Ethnomedicinal recipes for Skin and dermatitis & allied diseases from Tribals of Sriharikota Island, Andhra Pradesh

R. Bharath Kumar 1* and B. Suryanarayana 2

1. Associate Professor, Dept.Biotechnology, Vignan University, Vadlamudi, Guntur-522213. [E-mail: drbharathravuru@gmail.com]
2. Associate Professor (Retd.), # 8-307, Karnakamma Street, Venkatagiri Town –524132 [E-mail: dr_bsnarayana@yahoo.com]

Sriharikota Island is an elliptical land mass sandwiched between Bay of Bengal in the East and Pulicat lake in the West. Sullurpet is the nearest railway station, which is 18 Km from Sriharikota Island and it is on Chennai –Kolkata trunk line and 90 Km away from North of Chennai. An aboriginal tribe called ‘Yanadi’ dwells in Sriharikota. It is similar to Chenchu community elsewhere in Andhra Pradesh. Inspite of the community being drifted from their natural way of life due to agro-rural development activities, a few aged tribal men are still able to furnish traditional ethnomedicinal data. Therefore a detailed study on ethnobotanical uses of the tribals of Sriharikota Island was undertaken for the duration three years (1996-1999). During this work about 280 species are collected having a variety of ethno-medico-botanical/pharmaceutical values.

1. Introduction

An aboriginal tribe called ‘Yanadi’ dwells in Sriharikota. It is similar Chenchu community elsewhere in Andhra Pradesh. Inspite of the community being drifted from the natural way of life due to agro-rural development activities a few aged tribal men are still able to furnish traditional ethnobotanical data. In Sriharikota Island about tribal families are living in 3 colonies viz. Penubakam, Kothachenu and Chengalpalem.

2. Topography

Sriharikota Island is geographically located at 80° 21’ E and 13°22’ N to 14° N. It is a spindle shaped landmass sandwiched between Bay of Bengal on the East and Pulicat Lake on the West. It is 18 km East of Sullurpet. The nearest railway station located on Chennai-Kolkata trunk line. Chennai is 98 km away from Sriharikota.

3. Materials and Methods

An intensive medico-ethnobotanical survey of Sriharikota Island was undertaken for the duration three years (1996-1999). Regular periodical fieldwork is conducted covering all the seasons so as not to miss seasonal elements having pharmaceutical value and collected a large number of specimens in their respective phenological stages. Ample field notes recorded pertaining to frequency, abundance, edaphic and...
morphological characters, which cannot be deducted from exsiccatea. Local tribal men are contacted to record data related to ethno medico-botanical uses, drug preparation and mode of administration etc. After identification, samples are properly processed, mounted on herbarium sheets and deposited in Visodaya Govt.College Herbarium (VGCH) and a duplicate set at SHAR Herbarium, Sriharikota.
A. Yanadi with skin disease viz. “Errapodalu” reddish patches on face
B. & C. reddish patches on hands
C. Ointment applied on hands for red patches – Errapodalu (composed of roots of Plumbago zeylanica, Aristolochia bracteolata, Achyranthes aspera and Diplcyllos palmatus fruit, leaf & stem bark with champhor).

4. Results and Discussion

During these studies a good number of ethnomedicinal plants are collected. However in this paper 46 species of having remedial effect on various common Skin and dermatitis & allied diseases (i.e. Wounds, scratches, itches, scabies, knife cuts, antiseptic and vulnerary agents etc.) are enumerated. Latest Scientific name followed by relevant synonyms if any, local name, habit flowering & fruiting season, ethnomedicinal data and their phytochemical composition are also furnished for each species. Plants marked with asterisk (*) are reported here first time for their remedial effect on various common Skin and dermatitis & allied diseases as above mentioned.

Table: Medicinal Plant Species - Used by Tribals for Skin and Dermatitis & Allied Diseases

<table>
<thead>
<tr>
<th>Medicinal Plant Species</th>
<th>Used by Tribals for Skin and Dermatitis &amp; Allied Diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abutilon indicum (L.) Sweet. Hort.</td>
<td>Achyranthes aspera L.</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>Ageratum conyzoides L.</td>
<td></td>
</tr>
<tr>
<td>Aristolochia bracteolata Lam.</td>
<td></td>
</tr>
<tr>
<td>Azima tetracantha Lam.</td>
<td></td>
</tr>
<tr>
<td>Cardiospermum helicacabum L.</td>
<td></td>
</tr>
<tr>
<td>Catunaregum spinosa (Thunb.)Triv.</td>
<td></td>
</tr>
<tr>
<td>Cissampelos pariera L.var. hirsuta (Buch.Ham ex.DC.)Forman.</td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>Dalbergia paniculata</td>
<td>Roxb.</td>
</tr>
<tr>
<td>Dolichandrone spathacea</td>
<td>(L.f.) K. Schum.</td>
</tr>
<tr>
<td>Emilia sonchifolia</td>
<td>(L.) DC.</td>
</tr>
<tr>
<td>Evolvulus alsinoides</td>
<td>(L.) L.</td>
</tr>
<tr>
<td>Ficus religiosa</td>
<td>L.</td>
</tr>
<tr>
<td>Ficus tinctoria</td>
<td>Forst.f.subsp. parasitica (Willd.) Corner in Gard.</td>
</tr>
<tr>
<td>Ficus amplissima</td>
<td>T.E. Smith in Rees.</td>
</tr>
<tr>
<td>Ficus microcarpa</td>
<td>L.f.</td>
</tr>
<tr>
<td>Gmelina asiatica L.</td>
<td>Ipomoea aquatica Forsk.</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Justicia gendarusa Linn. f.</td>
<td>Lepidagathis mitis Dalz.</td>
</tr>
<tr>
<td>Mimosa pudica L.</td>
<td>Passiflora foetida L.</td>
</tr>
<tr>
<td>Spermacoce hispida L.</td>
<td>Tectona grandis L. f.</td>
</tr>
</tbody>
</table>
5. Enumeration:

5.1 *Abutilon indicum* (L.)Sweet. Hort. (MALVACEAE)
Ln: Tuttunubenda, kammalaku. Sn: Atibala.
Fresh leaves washed with water and cut into small pieces. 50 g of leaves slightly warmed with a pinch of turmeric powder and adequate quantity of groundnut oil and prepared it into curry. 5 g of curry taken twice a day for 15-20 days to get relief from bleeding piles. It is continued for 30 - 40 days to get remedy from bleeding piles. (Haemorrhoides).
CC: Asparagin.

5.2 *Achyranthes aspera* L. (AMARANTHACEAE)
Leaf paste as analgesic and antiseptic: 100 g of fresh leaves ground to paste. It is mixed with castor oil warmed and applied on swellings and
painful parts to get relief. Leaf paste is applied on wounds and knife cuts for 3-4 days until the wounds are healed.
CC: Achyranthine, Betaine, Potash.

5.3 Ageratum conyzoides L. (ASTERACEAE)
Ln: Uppara Chettu.
Leaf paste – antiseptic: 100 g of leaves ground to paste. It is slightly warmed and applied on wounds and cuts. This treatment is repeated for 3-4 days until the wound is healed.
CC: Phenolic ester (or) ethyl eugenol.

5.4 Aloe vera (L.) Burm. f. (LILIACEAE)
Leaves as refrigerant: A jelly like substance is obtained by removing epidermis of leaves. It is taken orally mixed with sugar for cooling effect. Leaf jelly as vulnerary agent: Jelly like substance from leaves is applied on wounds and boils for 4-5 days for healing.
CC: Aloin, Isobarbaloin.

5.5 Aristolochia bracteolata Lam. (ARISTOLOCHIACEAE) =A. bracteata Retz.
Root paste as vulnerary agent: 100 g of fresh roots taken processed and ground to paste. It is mixed with 1 spoonful of turmeric powder, warmed and applied on wounds. This treatment is repeated for 4-5 days until the wound is healed.
CC: Aristolochic acid, Potassium chloride.

5.6 Azadirachta indica A. Juss. (MELIACEAE)
Seed - antipruritic: 100 g of fresh seeds ground into paste slightly warmed and applied on areas of skin on affected by areas of skin scabies. This treatment is given once in a day for 15 -20 days. It is also applied for boils of skin.
Seed oil - antiseptic: Seed oil is warmed and applied on wounds and boils twice a day for 5-10 days until wounds and boils are healed. 100 g fresh leaves are ground to fine paste. It is mixed with 1-2 ml neem seed oil and applied gently on affected places of chicken pox on body twice a day, until patient gets relief from chicken pox.
CC: Azadirachtin, Margosine, Nimbidine.

5.7 Azima tetracantha Lam. (SALVADORACEAE)
Twigs – dermatotherapy: Fresh twigs 100 g ground to paste with 1 spoonful of turmeric powder. The paste is applied on affected area before bed time and washed next day with hot water. This treatment to be repeated for 10-15 days to get relief from skin diseases.

5.8 Bougainvillea spectabilis Willd. (NYCTAGINACEAE)
Leaf as vulnerary agent: 50 of fresh leaves ground to paste and mixed with 1 ml of castor oil. The paste is applied on wounds and boils for 5-10 days until the wounds are healed.
CC: Betacyanine, Flavonoids, Tannins, Alkaloids
5.9. *Cardiospermum helicacabum* L.  
(SAPINDACEAE)  
Tendrilate climbing herbs.  
Leaves - antiseptic: Fresh leaves 50 g taken and ground to paste, mixed with one spoonful of turmeric powder. It is applied on wounds, and boils once in a day for 3-4 days, till the wound is healed.  
CC: Saponins, Quebrachitol.

5.10. *Cassia auriculata* L.  
(CAESALPINIACEAE)  
Shrubs.  
Root - refrigerant: Fresh roots are cut into small pieces and ground to paste. 1-2 spoonfuls of paste given orally with 100 ml of butter milk twice a day, to result cooling effect to body and reduces excess heat. It is continued for 3-4 days.  
CC: Tannins.

5.11 *Catharanthus roseus* (L.) G. Don.  
= *Lochnera rosea* (L.) Reichb.  
Erect, perennial herb.  
Cultivated and also run wild in the undergrowth even in the interior forests. F1. & Fr.: Through out the year. Ld: Keepakam: RBK 9682.  
Leaf paste- antiseptic: 100 g of fresh leaves ground to paste. The paste is slightly warmed, applied on wounds and knife cuts, for 5-10 days until the wound is healed.  
Root decoction – anticancer agents: (Raachapundu): 200 g of fresh roots cut into small pieces and ground to paste, boiled in 500 ml of water and prepared decoction. 10-15 ml of decoction is given before half an hour to meal, twice a day. Recipe is continued for 40-90 days until the patient gets relief.  
CC: Berberine, Saponins.

5.12 *Catunaregum spinosa* (Thunb.) Triv.  
(RUBIACEAE)  
= *Randia dumetorum* (Retz.) Poir.  
Ln: Manga.  
Armed shrubs.  
Fruit – antidandruff: 100 g of fruits are ground extract juice. It is applied on head throughly. Head bath is taken after an hour of application. It gives relief from dandruff. This treatment is taken 2-3 times in a week for 15 days to give effective relief.  
CC: Carbohydrates, Tannins.

5.13 *Cissampelos pariera* L.var. hirsute (Buch.Ham ex.DC.) Forman.  
(MENISPERMACEAE)  
= *Cissampelos pareira* L.  
Climbing shrubs.  
Leaves used as antiseptic: Fresh leaves taken and cleaned. 20 g leaves boiled in a glass of water, with one spoonful of turmeric powder until jelly like paste is obtained. It is applied on wounds and cuts. It is continued for 3-4 days till wounds and cuts are healed.  
CC: Berberine, Saponins.

5.14 *Cissus quadrangularis* L.  
(VITACEAE)  
Rambling succulent herbs.  
Tender stems -antiseptic: Fresh stems cleaned and cut into small pieces and ground to paste. It is applied on wounds and cuts for effective healing.  
CC: Vitamin C, Carbohydrates, Tartaric acid.

5.15 *Cleome viscosa* L.  
(CLEOMACEAE)  
Annual herbs.
Leaf paste is mixed with lime juice and applied on wounds once a day until the wound is healed.
CC: Viscosin.

5.16. *Crotalaria laburnifolia* L. (FABACEAE)
Leaves - dermatotherapy: The above preparation is applied on burnings of skin. It is to be continued till the wounds are healed.
CC: Flavonoids, steroids, steroidal nucleus.

5.17 *Dalbergia paniculata* Roxb. (FABACEAE)
Leaves - antifilariasis: 100 g of fresh leaves taken and ground to paste with 10-20 ml of Castor oil. It is applied on filarial swellings twice a day for 30-40 days. The patient gets effective relief.
CC: Alkaloid, Flavonoid, Steroid.

5.18 *Dolichandrone spathacea* (L.f.) K. Schum. (BIGNONIACEAE)
Ln: Bembedu, Bemmadu. Tall light wooded trees. Rare, along margins of peddavagu and doruvus F1 & Fr.: August-January. Ld: Mavalam vagu: RBK 9318.
Seed paste as antiseptic: 200g of fresh seeds taken and ground to paste. The paste is slightly warmed and applied on wounds and cuts. This treatment is continued for 3-4 days until the wound is healed.
CC: Triterpene and Saponin

5.19. *Eclipta prostrata* (L.) L. Mant. (ASTERACEAE)
Leaf–antidepilatory: 1 kg of leaves ground to extract paste. The leaf juice mixed with 200 ml of *Sesamum* oil, throughly boiled to extract oil. The oil is applied on head to prevent hair falling and also used as hair tonic. It is continued for 3 months to get good results.
CC: Nicotine, Wedelolactone.

5.20. *Emilia sonchifolia* (L.) DC. (ASTERACEAE) = *Cacalia sonchifolia* L.
Leaves–antiseptic: 100 g of leaves are ground into paste. The paste is taken warmed and applied on knife cuts and wounds, for 8-10 days until the wounds are healed.
CC: Beta-sitosterol, stigmasterol, palmitic acid

5.21 *Evolvulus alsinoides* (L.) L. (CONVOLVULACEAE)
Whole plant juice febrifuge: 100 g fresh plant material squeezed and obtained juice. 10 ml of juice given orally 2-3 times a day for 3-4 days to get relief from fever with cold.
Leaf paste vulnerary agent: 100 g of fresh leaves taken, ground to paste and mixed with 1 spoonful of turmeric powder. It is applied on wounds and cuts for 3-4 days until the wounds are healed.
CC: Alkaloids
5.22 Ficus aimplissima  T.E. Smith in Rees. (MORACEAE)
= F. tsvela Roxb. ex Buch. – Ham.
Ln: Juvvi, Pedda juvvi.
Tall trees with spreading branches, bark light grey, smooth.
Trees spreading with prop roots, often epiphytic on palmyrah trees, common in forests. Fl & Fr : July – November, Ld: Chengalpalem : RBK 8911.
Leaf paste as vulnerary agent: 100g of fresh leaves taken and ground to paste. It is mixed with a pinch of turmeric powder, slightly warmed and applied on wounds and boils for 4–5 days until the wound is healed.
CC: Phenolics, Tannin, Falvonoids.

5.23 Ficus microcarpa L.f. (MORACEAE)
Ln: Kalizuvi.
Tall trees spreading with prop roots.
Common and abundant in low lying areas mostly, as epiphytic. Fl & Fr : September – March, Ld: Chandrasikuppam : RBK 9029.
Fruit paste as vulnerary agent and dermatotherapy: Fresh fruits mixed with black pepper made into paste and applied on wounds and itches, for a week to get relief.
CC: Phosphorus, Lime, Saponin.

5.24 Ficus religiosa L. (MORACEAE)
A large, tree, without aerial roots.
Leaf ash mixed with coconut oil, applied on wounds and burns for 15 – 20 days twice a day until the patient gets relieved.
CC: Tannin, Caoutchoric.

5.25 Ficus tinctoria Forst. f. subsp. parasitica (Willd.) Corner in Gard. (MORACEAE)
Ln: Konda juvvi, Pakkichettu.
Latex as vulnerary agent: Latex mixed with coconut oil, slightly warmed and applied on wounds and boils twice a day for 10 – 15 days until the wounds are healed.
CC: Tannin.

26. Gmelina asiatica L. (VERBENACEAE)
Erect armed shrubs, branchlets ending in spines.
Antidandruff and refrigerant: 100 g of root and fruit powder used for hair wash during oil bath twice a week for one month to get relief from dandruff as well as heat in the head.
CC : Glucoside, alkaloids, tannins.

5.27 Hibiscus rosa-sinensis L. (MALVACEAE)
An erect, glabrous shrub, branchlets purple.
Cultivated near colonies, as an ornamental plant. Ld: Penu-bakam : RBK 9172.
Leaves- antidepilatory: Fresh leaves and flowers are cleaned. 100 g of leaves and flowers boiled in 200 ml of castor oil or coconut oil. The preparation is called as ‘Dasani Thailam’ or ‘Mandara Thailam’. It is applied on hair for 30-40 days for promotion of luxurious hair growth and prevention of hair fall.
Leaves-refrigerant: 50 g of fresh leaves mixed with 10g (menthulu) Foeniculum vulgare seeds and ground into fine paste. It is applied gently on head oil bath is taken after ½ an hour or 1 hour for cooling effect to body. It is also used as substitute for shikakai / soap nut.
CC: Taraxeryl acetate, B-sitasterol, Ascorbic acid.
5.28. *Ipomoea aquatica* Forssk.  
(CONVOLVULACEAE)  
= *I. reptans* Poir.  
Ln: Panjaku, Kayyaboddi.  
Creeping herbs.  
Common, creeping at some wet places or floating in waters.  
Ld: Mavalam vagu : RBK 9319.  
Leaves vulnerary agent: 100 g of fresh leaves taken and ground to make paste.  
It is slightly warmed and applied on wounds and boils.  
This treatment is continued for 3-4 days until the wounds are healed.  
CC: Carbohydrates, Protein

5.29 *Justicia gendarusa* Linn. f.  
(ACANTHACEAE)  
= *Gendarussa Vulgaris* Nees; Wt.  
Aromatic, erect, under shrubs.  
Occasional on hedges, planted usually in gardens.  
Fl. & Fr.: November - February.  
Ld: Keepakam : RBK 10057.  
Leaves used in dermatotherapy: Children suffering from ‘Neelarogum’ are layed on the bed prepared with leaves.  
This treatment can be given for 10 days to get relief from the disease.  
CC: Beta - Sitosterol, Alkaloids.

5.30 *Lawsonia inermis* L.  
(LYTHRACEAE)  
= *Lawsonia alba* Lam.  
Ln: Gorintaku.  
Sn: Mendika, Raktagarbha, Ragangi.  
Shrubs or small trees, branchlets spine tipped.  
Common in open dry scrubs and along the canals.  
Fl. & Fr.: December-February.  
Ld: Beripeta: RBK 9100.  
Leaves yield red dye for beautifying nails and palms, feet.  
It prevents nail cracks.  
Leaves - antidepilatory agent, Cooling: Fresh leaves ground into paste.  
It is applied on head.  
After one hour of application head bath is taken.  
It keeps head cool, promotes luxuriant hair growth and prevents hair fall.  
Recipe is continued weekly twice for 40 days.  
CC: Sawsone, Henna, Gallic acid, Glucose and Mannital.

5.31 *Lepidagathis mitis* Dalz.  
(ACANTHACEAE)  
Ln : Karapanijutta.  
A stiff, prostrate herbs.  
Common on dry open sandy soils.  
Fl. & Fr.: August-January.  
Ld: R.V.Chatram: RBK 10082.  
Whole plant antiseptic: 200 g of fresh plants burned to ash.  
The ash is mixed with 10 ml of coconut oil to prepare ointment.  
It is applied on boils and *pussols* on head.  
After 1 hour of application head bath is advised.  
This treatment is taken for 4 –5 days until it is cured.  
CC: Phenols

5.32 *Mimosa pudica* L.  
(MIMOSACEAE)  
Ln: Attipatti, Siggaku Chettu.  
Sn: Lajja.  
Diffuse herbs, with recurved prickles.  
Common in moist places, Fl. & Fr.: August-October.  
Ld: Kothachenu: RBK 9177.  
Leaf paste - analgesic, antiseptic: 100 g of fresh leaves taken and ground to paste.  
The paste is slightly warmed and applied on painful swellings due to wounds, for 5-10 days twice a day until the wounds get healed.  
CC: Mimosine, Thiocyanigen, Tannins, Stearic acid.

5.33 *Murrya koenigii* (L.) Sprang.  
(RUBIACEAE)  
Ln:Karivepaku, Sn:Surabinimbha.  
A small tree.  
Common in dense forests, and also grown in backyards of houses.  
Fl. & Fr.: April-October.  
Ld: Penubakam: RBK 9602.  
Leaves - antiseptic: 50 g of fresh leaves mixed with required quantity of (4 or 5 ml) castor oil, ground to fine paste.  
It is applied on wounds and boils for healing.  
Leaves - antidepilatory: 100 g of fresh leaves with 200 ml of *Sesamum* oil boiled and obtained oil.  
2) It is applied on head for cooling, as hair tonic and to prevent hair falling.  
It is to be continued for 40 days for satisfactory result.  
CC: Koenigin, Carotene, Nicotinic acid.
5.34 Passiflora foetida L. (PASSIFLORIACEAE)
Ln: Gabbudonda. Tendrillate, foetid, climbers. Common on hedges. F1. & Fr.: August-October. Ld: Berialpeta: RBK 9090. Leaves—as Vulnerary: 50 g of fresh leaves taken and ground to paste and 1 ml lemon juice is added. It is applied on wounds and boils for fast healing.
CC: Cyanogentic glucoside, Niacine and thiamine.

CC: Karanjin, Pongapin.

5.36 Prosopis chilensis (Molina) Stuntz. (MIMOSACEAE) =Prosopis juliflora (Sw.) DC. Prodr. 2.447. 1825. Ln: Karrathumma chettu. A small tree with stout axillary spines. Common all over, in pure stands especially in colonies along the Buckingham canal. F1. & Fr.: July-November. Ld: Kothachenu: RBK 9653. Leaf paste – antiseptic: 100 g fresh leaves ground to paste, and applied on wounds and knife cuts, for 4-5 days until the wounds are healed.
CC: Carotene, Resin, Tannins.

5.37 Spermacoce hispida L. (RUBIACEAE) =Borreria hispida (L.) K. Schum. Ln: Madanagaddi. Erect or diffuse herbs. Common used in moist and open places. F1. & Fr.: Throughout the year. Ld: R.V. Chantram: RBK 8976. Leaf paste – antiseptic: 100 g of leaves ground to paste. The paste is slightly warmed and applied on wounds and boils. This treatment is taken for 4-5 days until the wound is healed.
CC: Saponins, Tannins, Phenolics, Steroids.

5.38 Tectona grandis L. f. (VERBENACEAE) Ln: Teak, Tekuchettu. Tall deciduous trees. This is the popular timber “Teak” tree. Planted. F1 & Fr: August – January. Ld: Penugaripalem: RBK 8923. Oil from seeds used in dermatotherapy: Oil extracted from seeds give relief of skin diseases on consistent application for 30-40 days.
Seed oil antidepilatory: The seed oil is also applied on head to promote growth and check hair falling.
CC: Anthraquinone, naphthaquinones, tectoquinone, oleoresin.

CC: Thespesin, Gossypetin.

fevers). It is to be continued until the patient gets relief from fever.

Root - dermatotherapy: Fresh roots are cut into small pieces and ground into paste. It is applied on wounds and scratches twice in a day until healing resulted.

CC: Toddalin, toddalinine, toddalolactone.

5.41 Tridax procumbens L. (ASTERACEAE)
Ln: Gaddi Chamanthi, Palakaku, Gayapaku.
Erect or decumbent herbs.
Common and abundant in waste place. F1. & Fr.: Throughout the year. Ld: R.V. Chatram: RBK 9824
Leaves – as antiseptic: 100 g of leaves ground to paste. A pinch of turmeric powder added to it. The paste is slightly warmed and applied on wounds and knife cuts, for a few days until the wounds get healed.
CC: Alkaloids, Flavonoids, Carotenoids,

5.42 *Ventilago madrasspatana* Gaertner. (RHAMNACEAE)
Gregarious climbing shrubs.
Stem bark-dermatotherapy: 200 g of fresh stem bark or root bark cut into small pieces, crushed to prepare juice. It is slightly warmed and applied on bites, itches and scabies etc. dermal problems. Oil bath is preferred after application. Recipe is continued until the patient gets relief.
CC: Ventilagin.

5.43 Vigna aconitifolia (Jacq.) Marechal. (FABACEAE)
=Phaseolus aconitifolius Jacq.
Ln: Chikkudu gadda. Sn: Mukushtila.
Suberect or diffuse, glabrous herbs.
Root tuber - analgesic, vulnerary: Fresh root tubers are ground to paste. It is applied on painful body parts, twice a day for 5-10 days to get relief from body pains. This treatment is also taken for wounds and boils for 3-4 days till the wounds are healed.
CC: Vitamin C.

5.44 Viscum articulatum Burm. f. (VISCACEAE)
Plant as vulnerary agent: 100 g of fresh plant material is ground to paste mixed with turmeric powder proportionately. It is applied on wounds and boils for 4-5 days. Until the wounds are healed.
CC: Oleanolic acid.

5.45 Waltheria indica L. (STERCULIACEAE)
Ln: Nallabenda.
Erect, suffrutescent, tomentose herbs.
Whole plant - antiseptic: Plants collected are cleaned dried under shade, pounded into fine paste mixed with appropriate quantity of turmeric powder. The paste is applied on wounds and cuts for quick healing.
CC: Saponins, Alkaloids, Anthraquinone

5.46 Ziziphus mauritiana Lam. (RHAMNACEAE)
=Ziziphus jujubha (L.) Gaertner.
Much branched small trees, armed with curved spines, branchlets woolly.
Common in open dry forests and scrubs especially near the coast. F1. & Fr.: July-October. Ld: Kothachenu: RBK 9264.
Leaves - antiseptic: 20 g of fresh Leaves taken and they are mixed and ground into paste with leaves of ‘Yerriboddi’ (Cissampelos pariera). It is boiled in 100 ml of water. It is applied on boils and wounds once in a day for 5-10 ml until the wounds get healed.
CC: Protopine, Berberine.

6. Acknowledgements
The authors are pleased to record their gratitude to DOS-ISRO for financial assistance to conduct the project. The authors are also grateful to the Principal, Visvodaya Govt. College, Venkatagiri and the Director, SHAR Centre, Sriharikota for providing facilities and encouragement at laboratory and in the field respectively. Authors are grateful to the Head, C&LD, Division for his keen interest and support to conduct the fieldwork.

7. References
8. Dey, A.C. 1994... Indian Medicinal Plants and Ayurvedic Preparations. Bishen Singh MahendraPal Singh, Dehra Dun -248001 (India)
10. Hemadri, K. 1979... Medicinal Plants from Andhra Pradesh. Telugu Akademy, Hyderabad.