

Ethnomedicinal plants used by the Bagata Tribes of Paderu Forest Division, Andhra Pradesh, India

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(Published in International Journal of Advanced Research in Science & Technology)

Abstract

Ethnobotanical surveys were conducted among the ethnic group of *Bagata* tribes inhabited in Paderu Division of Visakhapatnam District, Andhra Pradesh during 2013-2014. A total of 30 plant taxa belonging to 20 families pertaining to 26 genera were reported. All the plant species need to be evaluated through phytochemical investigations to discover their potentiality as new drugs for better health. The present study reports a high degree novelty in the use, mode of administration of plants among the *Bagata* tribes reflecting the revival of interest in traditional medicine.

From ancient times, people have made use of plants for their basic needs, sustenance, healthcare and livelihood. The ethnic tribes depend predominantly on plants for their food, clothing, housing, medicine, oil, agricultural implements, crafts and a host of other requirements. Some plants used by tribal people are cultivated, while others grow in wild conditions. They have some superstitious beliefs on some plants which were found to be tied/worn on the body parts to cure various ailments. Plants are still the main source of medicines to majority of people. Reliance on traditional medicine is not only associated with the traditional belief of its effectiveness but also on harmonious existence of spirit and matter¹.

The efficacy of herbal medicines is believed to be enhanced when they are prepared and administered by enchanting *mantras* and incantations. The anthropological studies on south Indian tribes have been carried out since the beginning of the 20th (2-4) century worked on ethnobotany and stressed its importance. The earlier workers showed much interest on the plants used for food and culture than the plants used for medicines⁽⁵⁻⁸⁾.

In recent years, many attempts were made to study the medicinal plants used by various aboriginal tribes and other people in India, particularly in Eastern Ghats⁽⁹⁻¹¹⁾. So many Research Institutes and Universities showed much interest in the exploration study of Ethnobotany in the Eastern Ghats. Visakhapatnam is one of the rich biodiversity centers and it is situated on the East Coast of India. Paderu Division is the biggest Forest Division of Visakhapatnam known as agency area, situated in the hilly tracts of Eastern Ghats of India.

Study area

The study area includes the Paderu Division of Visakhapatnam District, Andhra Pradesh. Paderu Division is the higher altitude zone in the hilly tracts of Eastern Ghats of Andhra Pradesh. It has the second highest tribal population in Andhra Pradesh. Paderu division lies between latitudes of 17° - 50' and 18° - 35' N and longitude of 82° - 17' and 83° - 01' E with a total geographical area of 3,24,965 ha. Out of which the forest area spreads over 104811.91 ha. It comprises a series of hills having an altitude ranging from 900 to 1680m. The area receives an average annual rainfall of 1800 mm and support a rich diversity of plant wealth. The Paderu Division enjoys luxurious forest vegetation. The coffee and pepper plantations are in Ananthagiri, Araku, Paderu, G. Madugula and Munchingiputtu mandals of this division. The study area consists eight mandals *i.e.* Ananthagiri, Araku valley, Dumbriguda, G. Madugula, Hukumpeta, Munchingiputtu, Paderu and Pedabayalu.

Bagata tribes

The *Bagata*, also called *Bhakta* are a Scheduled Tribe inhabiting the hill region of Visakhapatnam District. However, they are concentrated in the mountain valley of Paderu, Sujanakota, Karakapalli, Tajangi, Devarapalli and Peddavalasa which comprise two-thirds of Visakhapatnam agency. Being expert archers, the *Bagata* served the 17th century Golconda and Gangarajumadugula chieftains of Visakhapatnam Agency as their army personnel. They showed so much devotion that they were recognized as their devotees or *Bhaktas*. The name '*Bhaktas*' later became *Bagatas*. In appreciation of their military services, the chieftains appointed them as local chiefs, *Muttadars*, of the hill tracts. Due to this shift in status, the *Bagata* claimed themselves as a warrior tribe, expanded geographically, developed politically and acquired social supremacy in the tribal area over a time span of about 50 years from the late 17th to early 18th Century.

Materials and methods

The approaches and methodologies for ethnobotanical work, suggested by Jones⁽¹²⁾ and Chadwick and Marsh⁽¹³⁾ were followed. Emphasis was

given mainly on intensive field work in selected tribal habitations. Ethnobotanical data was collected through questionnaires, household surveys, interviews and semi-structured questions. The data collection held for selected villages from both genders in the division. The focus of the present study is to record the ethnobotanical knowledge with special reference to medicinal plants possessed by the tribal people. They represent the pockets of human gene pool and have distinct habitats and habits with ample knowledge on the medicinal properties of plants. Plants employed in material culture and plants associated with folk songs, folk tales, worship, mythology, taboos, magico-religious beliefs, ceremonies, etc. were studied in addition to vernacular names. Plant specimens were identified with the help of Flora of the Presidency of Madras⁽¹⁴⁾ and e-floras.

Results and Discussion

The history of indigenous knowledge is as old as the human race. This knowledge has always been very important for the people who generate it. It is a matter of survival for them. Many scientists, researchers and environmentalists all over the world are now striving to explore, document and use the resource base knowledge for the welfare of the wider human race. Documentation of traditional knowledge related to plant resources is known as ethnobotany. Analysis of information presented in (Table 1) indicates that Paderu Division of Visakhapatnam District possesses rich knowledge about the plant resources around them. A total of 30 angiosperm plant taxa belonging to 26 genera of 20 families have been identified and recorded for ethnobotanical uses. Out of the 20 families, Papilionaceae and Caesalpiniaceae were the dominated families with each of 4 species, followed by Mimosaceae 3, Arecaceae and Asteraceae each of 2 taxa and remains have single species of each. Out of the total 30 flowering species, trees are 15, shrubs 4, herbs 4, climbers 7 (including lianas, scramblers, twiners). The study showed that trees were dominating the forest. They are more utilizing in single form or in combination with other plant species parts for the treatment of 19 ailments like abortion, menstrual problems, wounds, snake bite, diabetes, headache, asthma, toothache, dysentery, diarrhoea, fever, chest pain, arthritis, earache, dandruff, fits, jaundice, rheumatism and fracture (Table.1). The maximum number of plants used for a particular ailment can possibly show the prevalence of the ailment in the area.

Various plant parts, such as roots (13 species), stem bark (7) leaves (3), flowers (1), seeds (3), whole plant and rhizome each species used for the treatment of the above ailments generally through oral administration (Fig.1)

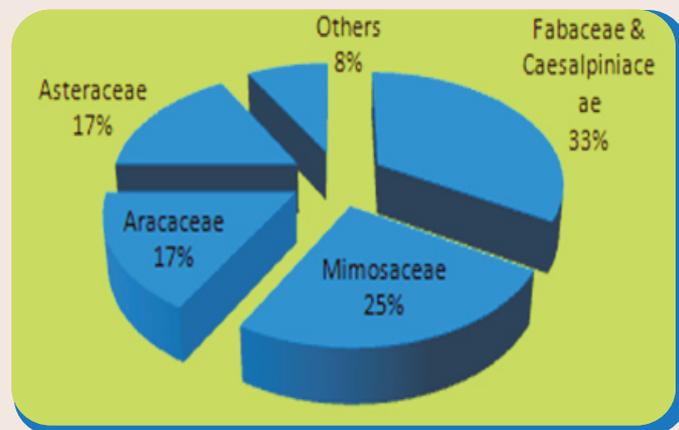


Figure1: Showing percentage of species used for the treatment

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Table: 1. Ethnomedicinal plants used by the Bagata tribes of Paderu Forest Division

Scientific Name	Local Name	Family Name	Habit	Part used	Disease
<i>Abrus precatorius</i> L.	Guruvinda	Papilionaceae	Twiner	Seeds	Abortion
<i>Abutilon indicum</i> (L.) Sweet	Thuthurubenda	Malvaceae	Shrub	Roots	Menstrual disorders
<i>Acacia leucophloea</i> (Roxb.) Willd	Tellatumma	Mimosaceae	Tree	Stem bark	Wounds
<i>Acacia nilotica</i> (L.) Delile	Nallatumma	Mimosaceae	Tree	Stem bark	Snake bite
<i>Aegle marmelos</i> (L.) Correa	Maredu	Rutaceae	Tree	Leaf	Diabetes
<i>Arisaema tortuosum</i> (Wall.) Schott	Dhammasaaru	Araceae	Herb	Tubers	Headache
<i>Balanites roxburghii</i> Planch	Gare	Balanitaceae	Tree	Roots	Asthma
<i>Barleria prionitis</i> L.	Mullagorinta	Acanthaceae	Shrub	Roots	Toothache
<i>Bauhinia purpurea</i> L.	Kanchanam	Caesalpiniaceae	Tree	Bark	Dysentery
<i>Bauhinia racemosa</i> Lam.	Are	Caesalpiniaceae	Tree	Roots	Diarrhoea
<i>Bauhinia vahlii</i> Wight & Am.	Addaku	Caesalpiniaceae	Liana	Roots	Dysentery
<i>Bixa orellana</i> L.	Jabarukaya	Bixaceae	Tree	Roots	Fever
<i>Bridelia retusa</i> (L.) A.Juss.	Koramanu	Euphorbiaceae	Tree	Bark	Chest pain
<i>Buchanania cochinchinensis</i> (Lour) M.R. Almedia	Chinnamurli	Anacardiaceae	Tree	Stem bark	Diarrhoea
<i>Butea superba</i> Roxb.	Teegamoduga	Papilionaceae	Liana	Root	Arthritis
<i>Calamus rotang</i> L.	Pemu bethamu	Arecaceae	Scrambler	Leaf	Cough
<i>Capparis zeylanica</i> L.	Aridonda	Capparidaceae	Scrambler	Root	Earache
<i>Caryota urens</i> L.	Jeeluga	Arecaceae	Tree	Seed	Dandruff
<i>Dalbergia latifolia</i> Roxb.	Iridi	Papilionaceae	Tree	Bark	Fever
<i>Dalbergia sissoo</i> DC.	Sissoo	Papilionaceae	Tree	Root	Diarrhoea
<i>Delonix regia</i> (Hook.) Raf.	Thurai	Caesalpiniaceae	Tree	Root	Asthma
<i>Dodonaea viscosa</i> (L.) Jacq.	Bandam	Sapindaceae	Shrub	Leaf	Fits
<i>Eclipta prostrata</i> (L.) L. Mant.	Guntagalagara	Asteraceae	Herb	Whole plant	Jaundice
<i>Elephantopus scaber</i> L.	Nelamarri	Asteraceae	Herb	Root	Diarrhoea
<i>Entada rheedii</i> Spreng.	Gilateega	Mimosaceae	Liana	Seed	Rheumatism
<i>Grewia tiliifolia</i> Vahl.	Tada	Tiliaceae	Tree	Root	Bone fracture
<i>Hemidesmus indicus</i> (L.) R.Br. ex Schult.	Sugandipala	Apocynaceae	Twiner	Root	Diarrhoea
<i>Vitex altissima</i> L.f.	Nemaliadugu	Verbenaceae	Tree	Root	Snake bite
<i>Woodfordia fruticosa</i> (L.) Kurz.	Jeguru	Lythraceae	Shrub	Bark	Jaundice
<i>Zingiber roseum</i> (Roxb.) Roscoe	Adaviallamu	Zingiberaceae	Herb	Rhizome	Arthritis