



## Research Article

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## An ethnobotanical survey of plants used by Yanadi tribe of Kavali, Nellore district, Andhra Pradesh, India

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### Abstract

An ethno botanical survey was undertaken to collect information from Yanadi tribe of Cheruvukattasangham, Kavali, Nellore district, Andhra Pradesh, India. Kavali is a part of Eastern Ghats Mobile Belt which is a Precambrian fold belt extending over 600 km along the east coast of India from the North of Cuttack in Orissa to Nellore in Andhra Pradesh. Yanadi tribe is most prevalent in this region. Besides other usages of plants the practice of oral tradition for healthcare management of human and domesticated animals using herbal medicines is still prevalent among the inhabitants of the area. The study revealed that, the Yanadi tribe used 30 plant species belonging to 20 families to treat scorpion sting, snake bite, cold, helminthic diseases, body pains after delivery in women, dysentery etc. This paper reports the uses of medicinal plants used by tribal people in the form of juices, extracts, decoctions, pastes and powders. The information requires validation for clinical usage.

**Keywords:** Ethnobotany, Yanadi tribe, Medicinal plants.

### Introduction

Plants are important sources of food, shelter and medicine and play a significant role in the survival of the tribal and ethnic communities. India is rich in cultural and floristic diversity and also a store house of ethno-botanical knowledge.<sup>1</sup> Many people are turning to plant-based medicines in recent times as they are abundantly available, economical, and have little or no side-effects.<sup>2</sup> Medicinal plants have gained global importance in alternative health-care system, for their proven and effective curative properties.

Kavali, which is the second biggest town in Nellore District of Andhra Pradesh State, India is located at 14.92° N 79.98° E. It has an average elevation of 17 m. Kavali, a part of Eastern Ghats Mobile Belt which is a Precambrian fold belt extending over 600 km along the east coast of India from the North of Cuttack in Orissa to Nellore in Andhra Pradesh is 8 km away from the Bay of Bengal. CheruvukattaSangham is the Yanadi tribal colony at Kavali. It is a small hamlet of 30 huts. Yanadi tribe is most prevalent in Nellore district. They use *Bambusa arundanacea* stems and *Borassus flabellifer* leaves for the roof of the huts. They are traditional snake and rat catchers. Due to urbanization, changes in life style happened; and they earn their livelihood by doing daily wage labour. They depend on traditional herbal practitioner for the primary health care. Their knowledge about medicinal plants is fast disappearing because very little knowledge is orally transmitted from one generation to the other generation. This indicates that the ethnic botanical knowledge of this region needs urgent documentation, before it is completely lost.

Though ethnobotanical studies in Nellore district are reported<sup>3</sup>, no survey was conducted in the CheruvukattaSangham at Kavali. Hence the present work was aimed to ascertain information on the plants used by Yanadi tribe inhabited in the CheruvukattaSangham at Kavali.

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## Materials and Methods

Interview was conducted with traditional healer, Venkaiah of Yanadi community during field visit or forest walk regarding the information of the plants used by them for medicine, religious customs, hallucinogens and magical beliefs. Verbal informal consent was obtained from him for the documentation. The interview was conducted in their local language (Telugu) and detailed notes were then transcribed to English. During the study-local name of the plant, parts used, mode of preparation and administration were recorded. Further, information about the

time of collection of plant parts, combination of plants used to treat any particular ailment was collected. The plant species were collected from the forest with the help of practitioner and identified using the volumes of 'Flora of the Presidency of Madras'.<sup>4</sup> The gathered information was documented on data sheets and preserved in Dept. of Botany, V.S.U. P.G.Centre, Kavali.

The medicinal plants used by Yanadis are presented with plant scientific name (in italics), followed by local names (in Telugu), family name, habit, plant part used to treat the ailment, mode of preparation and administration (Table 1).

**Table 1:** Medicinal plants used by Yanadi tribe of CheruvukattaSangham, Kavali

Botanical name (Vernacular name)	Family	Habit	Part(s) used	Mode of preparation, administration and ethnomedicinal use
<i>Abutilon indicum</i> (Oopirikuttaku)	Malvaceae	Shrub	Leaf	Three leaves chewed and spitted out. Then air has to be blown in the opposite side ear to the side the muscle sprain occurred.
<i>Abrus precatorius</i> (Erraguruvinda)	Fabaceae	Climber	Seed	Seed paste for hair growth and blackening of hair.
<i>Achyranthes aspera</i> (Uttareni)	Amaranthaceae	Herb	Whole plant	Powder of entire dried plant with equal quantity of sugar used to treat phlegm, breathlessness and continued cough.
<i>Aloe rauhii</i> (Adavi saga)	Liliaceae	Herb	Leaf	5 drops of leaf juice poured in the early morning for 2 days to treat ear pain and suppuration.
<i>Andrographis paniculata</i> (Nelavemu)	Acanthaceae	Herb	Leaf	Leaves used as veterinary medicine. Leaf paste made in to pills. 3 pills given for 3 days early in the morning to treat helminth infection.
<i>Aristolochia indica</i> (Tellaeswari)	Aristolochiaceae	Herb	Root	Root paste made with rice gruel is used for scorpion sting
<i>Aristolochia bracteolata</i> (Eswari)	Aristolochiaceae	Shrub	Root	Root powder in cup water given twice a day for high blood pressure.
<i>Azadirachta indica</i> (Vepa)	Meliaceae	Tree	Leaf	Leaves with turmeric made in to paste and applied for skin diseases.
<i>Caesalpinia sepiaria</i> (GubbaKorinda)	Caesalpinaceae	Shrub	Stem	Stem used as admixture with roots of <i>Glycosmis arborea</i> and stem of <i>Cryptolepis buechananii</i> in the preparation of decoction used for women after delivery to relieve from pains and fever.
<i>Canavalia gladiata</i> (Guttathumba)	Fabaceae	Climber	Seed	Seeds dipped in water used to clean eyes during cataract and watering of eyes.
<i>Capparis spinosa</i> (Tellauppi)	Capparidaceae	Shrub	Root	Root paste applied for scorpion sting
<i>Cassia italica</i> (Nelathangedu)	Caesalpinaceae	Herb	Leaf	Leaves and red chilly pounded and used to prepare rasam which is used as laxative.
<i>Cissus quadrangularis</i> (Nalleru)	Vitaceae	Climbing shrub	Stem	Young stem fried in oil and made in to chutney with salt and tamarind and used for good digestion.
<i>Cryptolepis buechananii</i> (Adavipaalatheega)	Asclepiadaceae	Climber	Stem	Stem without bark used in the preparation of decoction for women after delivery to relieve from pains
<i>Cuscuta reflexa</i> (Pasitheega)	Cuscutaceae	Herb	Tuber	Goat milk and palmjaggery added to the dry tuber powder, mixed well and dried. One teaspoonful powder taken twice daily to develop immunity.
<i>Datura metel</i> (Tellaummetta)	Solanaceae	Herb	Leaf	Leaf juice used for scorpion sting
<i>Dodonaea viscosa</i>	Sapindaceae	Shrub	Leaf	Leaf paste wrapped in cloth and tied to bone fractures.

(Banderu)				
<i>Gmelina asiatica</i> (Adavigummudu)	Verbenaceae	Small tree	Fruit	Fruit juice used for head bath to treat dandruff and sores on scalp.
<i>Glycosmis arborea</i> (Gonjichettu)	Rutaceae	Tree	Root	Root dipped in gruel or water and kept in pot for 2 days. After 2 days, pot is kept on fire and decoction (called as Kasimi) prepared. One glass of decoction given before breakfast for three days for women after delivery to relieve from back pain, legs and headache.
<i>Hemidesmus indicus</i> (Sugandhapala)	Asclepiadaceae	Herb	Root	Root decoction along with sugar used to cure stomach pain and urinary disorders. Also used as cooling beverage.
<i>Jatropha gossypifolia</i> (Erradundigamu)	Euphorbiaceae	Shrub	Leaf	Leaf juice used to treat fevers.
<i>Pergularia daemia</i> (Dushtipaku)	Asclepiadaceae	Climber	Leaf	Three leaves of <i>Pergularia</i> and one leaf of <i>Calotropis gigantea</i> slightly warmed and the juice of them poured on to a white cloth and administered drop by drop in to the nostrils to cure cold.
<i>Prosopis chilensis</i> (Burajala)	Mimosaceae	Tree	Stem	Cortex of the stem used in the preparation of decoction given for women after delivery to relieve from pains.
<i>Pterocarpus santalinus</i> (Adavichandanamu)	Fabaceae	Tree	Stem	Heart wood paste used for skin diseases and decoction for stomach ulcers.
<i>Rivea ornata</i> (Boddhitheega)	Convolvulaceae	Shrub	Stem	Stem without bark used in the preparation of decoction given for women after delivery to relieve from pains.
<i>Sida rhombifolia</i> (Muttusalaku)	Malvaceae	Herb	Leaf	Leaf paste with garlic made in to pills. 3 pills given on empty stomach to treat menstrual pain.
<i>Solanum nigrum</i> (Kamanchi)	Solanaceae	Herb	Leaf	Leaf paste warmed and tied for joint pains.
<i>Strychnos colubrina</i> (Nagamushti)	Asclepiadaceae	Shrub	Root	Root paste with water applied for snake bite.
<i>Syzigium cumini</i> (Neredu)	Myrtaceae	Tree	Bark, Leaf	Bark juice with salt given for stomachache. Young leaf paste for menorrhagia
<i>Ziziphus caracutta</i> (Gotti)	Rhamnaceae	Tree	Fruit	Fruits edible. 3-5 fruits given for 3 days to cure cold for children.

This survey reveals the medicinal use of 30 plant species belonging to 20 families, in which Asclepiadaceae and Fabaceae predominate. Plant parts like root, stem, leaf, bark, fruit, seeds and whole plant are used as medicine. The most commonly used plant part was leaves (used in 11 species), followed by root and stem (used in 6 species each). This is in agreement with earlier findings<sup>5,6</sup> where leaves were found to be most frequently used part. Priority was given to leaves because therapeutic properties are easier to elicit. Medicines are given in different forms including paste, decoction and juice. They used these plants to cure cold, fevers, jaundice, ear pain, stomachache, body pains and skin diseases. They have the traditional knowledge of medicinal plants used for poisonous bites and to relieve pains (backache, headache, pain in legs) during post pregnancy of women.

Yanadis are not only familiar with the medicinal plant species in their ecosystems, but they have also good knowledge of religious and cultural value of plant diversity and many plants are conserved in their natural habitat by tribals due to magico - religious belief that they are habitat of god and goddess. They worship trees as they believe that God and Goddesses reside in

them. With the result of this, plants of religious and cultural importance are conserved as sacred plants. Several esoteric art forms such as Vashikaran are on the verge of extinction. Vashikaran is the control of act of doing things once used for good purposes. Later due to selfishness, it was used to harm others and became a secret art. But, Yanadis use this tantra using plants.

The ethnic and indigenous people depend upon several wild species for fruits, seeds, bulbs, roots and tubers which are used for edible purposes. They follow environmental conservation rule in harvesting edible plants which establishes ecological prudence. Tubers of edible plants like those of *Dioscorea* sp. are harvested by tribals when the leaves of the vine turn yellow and have physiologically matured. The wild tubers are dig carefully avoiding damage to associated species.

Hallucinogens have been used since prehistory and for centuries have been associated with religion as well as with magic and medicine. They are the substances that produce distinct alterations in perception, sensation of space and time and emotional states. Plants used for edible purpose, hallucinogens

and sacred plants are presented in the table as miscellaneous plants (Table 2).

**Table 2:** Miscellaneous plants used by Yanadi tribe of CheruvukattaSangham, Kavali

Scientific name (Vernacular name)	Family	Usage
<b>Sacred plants</b>		
<i>Aegle marmelos</i> (Maredu)	Rutaceae	Worshipped as God
<i>Azadirachta indica</i> (Vepa)	Meliaceae	Worshipped as God
<i>Ficus religiosa</i> (Raavi)	Moraceae	Worshipped as God
<i>Mangifera indica</i> (Mamidi)	Anacardiaceae	Leaves hanged in front of the door during festivals
<i>Ocimum tenuifolia</i> (Tulasi)	Lamiaceae	Worshipped as Goddess
<i>Prosopis spicigera</i> (Jammi)	Mimosaceae	Worshipped
<b>Magical plants</b>		
<i>Bauhinia racemosa</i> (Ari chettu)	Fabaceae	Twigs hanged in front of the houses to protect from lightning and thunder.
<i>Calotropis gigantea</i> (Tellajilledu)	Asclepiadaceae	Leaves tied with black thread and tied around neck for jaundice patients
<i>Jatropha gossypifolia</i> (Yerradundigamu)	Euphorbiaceae	Leaf juice used in vasikarana
<i>Momordica charantia</i> (Kakara)	Cucurbitaceae	Antidote for vasikarana
<i>Opuntia dillenii</i> (Nagajemudu)	Cactaceae	Cultivated in front of the hut and believe measles will not attack due to its presence
<i>Sida rhombifolia</i> (Sanjeeva, Sandulaku)	Malvaceae	Leaf paste with garlic wrapped in white cloth and tied to the waist to the children when they are unrest.
<b>Wild edible plants</b>		
<i>Canavalia gladiata</i> (Guttathumba)	Fabaceae	Fruit used as vegetable
<i>Carissa carundus</i> (Kalekaya)	Apocynaceae	Fruit edible
<i>Cissus quadrangularis</i> (Nalleru)	Vitaceae	Young stem used in preparing chutney
<i>Diospyros ferra</i> (Utipallu)	Ebenaceae	Fruit edible
<i>Solanum nigrum</i> (Kamanchi)	Solanaceae	Fruit edible
<i>Ziziphus caracutta</i> (Gotti)	Rhamnaceae	Fruit edible
<i>Ziziphu soenoplea</i> (Parikichettu)	Rhamnaceae	Fruit edible
<b>Hallucinogens</b>		
<i>Acacia leucophloea</i> (Tellathumma)	Mimosaceae	Stem with jaggery used as hallucinogen

## Conclusion

The present survey concludes that the Yanadi tribe of CheruvukattaSangham has good knowledge regarding the utility of plants particularly to poisonous bites and for pains in the post pregnancy period. The information may be useful to improve the pharmaceutical applications in future.

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