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B. Mahadev
SRF, THCRP, Regional
Ayurveda Research Institute for
Skin Disorders, CCRAS, New
Rajiv Nagar, Payakapuram,
Vijayawada, Andhra Pradesh,
India.

G. Siva Ram
Senior Consultant, Regional
Ayurveda Research Institute for
Skin Disorders, CCRAS, New
Rajiv Nagar, Payakapuram,
Vijayawada, Andhra Pradesh,
India.

R.S.Chalapathi
Senior Consultant, Regional
Ayurveda Research Institute for
Skin Disorders, CCRAS, New
Rajiv Nagar, Payakapuram,
Vijayawada, Andhra Pradesh,
India.

V. Subhose
Research Officer (Ay.), Regional
Ayurveda Research Institute for
Skin Disorders, CCRAS, New
Rajiv Nagar, Payakapuram,
Vijayawada, Andhra Pradesh,
India.

Correspondence
B. Mahadev
SRF, THCRP, Regional
Ayurveda Research Institute for
Skin Disorders, CCRAS, New
Rajiv Nagar, Payakapuram,
Vijayawada, Andhra Pradesh,
India.

Precious medicinal plants found on the peripheries of villages of West Godavari district

B. Mahadev, G. Siva Ram, R.S.Chalapathi, V. Subhose

Abstract

India has a galore of divine medicinal flora all over the length and the breadth across the country. Andhra Pradesh also has rich floral diversity all across the state. As Andhra Pradesh is mostly blessed with favourable environmental conditions for the growth of medicinal plants wildly, several medicinal plants spread across the road ways naturally. They are of different habits i.e. herbs, shrubs and trees which are nothing but nature's gift to human beings. Several medicinal plants of utmost importance in the *Ayurvedic* system of medicine are available on the peripheries of some villages of West Godavari district, Andhra Pradesh. They offer solutions to even intricate disorders of human beings. *Acharyas* of *Ayurveda* focused on the usefulness of these medicinal plants several thousands of years ago itself. As *Ayurveda* focuses on preservation of health of healthy firstly and subsiding of the diseases secondarily, these medicinal plants spread along the peripheries of some villages of West Godavari district, Andhra Pradesh prove to be useful. They can be even used as panacea to relieve common ailments. Modernization in many ways is destructing nature and nature's wealth. Hence effort has to be put to preserve the nature's treasure which is invaluable to human beings in relieving many ailments.

Keywords: *Ayurveda*, Medicinal plants, Conserve

Introduction

India is a land of abundant natural resources. Flora especially medicinal plants distributed across the country is also huge. India has 15 Agroclimatic zones and 17000-18000 species of flowering plants of which 6000-7000 species are estimated to have medicinal use. About 960 species of medicinal plants are estimated to be in trade of which 178 species have annual consumption levels in excess of 100 metric tonnes. Medicinal plants are not only a major resource base for the traditional medicine and herbal industry but also provide livelihood and health security to a large segment of Indian population [1]. Andhra Pradesh has a rich floral diversity. Out of a total number of 2586 species estimated about 1800 species are found to be medicinal plants in Andhra Pradesh [2].

On the peripheries of tribal pockets of West Godavari district many of the useful medicinal plants described in *Ayurveda* are spread wildly. They are in the form of a wreath of medicinal treasure traversed along way sides. These should be conserved and preserved as they are the wealth of the nature. Their propagation should also be encouraged for the betterment of future generations. Villagers develop bonding with these medicinal plants and they treat these plants as gods and goddesses. They use these plants for curing all sorts of ailments [3].

List of some medicinal plants and their uses

1. *Kakodumbara* (*Ficus hispida* L.F.):



Fig 1: Showing *Kakodumbara*

This plant is found wildly all along the length of Buttayagudem, Velerupadu and Kukunoor mandal way sides of West Godavari district. Bark, fruit, leaf and root are the parts used. As per *Ayurvedic* scriptures the plant is said to possess *Kushtaghna* (alleviate skin disorders), *Vrana sodhana* (wound cleansing), *Sothahara* (alleviating oedema), *Vamaka* (causes vomiting), *Rechaka* (causes purgation), *Raktaprasadaka* (useful in circulatory disorders), *Rakta stambhaka* (styptic), *Stanyajanana* (galactagogue), *Balya* (energizer), *Vrishya* (aphrodisiac) and *Vishaghna* (useful to alleviate poisonous effects) properties. Anthelmintic, neuromuscular blocking, anti-histaminic, hypotensive, anti-cholagogue, lactagogue, anti-inflammatory, anti-spasmodic, anti-fertility and significant hepato-protective pharmacological activities are observed in it [4].

2. *Avartani* (*Helicteres isora* L.):



Fig 2: Showing *Avartani*

This plant is found wildly along the way sides of some of the villages of Buttayagudem mandal of West Godavari district. Fruit, root and stem bark are the parts used medicinally. As per *Ayurveda* it has *Stambhana* (obstructs the movement of fluids in the body), *Vrana ropana* (wound healing), *Soolaprashamana* (reduces abdominal colic), *Krimighna* (wormicidal), *Raktarodhaka* (styptic) and *Mutrasangrahaneeya* (anti-diuretic) properties. Pharmacological activities of it include anti-galactagogue, mild stimulant, antispasmodic, hypolipidaemic, insulin-sensitizing activity and HIV-1 protease inhibitor activities [5].

3. *Salmali* (*Bombax ceiba* Linn.):



Fig 3: Showing *Salmali*

This plant can be observed along the way sides of buttayagudem and velerupadu mandal villages. Root, gum, stem bark, leaf, flower, young fruit and seed are the medicinally used parts. *Ayurveda* states its use as *Sothahara* (reduces oedema), *Daha prasamana* (alleviates burning sensation), *Vedanasthapana*

(alleviates pain), *Stambhana* (obstructs the movement of fluids in the body), *Vrana ropana* (wound healing), *Lekhana* (scarifying), *Varnya* (improves complexion), *Raktastambhana* (styptic), *Kasa hara* (alleviates cough), *Mutrala* (diuretic), *Rasayana* (rejuvenative), *Vajikarana* (aphrodisiac), *Purishavirajaniya* (imparts colour to faeces) and *Balya* (energizer). Pharmacological activities include hypotensive, hypoglycaemic, antidiarrhoeal, moderate oxytocic, musculotropic and cardiac stimulant properties [6].

4. *Shyonaka* (*Oroxylum indicum* (L.) VENT.):



Fig. 4: Showing *Shyonaka*

The existence of *Shyonaka* in natural population is highly threatened and has been categorized as vulnerable by the government of India [7]. This plant is seen as a surprise on the way sides of Kotturu village of West Godavari district. Root, root bark, leaf, fruit and seed are the parts used medicinally. *Ayurveda* states its attributes as *Sothahara* (reduces oedema), *Vrana ropana* (wound healer), *Vedanasthapana* (alleviates pain), *Vata hara* (alleviates vata), *Deepana* (appetizer), *Pachana* (digestive), *Krimighna* (wormicidal) etc. This plant has got diuretic, spasmogenic, anti-inflammatory and anti-fungal properties [8].

5. *Bakuchi* (*Psoralea corylifolia* L.):



Fig. 5: Showing *Bakuchi*

Bakuchi is an endangered medicinal plant that is distributed throughout tropical and subtropical regions of the world. To the surprise this plant is observed on the way sides of Koida village of Velerupadu mandal, West Godavari district. It was found growing along with sesame and red gram crops which may be either cultivated or wild. Seed and seed oil are the useful parts. *Ayurveda* states its importance as *Kushtaghna* (alleviator of skin diseases), *Jantughna* (wormicidal), *Vrana sodhana* (wound cleanser), *Deepana* (appetizer), *Pachana* (digestive) etc. It has got anti-bacterial, anti-fungal, anthelmintic, anti-inflammatory, vasodilator, skin photo sensitising, anti-tumour, immuno-

modulatory, strong DNA polymerase inhibitor, mild nematicidal, tranquilosedative, anticonvulsant, mild hypotensive, spasmolytic and anti-pyretic properties [9].

6. **Kuberaksha** (*Caesalpinia bonduc* (L.) ROXB.):



Fig. 6: Showing Kuberaksha

This plant is found along the waysides of some of the Buttayagudem mandal villages. Root bark, leaf and seed are the useful parts of this plant. *Ayurveda* attributes that it has got *Jvaraghna* (anti-pyretic), *Rakta shodhaka* (blood purifier), *Krimighna* (wormicidal), *Bhedana* (purgative), *Pramehaghna* (anti-diabetic) etc properties. The pharmacological activities of this plant include anti-diarrhoeal, anti-viral, anti-fungal, anti-inflammatory, anti-fertility, anti-malarial, antiestrogenic and anti-amoebic [10].

7. **Kapikacchu** (*Mucuna pruriens* (L.) DC.):



Fig 7: Showing Kapikacchu

This plant is visible on the way sides of Buttayagudem mandal villages. Seed, leaf and root are the useful parts. *Ayurveda* elaborates its qualities as *Vrshya* (aphrodisiac), *Balya* (energizer), *Vata hara* (alleviator of vata), *Krimighna* (wormicidal) etc. This plant has got anthelmintic, hypotensive, spasmodic, potent antiparkinsonian, hypocholesterolemic, anti-fungal, anti-inflammatory, aphrodisiac and nervine tonic properties in pharmacological studies. L-Dopa free fraction of seed exhibited potent anti-parkinsonian effect in mice in 200 mg/kg i.p [11].

8. **Aralu** (*Ailanthus excelsa* ROXB.):



Fig. 8: Showing Aralu

This plant can be seen all along the way sides of Buttayagudem mandal villages. Stem bark and leaf are the medicinally useful parts. As per *Ayurveda* it is said to possess *Tvakdoshahara* (alleviates skin disorders), *Vrana sodhana* (wound cleanser), *Grahi* (Astringent and anti-diarrhoeal), *Krimighna* (wormicidal), *Rakta shodhaka* (blood purifier), *Yoni dosha hara* (alleviates vaginal disorders) etc properties. Pharmacological activities of it include anti-microbial, anti-tumour, cytotoxic, hypotensive, abortifacient and anti-implantation [12].

9. **Kebuka** (*Costus speciosus* (KOEN. EX RETZ.) SM.):



Fig. 9: Showing Kebuka

This plant comes under threatened species due to its decreasing number. This plant is found wild growing on the way sides of Munjuluru, Upparilla, Gogumilli and Kannarappadu villages of Buttayagudem mandal, West Godavari district. Rhizome is the useful part of this plant. *Ayurveda* states its attributes as *Deepana* (appetizer), *Pachana* (digestive), *Grahi* (astringent and anti-diarrhoeal), *Krimighna* (wormicidal), *Rakta shodhaka* (blood purifier), *Shothahara* (alleviates oedema), *Kasa-Swasa hara* (alleviates cough and dyspnoea), *Garbhashaya sankochaka* (causing uterine muscle contraction) etc. Pharmacological actions of it are antifertility, estrogenic, ecbolic, abortifacient, cardiotoxic, diuretic, CNS depressant, antiarthritic, anticholinesterase, oxicotic, antiviral, antifungal, hypoglycemic, spasmolytic, bradycardiac etc [13].

10. **Palasha (Valli)** (*Butea superba* ROXB.):



Fig. 10: Showing Valli Palasha

This plant is found near the peripheries of Koida village of Velerupadu mandal, West Godavari district. Seed, seed oil, root and stem bark are the parts used medicinally. It is said to possess anthelmintic, hypotensive, emollient, sedative and aphrodisiac activities [14].

11. **Madhuuka** (*Madhuca longifolia* (KOEN.) MACLER):

Fig. 11: Showing *Madhuuka*

This plant is seen along the way sides of Gundugudem and Gundamboru villages of Kukunoor mandal, West Godavari district. Flower, seed and seed oil are the medicinally useful parts. As per *Ayurveda* this plant is useful in *Svasa* (dyspnoea), *Daha* (burning sensation), *Kshata*, *Kshaya* (emaciation), *Trshna* (thirst), *Srama* (exertion) etc disorders ^[15]. Pharmacological activities of it include anti-inflammatory, analgesic, anti-pyretic, anti-hyperglycemic, anti-ulcer, anti-oxidant, hepato-protective and anti bacterial activities ^[16].

Discussion:

In the course of our journey to some of the villages of Buttayagudem, Velerupadu and Kukunoor mandal of West Godavari district, we found out some of the rare, threatened and endangered medicinal plants which are invaluable for treating many of ailments. As *Ayurveda* majorly depends on these herbs, their preservation and conservation is a must for the betterment of the future generations. Hence measures need to be taken to safe guard them and deforestation in the name of modernization should be curtailed.

The medicinal plants like *Shyonaka*, *Bakuchi*, *Kapikacchu*, *Kuberaksha*, *Kebuka*, *Salmali*, *Avartani*, *Aralu* etc, which have utmost importance in *Ayurveda* are decreasing day by day owing to the ever increasing lure of humans to develop in the name of urbanization and hence they should be conserved and their congenial environmental conditions for their survival shouldn't be derailed.

Safe guarding of the gene pool of these rare, threatened and vulnerable species found should be done and their propagation should be done. Measures like preparing seed balls of rare plants and dispersing them in different areas, adopting stem cutting techniques, uprooting of huge trees which obstruct road ways and planting them in other regions, techniques like micro-propagation etc should be followed for their conservation. Afforestation should be encouraged in a wide range. Support should be given to the farmers who cultivate medicinal plants. It is the need of the hour to conserve these species.

Conclusion:

Rare, threatened and vulnerable medicinal plants like *Shyonaka*, *Bakuchi*, *Kebuka* and *Salmali* should be protected from the peril of modernization in order to conserve and uplift the genuine resources of *Ayurvedic* wealth.

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