongamia pinnata* (L.) Pierre (=*Pongamia glabra* Vent.)

FABACEAE (Hongemara)

a) Description

A tree. Leaves alternate, imparipinnate; leaflets 5 or more, rather, large ovate, acuminate, opposite. Flowers pinkish-white, in lax axillary racemes. Calyx companulate, truncate; teeth obsolete. Corolla much exserted; standard suborbicular with curved folds above the claw; wings obliquely oblong, slightly adnate above the claws to the obtuse keel petals which are joined near the tip. Stamens 10, monoadelphous, the vexillary stamens free below and above; anthers uniform. Ovary subsessile; ovules 2; style incurved, stigma capitate. Pod obliquely oblong attenuated at both ends, curved at apex, thick more or less compressed, indehiscent. Seed 1 reniform thick. Common revenue tree along roadsides and bunds of cultivated fields. Flowering and fruiting during March to May.

b) Ethnobotanical information

The Nayaka tribals employ the tender shoot tips which are burnt and the ash is combined with honey to stop vomiting in pregnant women. The local
medicine-men employ the seeds powder with Blue vitriol (CuSO₄. 5H₂O) to prepare tablets, and is taken orally to cure scabies.

c) Information from literature

Root juice used for cleaning teeth and strengthening gums. Fresh bark decoction in piles, beri-beri. Leaf juice in flatulence, diarrhoea and cough, gonorrhoea and leprosy, seed oil to treat scabies, herpes and leucoderma (Yoganarasimhan, 2000) and the leaf decoction with pepper to cure malarial fever (Singh and Pandey, 1998). The flowers decoction to quench thirst in diabetes (Dharma Chandra Kumar, 1997).

195. Portulaca oleracea L.
PORTULACACEAE (Doddagonisoppu)

a) Description

Prostrate, succulent herbs; stem tinged with pink; nodes without scales. Leaves very shortly petioled, obovate to spatulate; notched at tip. Flowers clustered, terminal, subsessile; bract and bracteoles absent. Sepals distinctly carinate, 2, free — petals 5 to 6, yellow. Stamens 6-12. Style branching with 2-8 stigmas. Ovary half inferior, 1-locular; ovules many on free central placenta, capsule circumscissile below middle. Seeds many, reniform, compressed. Common, weed of roadsides and moist localities. Flowering and fruiting during January to April.

b) Ethnobotanical information

The Kadugolla tribals employ the whole plant, ground with common salt to apply externally on boils and abscess. The plant is used as leafy vegetable by local people.

c) Information from literature

The whole plant pounded up and rubbed on caterpillar stings to reduce the pain (Anderson, 1988). The whole plant is known to cure scurvy and used as leafy vegetable by Meenas tribals of Rajasthan (Yoganarasimhan, 2000; Singh and Pandey, 1998).

VERBENACEAE (Nāralemara, Eegimara)

a) Description

Erect shrubs, or small trees with enations stellately yellow-tomentose. Leaves ovate, acuminate, subcordate, thickly chartaceous. Panicles pyramidal. Calyx 5-toothed. Corolla white outside; yellow within; throat hairy; lobes unequal. Stamens 4, sub-didynamous; anther cells parallel or divergent. Ovary two-locular, becoming 4, 4-ovuled; stigma shortly bifid. Drupe inside calyx with a single 4-seeded pyrene. Common in open forests. Flowering and fruiting during March to May.

b) Ethnobotanical information

The Kadugolla tribals employ the shade dried stem bark powder, taken orally with sugar and cow milk daily to treat dropsy.

c) Information from literature

The root decoction and oil is given in stomach disorders. The leaves are used as diuretic agent and the decoction given after parturition and the stem bark against dropsical affections (Yoganarasimhan, 2000).

197. *Prosopis cineraria* (L.) Druce

MIMOSACEAE (Sēmejāli, Bailaryjāli)

a) Description

Armed trees. Leaves bipinnate, eglandular; secondary leaf rachis 1 to 2; pinnae usually 2 pairs leaflets 15-20 pairs, oblong, obtuse. Inflorescence spike 1 to few fascicled, long. Flowers cream, sometimes polygamous. Calyx faintly toothed. Petals at first connate below middle. Stamens 10; anthers with a deciduous gland. Ovary subsessile, many ovuled. Pod, straight, slender, glabrous, indehiscent. Common and often cultivated as an hedge plant. Flowering and fruiting during September to April.

b) Ethnobotanical information

The local medicine-men employ the leaves, which are boiled with Karanj oil (*Pongamia pinnata*) to apply to expel thorns from feet, and also relieve pain. The Budībudīke tribals employ the bark extract on joints to relieve pain.
Information from literature
Pods astringent and tree yields gum (Yoganarasimhan, 2000).

FABACEAE (Raktahonne)
a) Description
Trees. Leaves imparipinnate; leaflets 5-7, alternate or subopposite, elliptic-ovate, coriaceous. Panicle terminal, long. Flowers 1.5 cm long, with dark-brown calyx and yellow corolla. Calyx toothed upper 2 connate. Stamens monadelphous. Ovary usually stalked, 2-few-ovuled. Pod turgid with a circular wing. Seeds 1 to 2. Occasionally found in forests. Flowering and fruiting during April to May.

b) Ethnobotanical information
The BudlBudlke tribal$ employ the bark decoction with roots of *Acorus calamus* and ginger taken orally for diarrhoea and dysentery. The Koracha tribals employ the leaves with camphor to apply externally to destroy worms in wounds.

c) Information from literature
The leaf extract against diabetes (Gupta *et al.* 1999), bruised leaves for boils and sores and skin diseases (Jevan Ram *et al.* 1999). The gum and resin against rheumatism (Henry *et al.*, 1996), toothache, diarrhoea and dysentery (Deshmukh, Maratkar and Rothe, 1999). The root bark extract with curds against dysentery (Singh Prakash and Palvi, 1999) and against diabetes (Sharma and Singh, 2000). The stem bark powder against dysentery, diarrhoea and stomach disorders (Singh and Pandey, 1990). The decoction of stem bark against diabetes control (Dharma Chandra Kumar, 1997).

199. *Punica granatum* L.
PUNICACEAE (Dâlimbe)
a) Description
An erect shrub, much branched having branchlets, slender, often ending in spines. Leaves simple, oblong, lanceolate, consisting of obtuse or marginate apex, base acute, shiny glabrous. Flowers orange red, borne at branch tips,
sessile or sub-opposite; calyx long, tubular, lobes erect to recurved; thick coriaceous. Petals same as calyx lobes, hypanthium filament free, inferior ovary, ovules numerous, style 1, stigma capitate. Fruit a globose berry crowded with persistent calyx cultivated. Flowers and fruiting during October to May.

b) Ethnobotanical information
The Lambani and Jogi tribals employ the epicarp of the fruit and the extract is taken orally with hot-water to cure jaundice. The local medicine-men employs the tender shoot tips are ground with candy sugar and asbestos to be given orally with cow milk to treat dysmenorrhoea in women and the powder of the fruit is given orally with curds to cure dysentery in children.

c) Information from literature
The locals use the fruits and seeds to increase the sexual vigour (Singh and Pandey, 1998). Bark used to expel tapeworms. Fruit rind as astringent, diarrhoea and dysentery. Flower buds in bronchitis (Yoganarasimhan, 2000).
200. *Ricinus communis* L.

EUPHORBIACEAE (Haralu, Oōdalagida)

a) Description

Large shrubs; usually glaucous. Leaves peltate, palmately 7-fid, serrate, palmately veined; petiole biglandular at tip. Perianth 3-5 partite; male perianth 3-partite, female 5-partite. Disc absent. Stamens numerous in many branched fascicles. Ovary usually densely muricate, ovule one per locules, styles 3, branching into 6 papillose arms. Fruit schizocarp densely muricate. Common, escape in plains. Flowering and fruiting during January to June.

b) Ethnobotanical Information

The Lambani tribals employ the leaf juice with cow milk for jaundice. The Jogi tribals use the fresh leaf paste externally for boils and sores. The Budibudike tribals employ small dose of pure seed oil orally for constipation. Often the leaves are used as plates by tribals and local people.

c) Information from literature

Leaf paste against body pain (Arvind Saklani and Jain, 1996). The leaves smeared with oil, warmed and applied against boils (Usha Shome et al., 1996), leaf powder with *Phyllanthus amarus* with buttermilk to cure viral jaundice (Narayana Rao et al., 1991), leaf juice with goat milk to cure jaundice (Pandey and Shrivastava, 1993), leaf paste to cure itches (Bora, 1999), and a potential remedy against opium poisoning (Barua and Das, 1999) and for fever (Nagata, 1970), as galatogouge in animals (Mishra, Jha and Jha, 1996). The root decoction against guinea-worms diseases (Sharma, 1990), against rheumatism (Khare and Khare, 1999), for the termination of pregnancy (Sharma and Singh, 2000). The seed powder against abortion (Saini, 1996), constipation (Satapathy and Brahman, 1996), as a contraceptive (Singh and Anwar ali, 1996 and Goyal et al., 1997) as muscle relaxant (Gupta et al., 1997) against vertigo, nausea and vomiting (Baburaj Britto, Mathew and Rajan, 1999), seed oil against rheumatism (Suryanarayana et al., 1999).
201. *Ruta graveolens* L.
RUTACEAE (Mele kalina soppu)

a) Description
Aromatic foetid herbs or under shrubs. Leaves 2 to 3 pinnate; segments oblong to spatulate. Flowers yellowish, small in corymb. Calyx 5; corolla 5 free; disc conspicuous; stamens 10. Fruit a capsule. Cultivated. Flowering and fruiting during March to October.

b) Ethnobotanical Information
The Nayaka and Jogi tribals employ the whole plant with pepper and garlic to prepare pills to be taken orally for fever and chilling. The Jogi tribals employ the whole plant paste with children urine to be given orally as an antidote for snakebite.

c) Information from literature
The whole plant used in hysteria and amenorrhoea. The plant yields an oil, used as anthelmintic, antispasmodic, antieptic and rubificent (Yoganarasimhan, 2000).
202. *Salacia malabarica* (DC.) Schott & Endlicher
BOMBACACEAE (Boorugada mara)

a) **Description**
Trees. Leaves alternate; stipules small, deciduous; blade pinnately compound, chartaceous. Inflorescence of fascicles or solitary flowers, usually on leafless branches. Flowers dark red. Calyx wooly within; petals oblong, acute, hairy externally. Stamens less than 80 connate branching into 5-6 fascicles (phalanges); anthers 1-2 celled. Ovary 5-locular branching into 5-6 fascicles (phalanges); ovules many in each locule, axile; style 5 branched. Capsule hairy, woody, 5-valved; seeds many covered by cottony hairs. Fairly common in deciduous forests and along roads. Flowering and fruiting during February to April.

b) **Ethnobotanical information**
The Kadugolla tribals employ the fresh juice of the bark mixed with cow milk to be taken orally to cure inflammation. The Lambani tribals use the ash of the flower with stalk mixed with honey for the control of spleen enlargement.

c) **Information from literature**
The flower buds cooked as vegetables (Singh, 1996), water based flower paste to obtain permanent sterility (Bhuyan, 1994), against leucorrhoea (Saini, 1996). The gum is used in leucorrhoea (Aswai, 1996) and in diarrhoea (Mahato *et al.*, 1996). The root powder as aphrodisiac (Aswal, 1996), and to facilitate easy delivery (Borthukar and Saxena, 1996).

203. *Sansevieria roxburghiana* J & J. Schultes
AGAVACEAE

a) **Description**
Rhizome creeping. Leaves basal, entire, epetiolate, semiterete, to 1 m long and 5 cm thick, with scattered horizontal black bars above. Inflorescence racemose to 1 m long. Perianth narrowly tubular. Ovary superior; ovule 1 per locule; style linear, stigma simple. Pericarp falling away from ripening berry-like seeds. Planted as hedges plant. Flowering and fruiting during January to June.
b) Ethnobotanical information
The Lambani and Nayaka tribes use leaf juice, warmed and dropped into ear for earache. The local people and tribals believe that the plant is snake repellent.

c) Information from literature
Rhizome mucilaginous, used in the form of an electuary for cough and the juice of tender shoots to clean phlegm in children (Yoganarasimhan, 2000).

204. *Sapindus laurifolia* Vahl
SAPINDACEAE (Nore kayi; Kogate mara, Antuvala)

a) Description

b) Ethnobotanical information
The Kadugolla tribals employ the fruits, boiled and its decoction taken orally in small doses for the treatment of purgative and diarrhoea. The Lambani and Jogli tribals employ the fruits, which are ground and applied externally as shampoo for hair wash and dandruff.

c) Information from literature
The fruit powder used as stupefy the fish for hunting (Singh and Pandey, 1998), diarrhoea, cholera, tubercular glands, paralysis of limbs and lumbago (Yoganarasimhan, 2000).

205. *Saraca asoca* (Roxb.) de Wild.
CAESALPINACEAE (Ashoka mara)

a) Description
Medium sized tree. Leaves even pinnate; leaflets 4 pairs, petiole 25 cm long, ovate, oblong, acuminate. Inflorescence panicle, long, orange-yellow, pink with age. Bracteoles 2 at the base of the calyx tube; calyx petaloid, hypanthim

b) Ethnobotanical Information
The local traditional healers employ the milk based extract of stem bark with candy sugar and asbestos, taken orally to treat dysmenorrhea, leucorrhoea and haemorrhage in women. The Jogi tribals use the leaves which are ground and applied externally on swellings to relieve pain. The flowers are ground with honey, taken orally for dysentery. The Lambani tribals use the flower powder for the treatment of diabetes.

c) Information from literature
The bark is astringent, refrigerant and anthelmintic. It cures dyspepsia, burning sensation and ulcer (Nayak and Chodhury, 1999), leucorrhoea and gynaecological disorders (Satapathy and Brahman, 1999). The dried flower buds for diabetes (Nayaka and Choudhury, 1999), an alcoholic extract of flower buds used in late menstruation in domestic animals (Sarkar et al., 1999).

206. *Sarcostemma intermedium* Decaisne
ASLEPIADACEAE (Konanaballi, Soma)

a) Description
Leafless straggling shrubs. Cymes umbellate, terminal. Corolla campanulate; lobes slightly imbricate to the right, glabrous pale yellowish white; margins revolute. Outer corona 10-lobed, inner corona of 5 fleshy erect lobes with the apices slightly inflexed. Style apex elongate-conical, shallowly cleft, exerted. Pollinia pendent from dark horny corposcula, 2 per anther, waxy, without pellucid margins. Gynoecium of 2 superior unilocular carpels united only by the enlarged style apex. Fruit of paired follicles. Seeds flattened, comose. Abundant in scrub. Flowering and fruiting during October to July.

b) Ethnobotanical information
The Kadugolla tribals employ the whole plant, ground to prepare hot water-based extract to treat early expellation of placenta after delivery in cattle.
age. Fairly common in scrub plains. Flowering and fruiting during June to August.

b) Ethnobotanical information
The Lambani tribals employ the fresh leaf paste apply externally for syphilis. The leaf decoction is given orally as an anthelmintic. The Budilbudike tribals use the leaf paste along with tobacco powder to apply externally for wounds to expel worms.

c) Information from literature
The boiled leaves are used in dysentery and stomachache (Henry et al., 1996), paste against scabies (Jeevan Ram et al., 1999). The paste of leaves with tobacco to destroy worms in the sores (Yoganarasimhan, 2000).

ANACARDIACEAE (Gerumara, Korigeru)
a) Description
Medium sized tree. Leaves simple, broadly obovate-oblong, rounded-acute at tip, truncate – cordate at base, glabrous above, silky white pubescent beneath, panicles small, hairy, lateral or terminal. Flowers yellowish, unisexual; stamens smaller in female. Ovule sub apical; styles 3; stigma capitate. Drupe or nut reniform supported by fleshy hypocarp with plenty of acrid juice. Common in dry-deciduous forests. Flowering and fruiting during June to September.

b) Ethnobotanical information
Jogi tribal use the seed oil as an antiseptic to wounds and treatment of rheumatism. Native people use ripe fruit juice for the treatment of indigestion.

c) Information from literature
The fruits are anthelmintic, used to cure beri-beri, cancer, dyspepsia, leucoderma and cardiac diseases (Nayak and Choudhury, 1999), psoriasis, rheumatism, epilepsy and tumour (Yoganarasimhan, 2000).
210. *Sesbania grandiflora* (L.) Oir.
FABACEAE (Agase, Sedesoppu)

a) Description

b) Ethnobotanical Information
The Kadugolla and Nayaka tribals employ the root paste applied externally as an antidote for scorpion sting and bites of centipede. The Lambani tribals employ the fresh leaf juice (3-4 drops) dropped into nostrils to cure fever. The traditional medicine-men employ the shade dried root powder and filtered, the filtrate is taken orally to cure cough. All tribals and rural people use the leaf, flower and fruits as vegetables.

c) Information from literature
Juice of the roots with honey as expectorant. The bark decoction for diarrhoea and dysentery and scabies. The flower juice to improve eye sight (Yoganarasimhan, 2000). The leaves, flowers and young pods as vegetables (Deshmukh et al., 1999).

211. *Shorea roxburghii* G. Don
DIPTEROCARPACEAE (Jalārimara, Araginamara)

a) Description
Large deciduous trees. Leaves alternate, elliptic, acute and emerginating at tip, sub-cordate at base, blade coriaceous, entire. Inflorescence panicles of racemes, axillary. Flowers bisexual, regular. Sepals glabrous, subequal; petals white, pubescent on the outside. Fruiting calyx with 3 acrescent lobes. Stamens 15, anthers linear. Ovary hairy, superior, 3-locular, ovules 3 in each locule, parietal; stigma 3-fid. Fruit nut-like enclosed in calyx tube, with 3-lobes acrescent, oblong, erect turning red. Occasional in dry deciduous forests.
Frequently planted in plains and gardens. Flowering and fruiting during February to March.

b) Ethnobotanical information
The Budlbudlike tribes collected gum oozing from this tree mixed with honey or sugar to be taken orally amoebic dysentery.

c) Information from literature
Nil.

212. *Sida acuta* N. Burman
MALVACEAE (Bheemanakaddi)

a) Description

b) Ethnobotanical information
The Kadugolla tribals employ the fresh root juice orally with goats milk for anthelmintic; the leaves are ground and tied with clean white cloth, and soaked in goats milk to squeeze to remove cataract of the cattles. The Nayaka and Jogl tribes employ the root juice externally for healing of wounds. The whole plant is ground with ginger, the extract is taken orally for intermittent fever and seed powder is given orally with milk daily for impotency by local medicine-men.

c) Information from literature
The leaf extract for acidity (Kshirasagar and Singh, 2000), leaf juice with milk against syphilis and gonorrhoea (Kothari and Londhe, 1999), as abortifacent in Africa (Datta and Banerjee, 1978). The whole plant decoction is used for gonorrhoea, ulcer, rheumatism. The root paste is used against urinary and
nervous disorders and problems related to bile and blood (Datta and Banerjee, 1978). The leaves are boiled and applied to testicular swellings and elephantiasis (Yoganarasimhan, 2000).

213. *Sida cordifolia* L.

**MALVACEAE (Kisangl, Chittanuitti)**

a) **Description**


b) **Ethnobotanical information**

The Nayaka and Lambani tribals employ the whole plant for urinary disorders. The root paste is applied on bleeding piles. The Jogi tribals employ the paste of leaves with candy sugar to cure leucorrhoea in women.

c) **Information from literature**

The leaf juice is used as antiseptic to stop bleeding from cut wounds (Balasubramanian and Prasad, 1996; Rosakutty *et al.*, 1999) to lessen the labour pain (Bhuyan, 1994). The plant juice to prevent spermatorrhoea (Saini, 1996; Khanna and Ramesh Kumar, 2000), snakebite and scorpion sting (Panda and Das, 1999). The root with ginger used as febrifuge, root bark in leucorrhoea and paralysis (Rama Prasad and Pandey, 1993), urinary and nervous diseases, especially to cure facial paralytic stroke (Singh and Pandey, 1998).
214. *Solanum erianthum* D. Don

SOLANACEAE (Kādusunde, Kaliartl, Chowdangi)

a) Description

Unarmed, densely stellately tomentose. Leaves alternate, often unequally paired in upper parts; stipules absent; leaf blade generally entire, ovate-oblong, subtruncate at base. Cymes apparently terminal, corymbose. Calyx gamosepalous, dentate to partite, usually persistent. Corolla white, stellately tomentose without, slightly exceeding calyx. Stamens usually 5, usually inserted below mid corolla; filaments free; disc hypogynous. Ovary superior, usually 2-locular; ovules many, axillary; style simple, filiform; stigma dilated to 2-lobed. Fruit a berry sparsely; stellately hairy, globose, turning yellow, seeds scaly, minutely papillose. Fairly common in shady places. Flowering and fruiting during December to September.

b) Ethnobotanical Information

The Kadugolla tribals employ the leaves that are ground and the paste is mixed with honey to be taken orally for bronchi ti^2, and throat infections. The Nayaka tribals employ decoction of the fruits to gargle, to cure toothache and gum bleeding. The bruised leaves are applied on wounds by Koracha tribals.

c) Information from literature

The decoction of roots used in body pains, vertigo and urinary disorders and leaves to control vaginal discharges (Yoganarasimhan, 2000). The decoction of leaves given to prevent contagious horse disease (Singh and Kaushal Kumar, 2000).

215. *Solanum nigrum* L.

SOLANACEAE (Ganike, Kempuganiek soppu)

a) Description

Unarmed herbs. Leaf entire or slightly toothed, ovate, decurrent on the petiole glabrous or sparsely pubescent. Cyme umbellate, axillary or lateral, 4-8 flowered. Flowers bisexual, pedicelled. Calyx campanulate or tubular, sometimes accrescent. Corolla white, rotate, limb plicate, lobed. Stamens usually 5, anthers connivent into a cone around the style. Disc hypogynous. Ovary superior, usually 2-locular; ovules many, axillary; style simple, filiform;
stigma dilated to 2 lobed. Berry globose, glabrous, seedly minutely pitted. Common along the roadsides, cultivated and waste lands. Flowering and fruiting during January to December; December to January.

b) Ethnobotanical information

The Nayaka and Lambani trials employ the juice of the leaves taken orally with milk for indigestion. The Jogli tribals employ the fruits made into juice with sugar taken orally for diarrhoea. The local people and tribals use the leaves as leafy vegetable. The berries are edible.

c) Information from literature

The leaf decoction to remove the effect of opium (Bedi, 1978), the leaf juice against jaundice (Raju et al., 1999), leaves in skin ailments and hydrophobia (Suryanarayana et al., 1999). The fruits as galatogogue, fruit powder is smoked to cure pharyngeal infection and tonsil swellings (Das and Misra, 1999), asthma (Suryanarayana et al., 1999). The root decoction to enhance fertility (Bedi, 1978), and to cure vomiting in children (Singh and Pandey, 1998).

216. *Solanum surattense* Burm. f. (= *S. xanthocarpum* Sch. & Wendl.)

SOLANACEAE (Ramagulla, Karigulla)

a) Description

Prickly diffuse herb; prickles straw coloured or yellowish. Leaves alternate, subopposite, simple, elliptic, deeply sinuate, prickly glabrous. Flowers in supra-axillary cymes, sometimes reduced to solitary. Calyx tubular, long hairy densely prickly, crumbled in bud; lobes lanceolate, stamens 5; filaments glabrous, anthers oblong. Ovary ovoid, glabrous, 2-celled; ovules numerous; style simple, glabrous; stigma capitate. Fruit a berry, white or yellow with green reticulations with enlarged calyx seeds discoid, flat, glabrous. Common, spreading herb in waste places and on manure heaps. Flowering and fruiting during July to January.

b) Ethnobotanical information

The Kadugolla tribals employ the whole plant ground with buttermilk to be given orally for cough in cattles. The Lambani tribals employ the seeds which are powdered and smoked to cure whooping cough. The fruits are shade dried and powdered to give orally for toothache.
Information from literature
The stem, flowers and fruits used as carminative. Juice of leaves mixed with pepper and used in rheumatism. The dried seeds to cure diabetes (Gupta et al., 1999). The juice of berries and leaves to cure cough, asthma and chest pain (Suryanarayana et al., 1999). Seeds burnt and smoke is taken in mouth for toothache (Seema Malik, 1996). The roots are used as expectorant in asthma and cough (Yoganarasimhan, 2000).

217. *Solanum torvum* Sw.,
SOLANACEAE (Sundekayi, Sundegida)

a) Description
Large, stellately hairy shrubs, with prickles usually on stem and petioles. Leaf ovate-lanceolate, with shallow, somewhat triangular lobes, cordate-oblique at base. Cyme lateral, corymbose, few to many flowered. Pedicel long, often glandular — hairy. Calyx campanulate or tubular; sometimes accrescent. Corolla white, stellately hairy outside. Stamens usually 5, inserted below mid corolla. Disc hypogymous. Ovary superior, usually 2-locular; ovules many, axillary; style simple, filiform; stigma dilated to two lobed. Fruit, berry globose, glabrous. Seeds somewhat angular, smooth. Common along roadsides, waste places, often cultivated for its fruits. Flowering and fruiting during January to July and March to September.

b) Ethnobotanical information
The Lambani tribals employ the leaves which are shade dried and ground with hot water as poultice and apply on swellings to alleviate inflammation. The local medicine-men employ the leaves with turmeric powder and pepper, the paste is applied externally for rheumatic pain.

c) Information from literature
The fruits are fried in oil and given for cough (Saxena et al., 1988). Roots used in poultices applied for cracks in the feet (Yoganarasimhan, 2000).
218. **Sonchus oleraceus** L.
ASTERACEAE (Hulumulangi soppu)

a) Description

b) Ethnobotanical information
The Kadugolla tribals employ the whole plant pounded with pepper and garlic taken orally to treat fever and cough. The Koracha tribals use water based leaf decoction with common salt to treat indigestion.

c) Information from literature
The juice of plant is taken orally with sugar to cure liver diseases (Singh and Pandey, 1998). The leaves and roots used in indigestion and as a febrifuge. Stem tonic and sedative (Yoganarasimhan, 2000).

219. **Sopubia delphiniifolia** (L.) G. Don
SCROPHULARIACEAE

a) Description
Hemiparasites. Lower leaves pinnatisect with filiform segments. Calyx lobe linear, glabrous within. Corolla white to purple, 2 cm long. Stamens 4, didynamous; sterile anther cells acuminate. Disc present. Ovary superior, 2-locular, usually with numerous axile ovules; stigma entire to 2-fid. Fruit usually a capsule; seeds generally small. Frequent in marshy places, tanks and pools. Flowering and fruiting during August to January.

b) Ethnobotanical information
The Jogi and Koracha tribals employ the juice of the leaves, externally on scabies. The Budlbudike tribals employ the whole plant paste for sores and ulcers.
c) Information from literature
The juice applied to sores on feet, caused by exposure to moisture (Yoganarasimhan, 2000).

220. *Sphaeranthus indicus* L.
ASTERACEAE (Moodugattinasoppu, Thiganesoppu)

a) Description
Prostrate or ascending aromatic herbs, branching from near base; stem narrowly winged; wing toothed. Leaves ovate to obovate, acute to rounded at tip, sharply toothed. Compound heads globose, purplish; bracts lanceolate, acute, toothed along margin, membranous; receptacle glabrous. Outer florets female; corolla tubular, 2-3 fid. Anthers obtuse. Style arms short. Achenes oblong usually tipped by persistent corolla; pappus 0. Common in open moist areas, in plains. Flowering and fruiting during January to April.

b) Ethnobotanical information
The traditional healers use root pounded with buttermilk and the extract taken orally to treat piles. The Lambani tribes use the root powder to prepare hot water based extract, to treat abdominal pain and as vermifuge. The whole plant is powdered and taken orally with cow's milk to treat short sight. The Kadugolla tribes use the juice of flower into eye (3-4 drops) to remove cataract in cattle.

c) Information from literature
The plant juice is useful in gastric troubles (Bedi, 1978). The leaves with *Coldenia procumbens* and calcium to treat skin diseases (Jewan Ram et al., 1999). The root and inflorescence for impotency (Rao et al., 1999). Pulverized seeds and roots used in cough and other chest troubles and antitubercular agent (Yoganarasimhan, 2000).

221. *Spilanthes calva* DC. (= *Spilanthes acmella* auct.non (L.) Murr.)
ASTERACEAE (Hommugali, Sannavanamugali)

a) Description
Creeping ascending herbs. Leaves ovate, acute, subcrenate, acute, sometimes elliptic glabrous; receptacle raised, conical. Florets yellow ligules
filiform, included. Stamens 4-5 nearly free, anthers acute below. Style arms slender, hairy. Achenes dorsally compressed, sometimes trigonous, glabrous; pappus 0. Common in shade along roadsides, marshy areas, drainages, and nearby tanks. Flowering and fruiting during September to December.

b) Ethnobotanical information
The Nayaka and Lambani tribals chew the flower heads to remove bad smell from the mouth, relieve throat infection and toothache. The whole plant is ground with jaggary to prepare pills and taken orally with ghee to cure fever. Koracha tribals use the leaf paste applied externally to cure eczema and itching.

c) Information from literature
The pungent flowers are chewed for relief in throat infections and paralysis of tongue; stammering in children. The decoction given in lithotriptic and diuretic, also used in scabies and psoriasis (Yoganarasimhan, 2000). The seed oil is used for perfect erection of male sex organ (Singh and Pandey, 1998).

222. Stachytarpheta indica (L.) Vahl
VERBENACEAE (Kaadu uttarani)

a) Description
Large herb, sometimes subscandent, sparsely pubescent under shrubs. Leaves opposite, simple, dentate. Inflorescence a terminal, centripetal spike. Spike glabrescent, 30 cm long. Flowers sessile, and subtended by persistent bracts or immersed in the rachis, 4-merous. Calyx tubular, ribbed, dentate. Corolla blue purple, salver form; tube slightly curved, hairy inside; limb oblique, with spreading often emarginate lobes. Stamens 2. Staminodes linear, small. Ovary 2-locular, 2-ovulate; style elongate, persisting; stigma subcapitate. Drupe included on calyx, breaking into two one seeded pyrenes. Common weed in open places and along roadsides. Flowering and fruiting July to December.

b) Ethnobotanical information
The Kadugolla tribals employ the leaves cooked as leafy vegetables with butter is taken orally for internal piles. The Nayaka and Lambani tribals employ the leaf paste, which is applied externally for wounds and cuts.
Information from literature
The whole plant extract used for intestinal worms, venereal diseases, dropsy, stomach ailments and ulceration of nose, and the dried leaves are used for cardiac troubles (Banumathy and Parvathi, 1999), paste of the leaves in coconut oil for cooling and to control fever after delivery and the Nicobarese (Dagar and Dagar, 1999).

Sterculia urens Roxb.
STERCULIACEAE (Billibuthale, Kempudāle)

a) Description
Unarmed deciduous trees. Leaves alternate, 3-5 lobed, crowded towards the apices of stem, entire; glaucous below. Inflorescence racemes or panicles, axillary or terminal. Flowers usually unisexual. Calyx hairy; lobes not reflexed, short, 5-toothed. Petals absent. Receptacle produced into an elongate gynandrophiore. Stamens 15. Anthers sessile crowded together at tip of gynandrophiore, surrounding reduced to pistillodes; staminodes absent. Carpels 5, stalked, 1-locular, 2 to many ovuled. Follicles acute at both the ends, bristly hairy. Occasionally found in forests. Flowering and fruiting November to December.

b) Ethnobotanical information
The Nayaka and Kadugolla tribals employ the leaves which are ground and made into paste applied externally on ringworms. The Jogi tribal employ the stem bark of the plant made into decoction which is taken orally with honey to cure dysentery.

c) Information from literature
The bark is used to facilitate easy delivery (Yoganarasimhan, 2000; Ram Prasad and Pandey, 1993). The gum is used for piles, (Kothari and Rao, 1999), cooling effect (Sharma and Singh, 2000), to relieve labour pain (Pandit et al. (1996). The paste of young fresh leaves is applied as an ointment on cracked skin (Singh and Pandey, 1998; Prabhakar Joshi, 1985).
224. **Sterospermum colais** (Buch. – Ham. Ex Dillw.) Mabber. (= **Sterospermum personatum** (Hassk.) Chatterjee)
BIGNONIACEAE (Aadhrimara)

a) Description

b) Ethnobotanical information
The Koncha tribal apply leaf paste externally for scorpion stings.

c) Information from literature
The stem contains tannin and flavonoids (Brahman and Saxena, 1978), root bark is taken orally for malaria (Jamir, 1991). The decoction of roots used in asthma, cough and excessive thirst (Yoganarasimhan, 2000), against malaria (Jamir, 1991).

225. **Strychnos potatorum** L.f.
LOGANIACEAE (Vishamusti, Kasarka)

a) Description
Erect trees. Leaves elliptic, acute at both ends, with a pair of ribs above the basal 3. Cymes usually on old wood. Flowers 5-merous, corolla tube longer than lobes. Stamens inserted in the corolla tube; anthers usually 2-celled; anthers often bearded at base. Ovary superior, bilocular, with 1 to many axillary ovules, oval and style glabrous. Fruits berry 1 or sometimes 2-seeded with a thick crustose rind. Occasional in dry-deciduous forests. Flowering and fruiting during September to June.

b) Ethnobotanical information
The Lambani tribal employ the shade dried and powdered root bark, the powder is boiled with water and filtered, the decoction is combined with palm jaggery and given orally for abdominal pain during menstrual period. The
Budlbudlke tribals employ the leaf paste with sesame oil to apply externally for scabies and eczema.

c) Information from literature

Seeds tonic, stomachic, demulcent and emetic, used in diarrhoea, diabetes and gonorrhoea (Yoganarasimhan, 2000). The fruits are used as vermifuge (Balasubramanian and Prasad, 1996) and seeds are used to clear the turbidity of water (Suryanarayana et al., 1999).

226. *Stylosanthes fruticosa* (Retz.) Alston
FABACEAE (Kadukadale kayi, Kadukadle)

a) Description

Diffuse, rigid, pubescent under shrubs. Leaves pinnately trifoliate; leaflets elliptic – oblong armed at apex, mucronate, stipules sheathing, adnate to the petiole. Flowers polygamous, concealed, in the upper leaves, small, 1–few per head. Calyx tube filiform; upper 4 lobes connate, lowest narrow and distinct. Corolla yellow. Stamens mono delphous in closed tube; anthers dimorphous, alternately long, basifixd and short, versatile. Ovary subsessile, 2–3 ovuled; style long, lower part persistent, dilated at apex and resembling stigma. Pod of 1–2 joints, small, concealed in the bracts, turgid, rugose, tipped with the persistent hook, basal part of the style; seeds strophiolate. Frequent in plains and scrub jungles. Flowering and fruiting during May to January.

b) Ethnobotanical information

The Jogl tribals employ the leaves are bruised and its smell inhaled to treat hysteria, and the leaves are shade dried and powdered to smoke for cough.

c) Information from literature

In Africa, leaves used in diarrhoea and infusion of the herb given in colds (Yoganarasimhan, 2000).
227. *Tarenna asiatica* (L.) Kuntze
RUBIACEAE (Tarani, Rayabhore gida)

a) Description
Usually shrubs, young parts often resinous. Leaves elliptic lanceolate, shining, shortly acuminate, rounded, coriaceous; stipules interpetiolar, connate. Inflorescence a terminal corymbose cyme; bracts and bracteoles present. Flowers 5-merous, corolla lobes contorted; tube shorter than lobes; calyx long-lobed, persistent. Stamens inserted on the mouth of corolla; anther exserted. Ovary 2-locular; locule many ovuled; style hairy. Fruit a berry, crowned with calyx. Frequent in scrub jungles. Flowering and fruiting during January to December.

b) Ethnobotanical information
The traditional healers use the leaves with the leaves of *Dodonea viscosa* and bark of *Terminalia arjuna*, shade dried and powdered, mixed with cow ghee and applied externally on bone fracture.

c) Information from literature
Fruits mashed and applied on boils to promote suppurations (Yoganarasimhan, 2000).

FABACEAE (Vajraneeli gida)

a) Description
Glabrescent erect under shrub. Branches grey, pubescent. Leaves usually odd pinnate; venation strikingly striate. Leaflets 13-19, raceme with 1-4 flowers at node. Calyx lobe or teeth sub equal or upper 2-connate. Corolla pink, wings slightly adherent to keel. Stamens 10, monoadelphous at early stage, the vexillary (upper) filament becoming free. Ovary sessile, usually many ovuled; style often flattened, glabrous or bearded; stigma usually penicillate. Pod slightly curved glabrous. Common weed in waste places and amidst boulders along rocky slopes. Flowering and fruiting during April to December.
b) Ethnobotanical information
The Lambani tribal employ the root paste with garlic to apply externally for pimples (acne). The Nayaka and Jogi tribals employ the leaves are made into paste with common salt and apply externally on abscess and boils.

c) Information from literature
The root is used to destroy 1-2 months zygote and follows bleeding, to prevent bleeding, *Cynodon dactylon* juice is administered to prevent the bleeding (potential contraceptive). The root decoction is used against rheumatism (Bhuyan 1994), tonsillitis (Dwivedi, 1999), typhoid (Ram Prasad and Pandey, 1993); to cure stomach pain, spleen enlargement, diarrhoea and as an insect repellent in cattle (Dash and Mishra, 1999). The blood purifier (Thomas and Britto, 1999).

229. *Terminalia arjuna* W. & A.
COMBRETACEAE (Thoremathi, Koodumara)

a) Description
A large deciduous tree. Leaves oblong, or elliptic, usually crenulate. Flowers small, green or white in spikes. The spikes solitary or in panicles; bracteoles small, deciduous, calyx tube cylindric constricted above the ovary; limb campanulate with 5 triangular valves. Petals absent. Stamens 10, in 2 series, the 5 upper alternate with the calyx lobes, the 5 lower opposite; filaments subulate, exerted; anthers small. Disk inside the stamens, 5 lobed villous. Ovary inferior 1-celled; ovules 2-3 pendulous; style subulate, stigma small. Fruit with short, hard angles or wings, usually notched near the top, the lines on the wings oblique and curving upwards. Occasional in forests, especially in the banks of rivers and streams. Often it is cultivated. Flowering and fruiting during March to June.

b) Ethnobotanical information
The Jogi tribal employ the shade dried and powdered stem-bark taken orally with honey for cardiac problems. The same powder is applied externally with neem oil for maggots in wounds. The Nayaka and traditional healer use the same bark powder in combination with the leaf powder of *Tarenna asiatica*
and Cassia montana is mixed with yolk of hen egg or cow ghee or in combination with Guizotia oil as poultice on bone fracture and sprain.

c) Information from literature
The bark decoction against chest pain and heart palpitation (Satapathy and Brahmam, 1996), heart diseases (Dwivedi, 1999) and against menstrual disorders (Henry, et al., 1996). Unripe fruits are used as astringent and ripe fruit as purgative (Gupta et al., 1999). The bark and leaves are used for wounds (Kothari and Moorthy, 1996).

230. **Terminalia bellirica** (Gaertner) Roxb.
**COMBRETACEAE** (Tāremara, Shantimara)

a) Description

b) Ethnobotanical information
The Kadugolla tribal employ the fruit powder in combination with honey for asthma. The Budlbudike tribal ground the fruit and made into paste, which is applied externally for swellings to relieve pain. The tender water based fruit decoction is taken orally with sugar to treat constipation. Local people, as well as, tribals worship the tree on every Saturday.

c) Information from literature
Dry fruits exhibit antifungal activity (Valsaraj et al., 1998), asthma and bronchitis (Kothari and Moothy, 1996), one of the triphala constituent, used for jaundice (Raju Goel et al., 1999). The leaf paste to prevent vomiting and diarrhoea (Gupta et al., 1999). The fruit powder with *Cyperus rotundus* rhizome against gastritis (Satapathy and Brahmam, 1999), dysentery (Sharma, 1999), as astringent, antipyretic, laxative, piles, dropsy, leprosy,
dyspepsia and headache (Ranjan, 1999) and in peptic ulcer (Narayana Rao et al., 1991).

231. *Terminalia catappa* L.
COMBRETACEAE (Nādūbādāmī)

a) Description
A large deciduous tree with large leaves, which turn red before falling. Leaves clustered at the ends of the branchlets, alternate, thin, obovate, obtuse, base cordate, petiole very short. Flowers, small, green or white, in spikes. Spikes solitary or in panicles. Calyx tube-ovoid, limb campanulate, with 5 triangular valvate lobes. Petals absent. Stamens 10, in 2 series, the 5 upper alternate with the calyx lobes the 5 lower opposite to them; filaments subulate, exserted; anthers small. Disc inside the stamens, 5 lobed, villous. Ovary inferior 1-celled; ovules 2-3, style subulate, stigma small. Fruit ellipsoid, more or less compressed, 2-ridged when dry, glabrous. Common, cultivated in gardens and as avenue tree. Flowering and fruiting during March to May.

b) Ethnobotanical information
The Lambani and Koracha tribal use the tendered leaf paste and apply externally for the treatment of scabies. The seed kernel is crushed and made into fine paste in combination with garlic to apply externally on forehead for headache.

c) Information from literature
Leaves sudorific, also applied to rheumatic joints, juice used in ointment for scabies and cutaneous infections. The bark is used as diuretic and cardiotonic and also used in dysentery (Yoganarasimhan, 2000).

COMBRETACEAE (Āḷālekayī)

a) Description
Trees. Leaves usually alternate or sub opposite; glands sessile at apex of petiole; blade elliptic-oblong, rounded at both ends. Young parts tomentose. Spike short, usually simple. Flowers white or pale yellow. Calyx smooth, hypanthium not produced; limb campanulate, with short, triangular lobes.

b) Ethnobotanical information
The Jogi and Koracha tribes employ the fruits powdered with common salt and clove for toothache and bleeding gum. The fruits are powdered with pepper and ginger, and mixed with honey for fever in Kadugolla tribal. The traditional healer use shade dried fruits powder with clove and small quantity of camphor taken orally with cow milk or hot-water for the treatment of bronchitis and cough.

c) Information from literature
The fruit powder for scabies (Jewan Ram et al., 1999), as laxative, chronic ulcer, toothache, asthma and eye complaints and a component of "Triphala" (Kothari and Rao, 1999), as laxative and stomachache (Dwivedi, 1999), smoothening of skin and cracks (Rajendran and Aswal 1999), abortion (Bhuyan, 1994) and fruit paste to cure frequent nocturnal emissions. Fruit powdered and smoked to control asthma condition (Gupta et al., 1999).

COMBRETACEAE (Huluve mara, Hunagalu mara)

a) Description

b) Ethnobotanical information
The Lambani tribals use the water-based decoction of the bark, which is taken orally with sugar for vomiting and also to treat fever.

c) Information from literature
Bark as cardiotonic and diuretic (Yoganarasimhan, 2000)
234. *Thespasia populnea* (L.) Sol. ex Correa
MALVACEAE (Huvarasimara, Bugarimara)

a) Description
Shrubs or trees, often scaly. Leaves undivided, sometimes palmately lobed, entire, cordate at base, 3-5 ribbed; midrib glandular. Inflorescence of 1-few flowers in solitary. Calyx woody, cupular, truncate at mouth except for small teeth, persistent. Corolla large, rotate, bright yellow, with purple base, often turning brick red with age. Staminal column antheriferous throughout. Ovary 5-locular, or incompletely 10-locular, each locule 3-to-many ovulate; style 1; stigma clavate, ribbed. Capsule woody, dehiscent or not; seeds glabrous or tomentose. Common in roadsides and often cultivated. Flowering and fruiting during January to February.

b) Ethnobotanical information
The traditional healer employ the stem-bark juice, given orally with cow milk to 10-15 days for abortion. The Kadugolla tribal employ the stem-bark powder and given orally with jaggary as appetizer. The Nayaka tribal employ the ground leaves and the paste is applied externally with neem oil to destroy worms in wounds.

c) Information from literature
The stem bark, flowers used in single or in combination with others for uterine problem and irregular menstruation (Rajendran and Mehrota, 1996). The leaves, fruits and roots to cure scabies and psoriasis (Singh and Pandey, 1998).

MENISPERMACEAE (Amruthaballi, Madhuparni)

a) Description
Climbing shrub with succulent stems, the bark papery, at first, then corky. Leaves glabrous, alternate, simple, deeply cordate. Flowers axillary terminal or from the old wood. Sepals 6, 2-seriate, inner larger. Petals 6, smaller. Male-stamens 6, free; anther cells cornivent at the thickened top of the filament, bursting longitudinally. Female – staminodes 6, clavate; ovaries 3; stigmas forked. Drupes ventrally flat, dorsally convex, round or oval; style-scar
subterminal. Seeds grooved ventrally or curved. Common among trees in forests and hedges. Flowering and fruiting during February to June.

b) Ethnobotanical information
The Nayaka tribal employ the whole plant, which is ground and boiled to prepare condensed decoction taken orally to treat diabetes. The Jogi tribal employ the leaf juice taken orally with candy sugar to cure hemorrhage. The Kadugolla tribal employ the whole plant juice applied externally and also given internally as antidote for snakebites in cattle.

c) Information from literature
The stem decoction is used as a well known tonic for chronic fever and weakness (Pandit et al., 1996; Bedi, 1978 and Thomas Britto, 1999), jaundice (Raju Goel et al., 1999; Sharma, 1999 and Banumurthy and Parvathi, 1999) as an antipyretic, aphrodisiac, diuretic and gonorrhoea (Ranjan, 1999). Juice of the plant against gonorrhoea and diabetes (Thomas and Britto, 1999). The extract of the plant is filtered and dried in sunlight and used for diabetes (Thomas and Britto, 1999). The fruit powder for rheumatism (Srivastva and Diwanje, 1999). The root and stem used as an antidote to snakebite (Singh and Pande, 1998).

236. **Toddalia asiatica** Lam.
RUTACEAE (Kǎdumenasu)

a) Description
Erect or climbing shrubs, usually armed with scattered, recurved prickles, dioecious. Leaves digitately trifoliolate; leaflets sessile, coriaceous. Inflorescence a cyme or panicle. Flowers pedicelled, abortively, unisexual, 2-5 merous. Calyx small, campanulate, toothed-parted. Petals imbricate or valvate. Stamens 4-5; ovary usually shortly stalked, oblong or globose, 2-7-locular; style short; stigma capitate. Fruits berry, globular, pitted, yellow with age. Frequent in dry-deciduous forests. Flowering and fruiting during February to September.
b) Ethnobotanical information
The Kadugolla tribal employ the leaves with pepper and garlic, made into a paste, mixed with honey and taken orally for fever. The Nayaka tribal employ the decoction of the leaves with sugar to cure fever. The Jogi tribal employ the fruit decoction to treat pain in bowels.

c) Information from literature
The roots, turmeric in neem oil against rheumatism (Henry et al., 1996) diarrhea and fever (Choudhury, 1996), root yield dye and also to cure fever (Suryanarayana et al., 1999). The fresh leaves are eaten for pain in bowels (Rosakutty, et al., 1999), leaves and buds to cure cough and colds in children (Kumon et al, 1999) and the leaf juice against burns to get rid of pains (Panda and Das, 1999).

237. **Tragia involucrata** L.
**EUPHORBIACEAE** (Thuruchan gida, Thēte soppu)

a) Description
Erect, trailing or straggling herbs, with hispid stinging hairs. Leaves long petioled, linear, elliptic, entire or crenate-serrate, base acute. Perianth usually 3-lobed, valvate in male; 3-partite, usually pinnatifid and accrescent in female. Disc absent. Stamens generally 3. Ovary usually hirsute; ovule 1-per locule; style elongate, 3-branched. Fruit a schizocarp with an accrescent, spreading calyx. Common in plains, bunds of cultivated fields, often in roadsides. Flowering and fruiting during October to May.

b) Ethnobotanical information
The Kadugolla tribal employ the root pounded with the leaves of *Ocimum sanctum* which is applied externally for boils and itches. The Koracha tribal use the root decoction taken orally for asthma and intermittent fever. The traditional healer employ the tender shoot tips with candy sugar taken orally for haemorrhages in women.

c) Information from literature
The fresh leaves fried in neem oil applied with country liquor for thick growth of hair in adolescent period of the girl (Banerjee and Pal, 1998). The root paste applied for extraction of guinea worms (Yoganarasimhan, 2000).
238. *Trilobulus terrestris* L.
ZYGOPHYLLACEAE (Neggalu mullu)

a) Description
Prostrate, silky herbs. Leaves opposite and unequal, oblong, paripinnate; stipulate interpetiolar, lanceolate, persistent; leaflets opposite, entire; venation pinnate. Flowers bracteate, solitary bisexual, regular, 5-merous, yellow; peduncle long. Sepals free, imbricate, deciduous. Petals free imbricate, fugaceous. Stamens 10. Disc of 10 erect scales in 2 rows on inner and outer sides of stamens opposite the sepals. Ovary hisute, 5-locular. Cocci of fruit 5, woody, each with 2-large and a few small spines. Frequent in dry sandy places across plain. Flowering and fruiting during July to November.

b) Ethnobotanical information
The Kadugolla tribal employ the whole plant ground and the paste mixed with honey and taken orally as aphrodisiac and also to treat spermatorrhoea. The root is ground and mixed with water to boil for sometime, the decoction is taken orally with honey to cure dysuria in Nayaka tribal. The local people use the tender shoot tips as vegetable.

c) Information from literature
The fruits are used in removing kidney stones and the decoction of whole plant with almonds to treat impotency (Pandit *et al.* 1996), fruits and roots used as cooling agent, impotency and in urinary disorder (Kothari and Rao, 1999), the decoction of plant against kidney stones (Rosakutty *et al.*, 1999) and whole plant against rheumatism (Thomas and Britto, 1999)

BORAGINACEAE (Adhomukhi, Kattetumbe soppu)

a) Description
Erect hispid herb. Leaves opposite, shortly petioled elliptic lanceolate with bulbuous base hairs. Flowers generally solitary, drooping; upper ones in leafy racemes. Calyx lobes not hastate below, ovate, acuminate, entire. Corolla blue with rounded, apiculate lobes. Anthers bearded below; connective produced and twisted around each other. Ovary 4-lobed, 4-locular; style subterminal, slender; stigma small. Nutlets 4, all adnate by their inner surface

b) Ethnobotanical information
Kadugolla tribal ground the leaves, and prepare hot water-based extract, given orally as an antidote for poisonous worms bite in cattle. The Koracha and Budibudike tribes use the root made into paste and apply externally to treat arthritis.

c) Information from literature
The leaves are emollient, demulcent and diuretic. Flowers promote sweating and diaphoretic. Roots applied to wounds as an analgesic (Yoganarasimhan, 2000).

240. *Tridax procumbens* L.
ASTERACEAE (Addike soppu)

a) Description
Perennial, procumbent herbs, creeping and ascending. Leaves opposite, short petioled, palmately veined, ovate, acute, deeply inciso dentate; sometimes 3-lobed; lobes acute; hairs thick based. Pedunculate, terminal, radiate; bracts 2-3 seriate, the outer herbaceous, green, pubescent; inner scarious pinkish above middle. Corolla yellow. Outer florets few, female; ligule 2-3 dentate. Anthers shortly acute below. Style arms slender, hairy. Achenea turbinate, silky villous; pappus bristles plumose. Common weed in open places. Flowering and fruiting during all seasons.

b) Ethnobotanical information
The Kadugolla tribes use the fresh juice of the leaves with curds to treat abdominal pain. The squeezed juice of leaves is applied externally on burning wounds, abscess and cuts. The traditional healer chew 2-3 leaves daily for the treatment of diabetes.

c) Information from literature
Crushed flowers induces sneezing, which reduces the cold (Girach *et al.* 1996), leaf juice against kidney stones (Kothari and Moorthy, 1996) as an antiseptic (Dwivedi, 1999 and Rosakutty et al, 1999; Ramprasad and Pandey, 1993), leaf paste used to clot the blood in wounds (Jewan Ram *et al.*, 1999
and Thomas and Britto, 1999) and as a potential insecticide (Bhanumathy and Parvathi, 1999).

241. **Tylophora indica** (N. Burman) Merrill

*ASCLEPIADACEAE* (Aadumuttada balli, Meke muttada balli)

**a)** Description

Sap watery. Leaves elliptic to ovate, pilose to occasionally glabrous, base rounded to cordate; apex acute to acuminate or apiculate. Cymes lateral, umbellate to paniculate, peduncle and pedicels pilose, long. Calyx lobes subulate, spreading, pilose; corolla lobes pilose within, reddish purple on center, yellowish on margins. Corona lobes intricate, with a wide adnate base and a narrow free apex arching against the gynostegium. Gynostegium slightly stipitate. Gynoecium of 2-superior unilocular carpels united only by the enlarged style apex. Fruit of paired follicles. Seeds flattened, comose. Most commonly found in forests especially in dry regions. Flowering and fruiting during April to September.

**b)** Ethnobotanical information

The Lambani and Jogi tribes employ the shade dried leaf powder with honey to cure asthma and cough. The traditional healer use 3-4 drops of root juice with cow milk to vomit phlegm. The Kadugolla tribal use leaves with *Vitex negundo, Leucas aspera*, and *Erythrina suberosa* leaves with black pepper and garlic ground with water, the extract is given orally for cattle to treat "Head swinging disease".

**c)** Information from literature

The roots are in use as stimulant, emetic, cathartic, expectorant and diaphoretic, used in asthma, bronchitis and whooping cough (Yoganarasimhan, 2000), asthma, bronchitis, whooping cough, dysentery and diarrhoea. Leaves are used in dermatitis (Bhanumathy and Parvathi, 1999).
242. *Urginea indica* (Roxb.) Kunth
LILIACEAE (Kāduēruill)

a) Description

Scapigerous, herbs; bulb globose, thick. Leaves radicle, simple, entire, linear-lanceolate, ensiform, acute, glaucous. Scape slender. Inflorescence racemose, appearing before the leaves, bracteate. Pedicel long. Perianth campanulate, 6-segmented, linear-oblong, pale brown, white at margin. Stamens 6; staminal filaments white, flattened below; anther linear, versatile, yellow. Ovary superior, sessile; ovules many per locule; stigma capitate. Fruit a triquetrous, loculicidal capsule; seeds many, flat, black. Common in dry areas. Flowering and fruiting during April to May.

b) Ethnobotanical Information

The Kadugolla tribals employ the bulb with “Dhobi’s earth” (washing soda) and is mixed with buttermilk to be given orally for rinder pest in cattle; the bulb is crushed and boiled with Karanji oil (Pongamia oil) to apply externally to treat ‘groin bubo’.

c) Information from literature

The bulbs are the source of the drug ‘Indian squill’ used as a cardiotonic stimulant, diuretic, used as deobstruent and externally to remove wart and corns (Yoganarasimhan, 2000). The bulbs as a remedy for bronchial infections, early healing of cracked skin (Singh and Pandey, 1998). The paste of the bulb against diarrhoea (Dharma Chandra Kumar, 1997). The decoction of the bulb against rheumatism (Saxena, 1988). Juice of the bulb against dysentery (Ram and Vineeta Saha, 1998).
ASTERACEAE (Sahadevi)

a) Description

Annual herbs. Leaves alternate, ovate, acute, cuneate below, crenate, hairy. Bracts ovate – lanceolate, acute – acuminate, hairy the outer shorter. Corolla pink; lobes ovate acute. Head discoid, few – many flowered in axillary or terminal, peduncled panicles; involucre many seriate; outer bracts shorter, glandular, hairy. Anthers sagittate below; style arms subulate. Achenes 2 – 3 angled, densely hairy; pappus biseriate, the outer short. Common weed in roadsides, paddy fields, sometimes at outskirts of forests. Flowering and fruiting during May to December.

b) Ethnobotanical Information

The Kadugolla tribals employ the plant powder with hot water for blood purification and piles. The powder is mixed with honey and taken internally for fever. The Jogi tribals use fresh juice of leaves taken orally to treat lithintripetic. The Budibudike tribals apply the plant paste on hairs to destroy lice.

c) Information from literature

The plant juice to cure urinemia (Saini, 1998), against rheumatism (Samvatsar and Dhwanje, 1999), to cure fever (Bedi, 1978), decoction to stop bleeding after delivery (Bhuyan, 1994), against haemorrhoids (Narayana Rao, 1991), urinary infection and abdominal pain, as an external application to cure eczema and other skin diseases (Dharma Chandra Kumar, 1997). The root extract with Quinine to cure malaria, dropsy (Yoganarasimhan, 2000; Singh and Pandey, 1998 and Barua et al., 1999).

244. *Vicia indica* (L.) DC.
ASTERACEAE (Mooguthisoppu)

a) Description

Annual. Suffrutescent herbs. Stem reddish brown terete, grooved, glabrous with age. Leaves ovate – lanceolate, acute, cordate hastate and amplexicaul below, entire, scabrid along margin, pubescent beneath. Heads usually solitary on long peduncles; bracts lanceolate, acute, hairy, the outer shorter. Ray florets about 22; ligule elliptic oblong, 3-dentate, bright yellow. Disc florets
many, yellow. Anthers sagittate below. Achenes villous angled; pappus 1 seriate, smooth, scanty. Common in plains and dry deciduous forests. Flowering and fruiting during November to April.

b) Ethnobotanical information
The Nayaka tribal use the whole plant paste as an antidote for scorpion sting. The JogI tribal prepare the water-based decoction of the whole inflorescence, to gargle to cure throat disorders and gummosis.

c) Information from literature
The whole plant is used as antifertility agent and the roots are used in scorpion sting. The inflorescence used in throat disorders (Yoganarasimhan, 2000). The root decoction against cough (Seema Malik, 1996).

245. *Viscum monolcum* Roxb. ex DC.
LORANTHACEAE (Bandrika)

a) Description

b) Ethnobotanical information
The leaves are ground and paste applied externally on pimples by Nayaka tribals. The Budibudikle tribal employ the whole plant, shade dried and powdered, mixed with honey is given orally for leucorrhoea.

c) Information from literature
A powerful narcotic plant. If the plant parasitize nux-vomica trees, possess the properties similar to nux-vomica and are used as a substitute for strychnin and brucine (Yoganarasimhan, 2000).
246. *Viscum articulatum* Burm. F (= *V. nepalense* Spreng.)
LORANTHACEAE (Bandrike)

a) Description
Leafless parasitic herb. Stem flattened, pendulous dichotomously branched, articulated glabrous, narrow at both ends. Flowers in axillary clusters, unisexual; bracts cup shaped. Perianth 4, lobes small, triangular, deciduous. Fruit a globose berry, small, greenish yellow. Parasite on *Pongamia pinnata*, *Acacia leucophloea*. Flowering and fruiting during May to August.

b) Ethnobotanical information
The Kadugolla tribal8 employ the whole plant is ground with cinnabar (HgS) and the paste is mixed with coconut oil to apply externally to treat neurofibroma.

c) Information from literature
Plant as whole used as febrifuge and an aphrodisiac agent and the paste applied against cut (Yoganarasimhan, 2000).

247. *Vitex negundo* L.
VERBENACEAE (Lakkisoppu, Lakisoppu)

a) Description
Large, silvery-tomentose shrubs or small trees. Leaves opposite; leaflets middle one slightly longer petiolulate, entire, lanceolate, acuminate, membranous. Panicles terminal, sometimes from upper axils, with short cymose branches. Flower irregular, subsessile, 5-merous. Calyx cupular, toothed, subacrescent. Corolla blue, bilabiate; tube short, with a ring of hairs at the base of staminal filaments; upper lip 2-lobed, lower 3-lobed, middle one larger. Stamens 4; didynamous, exerted; filaments smooth or hairy; anther cells divaricate. Ovary pilose at apex, at first imperfectly 2-locular, finally 4-loculate, 4-ovulate; stigma slightly bifid at apex. Fruit drupe, globular, occasional in forests and often in the bunds of cultivated fields. Flowering and fruiting during January to February and May to July.
b) Ethnobotanical information
The Nayaka and Koracha tribals employ the root ground with tender coconut water and taken orally twice a day for 1 to 2 weeks for lithontriptic. The Kadugolla tribals use the leaves, which are ground with the leaves of *Tylophora indica*, *Leucas aspera*, *Erythrina subersa*, black pepper and garlic with water given orally to the cattle to treat head swinging disease in cattle. The traditional herbalist use the leaves pounded with goats milk to prepare tablets taken orally with goats milk for 4 - 5 days to treat hydrocele.

c) Information from literature
The leaves are used in rheumatism (Yoganarasimhan, 2000; Pandit *et al.*, 1996; Ram Prasad and Rao, 1993; Kothari and Londhe, 1999 and Samvatsar and Dianedji, 1999). The leaves are smoked to relieve headache and to expel guinea-worms (Singh and Pandey, 1998). The decoction against rheumatism, the paste against eczema and juice to control diabetes (Dharma Chandra Kumar, 1997). The decoction of root administered orally to cure cough (Dash and Misra, 1999) and flowers used in diarrhoea, fever and liver complaints.
248. **Waltheria americana** L. (= *W. indica* L.)
STERCULIACEAE (Gondegida)

a) **Description**
Fruiting, branching herbs; usually stellately pubescent. Leaves alternate, crenate-serrate, ovate, cordate at base, rounded at tip. Inflorescence of fascicles, axillary or terminal, bracteate. Flowers bisexual, regular. Calyx deeply 5-partite, tube long. Petals 5, spatulate, clawed; receptacle flat. Stamens 5; filaments fused at base forming a short column; staminodes absent. Ovary 1-locular, 2-ovuled; style eccentric; stigma penicillate. Fruit 2-valved, 1-seeded capsule. Common weed in bunds of cultivated fields and open places. Flowering and fruiting during September to December.

b) **Ethnobotanical information**
The Kadugolla tribals employ the leaves ground with asbestos and candy sugar, boiled to make decoction, taken orally for 3–4 days to cure leucorrhoea and haemorrhages in women. The leaves are ground and applied externally for burning wounds.

c) **Information from literature**
The tribals of Dungarpur district take extract of roots as an effective medicine for leucorrhoea and spermatorrhoea (Singh and Pandey, 1998), against dysentery (Henry et al., 1996), roots chewed to control internal hemorrhages (Yoganarasimhan, 2000), and the plant juice against bile disorders (Saxena, 1986).

249. **Wattakaka volubilis** (L.f.) Stapf (= *Marsdenia volubilis* (L.f) Cooke)
ASCLEPIADACEAE (Heggatare soppu)

a) **Description**
Sap watery except milky in the follicles. Leaves ovate, sparsely pubescent on the veins; base rounded to cordate; apex acuminate. Cymes umbellate, lateral. Corolla lobes pale green, rotate; lobes imbricate to the right; margins ciliolate. Corona of 5 fleshy truncate lobes with cups at the inner angles resting against the stigma head. Gynostegium short, sessile. Pollinia erect from dark horny corpuscula, 2 – per anther, waxy, without pellucid margins. Gynoecium of 2 – superior unilocular carpels united only by the enlarged style.

b) Ethnobotanical information
The Kodugolla tribals squeeze the leaves and the juice is mixed with caustic potash to apply externally to treat boils and abscess, the same is applied on neck to cure tonsillitis. The same tribe use the leaves wetted by caster oil, warmed and applied on joint to treat arthritis.

c) Information from literature
The leaves are used to treat boils and abscess. The roots and tender stalks emetic and purgative, on the whole, plant juice used against sneezing.

250. **Wrightia tinctoria** (Roxb.) R. Br.
**APOCYNACEAE** (Maralemara, Aalemara)

a) Description
Shrubs or small trees, branches slender. Leaves opposite, glabrous or puberulous beneath. Flowers white, in terminal cymes. Calyx 5–lobed, with glands or scales within. Corolla salver shaped, tube cylindrical, throat with a corona with 1–2 series of erect, simple lobed, or fimbriate scales united in a ring. Stamens inserted on the mouth of the tube, filaments short anthers sagittate. Ovary 2, free carpels ovules many. Fruit of 2 connate follicular mericarps; seeds linear.

b) Ethnobotanical information
The Lambani and Budlibudike tribes use the water-based decoction of the leaves and bark with pepper and common salt to treat stomach pain and fever.

c) Information from literature
The roots are used as an effective oral contraceptive (Goyal *et al.*, 1997), on the other Singh and Anwar Ali (1996), reported the use of fresh stem bark as contraceptive agent. The seeds are aphrodisiac and anthelmintic (Yoganarasimhan, 2000), seed and bark are used in liver disorders (Kothari and Rao, 1997) and the leaves for jaundice (Kothari and Londhe, 1999).
251. **Xanthium indicum** Koen. (= *Xanthium strumarium* L.)

(Ardhanarigida)

a) Description
Erect annual herbs. Leaves alternate, broadly ovate, acute, 3-lobed, crenate, palmately veined glandular. Head monoecious, discoid, with functionally made heads in the upper axils, female heads in lower axils. Male head: bracts 1-seriate; receptacle palesaceous; florets many, appearing bisexual but achenes sterile enclosed within; style arms short, included. Female head globose, 2-florets; bracts all connate forming an indurate involucrre which is tipped by 2 spinescent hooks and covered by hooked opines; corolla 0; style arms exserted. Achenes 2, enclosed within the hardened spinescent involucrre; pappus absent. Common in roadsides, ditches, and manure heaps. Flowering and fructing during September.

b) Ethnobotanical information
The Jogli tribal8 apply the root paste externally on forehead to cure headache.

c) Information from literature
The plant decoction against leucorrhoea (Saini, 1996), inflammation of thyroid glands and ulcers, leaf paste against wounds (Sikarwar, 1996). As a whole plant is poisonous to cattle and pigs (Datta and Banerjee, 1978). Root is used to induce sleep in children (tranquilizer) (Deshmukh et al., 1999), used in alcoholic beverages (Paliwal and Badone, 1988).

252. **Xeromphis spinosa** (Thunb.) Keay

RUBIACEAE (Maggare, Mangare kayi)

a) Description
Shrubs or trees; spines axillary, absent on older parts. Leaves elliptic-ovovate, subacute, often with bearded domatia beneath. Stipules interpetiolar caduceous. Inflorescence fascicle, on apex of brachy blasts. Flowers 5-merous, calyx shortly lobed. Corolla pale yellow covmpanulate; tube with a band of hairs within; lobes contorted, longer than tube. Stamens as many as corolla segments; anthers exserted. Ovary two locular with many ovules, axile placentation. Fruit a berry, ellipsoid. Occasional in forests. Flowering and fructing during March to September.
b) Ethnobotanical information
The Kadugolla tribals employ the powdered stem bark boiled with water and the decoction is taken orally for blood mixed dysentery. The Nayaka and Budibudike tribals employ the fruit ground with lemon juice and applied externally for Herpes.

c) Information from literature
Fruits are edible and used for stupefying fishes as a poison (Singh and Pandey, 1998).
253. **Zaleya decandra** (L.) Burn. f. (= *Trianthema decandra* L.)

**ALZOACEAE** (Gandhiberu)

a) **Description**

Prostrate much branched herbs. Leaves opposite, stipulate, subepulvulent, those of the opposite pair slightly unequal, joined below by the papery petiolar sheath. Inflorescence axillary; few flowered. Perianth pink deeply 4–5 lobed. Stamens 10–15. Ovary 2 locular; ovules 2 in each locule; styles 2. Fruit circumscessile, separating into 2 parts, each with 2 seeds. Fairly common weed in dry area. Flowering and fruiting during August to September.

b) **Ethnobotanical information**

The Kadugolla tribal employ the whole plant, which is pounded and mixed with cow ghee taken orally for aphrodisiac. The plant juice is applied externally with Pongamia oil to treat eczema.

c) **Information from literature**

The roots with garlic soup for the treatment of flatulence (Henry *et al.*, 1996).

254. **Ziziphus mauritiana** Lamk. (= *Ziziphus jujuba* Lamk.)

**RHAMNACEAE** (Bhorehannu)

a) **Description**

Moderate sized prickly tree with alternate, simple, crenate, rounded, shortly petioled 3-nerved leaves. Stipules modified into recurved spines or prickles. Flowers greenish yellow in axillary cymes. Fruit a drupe, globose, single seeded smooth and yellowish. Occasional in cultivated fields and forests. Flowering and fruiting during July to October.

b) **Ethnobotanical information**

The Kadugolla tribals employ the juice of the fruit, that is given orally as blood depurative and promote digestion. The Nayaka tribals employ the bark decoction of the stem orally against fever and rheumatism. The fruits are edible.

c) **Information from literature**

Mahato *et al.* (1996) reported the used of fruit decoction to cure diarrhoea. Yoganarasimhan (2000) reported the use of leaves with arecanut as an astringent and diaphoretic.
255. *Zornia gibbosa* Spanoghe

**FABACEAE**

a) **Description**

Diffuse wiry herbs. Leaves digitately 2-foliolate; petiole long, leaflets lanceolate with black glands. Flowers spike long, bracts not covering flowers. Calyx hyaline; upper two lobes connate, lowest one equaling upper lip, side ones shorter. Corolla yellow; standard one cordate. Stamens monoadelphous, tube split above; anthers dimorphous; alternating long, basifixed and short; versatile. Ovary sessile, many-ovuled. Pod a loment of several, 1-seeded joints with scabrid prickles. Occasional in dry-deciduous forests. Flowering and fruiting during June to August.

b) **Ethnobotanical information**

The JogI tribals employ the whole plant shade dried and powdered. The powder is boiled for long time and the decoction is taken orally with sugar mixed milk to induce sleep in children.

c) **Information from literature**

Roots have been employed to induce sleep in children (tranquilizer) (Deshmukh et al., 1999) and the plant powder is used to control spermatorrhoea (Saxena, 1986).