

Ethnomedicinal Plants Used by Nukha Dora Tribes of Dumbriguda Mandal, Alluri Sitaramraju District, Andhra Pradesh, India

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Abstract

Original Research Article

The paper enumerates 60 medicinal plant species belonging to 49 genera and 35 families used for 43 ethnomedicinal purposes by the Nukha Dora primitive tribe of Dumbriguda Mandalam Alluri Sitaramaraju district, Andhra Pradesh. Many elderly persons of the village are also aware about the importance and use of such herbal medicines. A review of the available scientific literature suggests that many of the medicinal plants used by the tribals can be validated scientifically in their traditional uses based on reported pharmacological activities present in those plants.

Keywords: Ethnomedicinal practice, Nukha Dora tribal people, Dumbriguda Mandalam, Alluri Sitaramaraju District.

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INTRODUCTION

The study of traditional medicine is ethnomedicine. Ethnomedicine is older than civilization. It is part of the customs and traditions of a specific community and is now considered a new source of wisdom. Historically, the use of plants for treating human and animal diseases in India can be traced back to the Rigveda, the earliest scripture of the Hindus (4500-1600 BC) (Jain, 1994). Indian ethnobotanical contributions have earned the nation a prominent place on the world map of ethnobotanical studies (Jain, 1963c; 1965; 1967a; 1991b). A future role for ethnobotany may be to contribute to sustainable development and the conservation of biodiversity (Rajasekaran & Warren, 1994). A multitude of tribal groups and very diversified vegetation make India a top country for ethnobotany knowledge. It is estimated that India is home to 17,500 angiosperm species alone (Jain, 2000). Glimpses of Indian Ethno botany (Jain, 1981) contributed to the development of ethno botanic studies in India. These studies are especially important for aboriginal people (Maheshwari and Singh, 1984). In the last decade, the Department of Environment and Forest has been consistently conducting research on ethnobiology, which has generated a lot of curiosity about tribal medicine. Since time immemorial the primitive societies have depended on plants remedies for the treatment of diseases and disorders (Singh *et al.* 2003). A large number of wild plants are useful for the tribal people for

meeting their multifarious needs (Anonymous, 1990). In Andhra Pradesh, ethnobotany has been well explored (Hemadri, 1976; Ramarao *et al.*, 1999; Reddy *et al.*, 1996; Reddy *et al.*, 2000; Savitamma *et al.*, 2007; Krishnamurthy, 1958; Sudhakar & Rao, 1985; Raju, 1996; Lakshmi & Lakshminarayana, 2008). The present study aims to investigate the ethnomedicinal plants used by primitive tribes of Maredumilli Mandal and the practices they employ.

MATERIAL AND METHODS

Study area

The study area of Dumbriguda Mandal is one of the 11 tribal mandals of Alluri Sitaramaraju District. Alluri District is one of the North Eastern Coastal districts of Andhra Pradesh and it lies between 17° - 15' and 18°-32' Northern latitude and 83° - 54' and 83° - 30' in Eastern longitude. It is bounded on the North partly by neighboring district known as Vizianagaram and the Orissa State, on the South by East Godavari District, on the West by Orissa State and on the East by Bay of Bengal. Dumbriguda is a Mandal headquarter which consists 22 Panchayats and 87 revenue villages. Total population of the area is 44,878 among them 93.43% are tribal communities. It is a first attempt on conducting an exploratory study towards understanding traditional food system of tribal communities in this region, however earlier workers had done some similar studies on uncultivated food plants in several other tribal areas in the country and within the state.

Methodology

An ethnomedical study was conducted by interviewing tribal elders and elderly people, herbal healers, tribal gurus, and vydhyas during different seasons during the years. Field trips were conducted several times between the years 2020 and 2021 in the district to document the ethnomedical knowledge of the tribal people in Dumbriguda Mandal. Information was collected on plant species, parts, vernacular names, and methods of use of useful plants. The ethnomedicinal plants were identified with the help of regional floras (Gamble & Fischer, 1935 Herbarium specimens of the plants were deposited at the Botany Department of the Andhra University in Visakhapatnam, Andhra Pradesh, India. Data on ethnomedicine is arranged alphabetically by botanical names, family names, vernacular names, habits, useful parts, and diseases (Table 1).

RESULTS AND DISCUSSION

The present study reveals that 60 species belonging to 49 genera and 35 families were employed for various purposes. According to a family-wise analysis of ethnomedicinal plants, the most dominant families include the Fabaceae with 6 species followed by the Apocynaceae with 5 species, the Mimosaceae and Malvaceae with 4 species, and the Menispermaceae and Dioscoriaceae with 3 species and Sapotaceae, Lauraceae, Ebenaceae, Caesalpiniaceae and Asteraceae with 2 species and remaining 22 families each one has single species. In the present study it is clearly evident that the local people use trees 26 followed by Shrubs, 16, shrubs,

Climbers 10 and Herbs 8. Depending upon the plant part used for medicinal purposes stem bark constitutes the highest 15 followed by leaf 14, root 8, stem, 4, whole plant, root bark and fruit 3 species.

An intensive survey and repeated personal interviews in different pockets resulted in coming across 43 diseases in the area. The most common diseases afflicting tribal groups are ascertained by consulting local doctors. The most common ailments are Abdominal swelling, Anasarca, Antifertility, Blisters, Blood purification, Body pain, Breast pain, Cholera, Fertility, Gonorrhoea, Headache, HIV, Impotency, Leucoderma, Lice, Peptic ulcer, Snake bite, Sterility, Wounds, Abortion, Acidity, Antidote, Antifertility, Bronchitis, Burns, Conception, Cuts, Dandruff, Diabetes, Dyspepsia, Fractures, Hydrocele, Stomachache, Swellings, Anaemia, Blood pressure, Conjunctivitis, Cough, Dysmenorrhoea, Fever, Jaundice, Anthelmintic, Chest pain, Cold, Epilepsy, Leucorrhoea, Boils, Rheumatoid Arthritis, Dysentery, Diarrhoea and Asthma. For their healthcare system, the tribal people of East Godavari still rely on traditional medicine. Various kinds of valuable drugs have been discovered through documentation of traditional knowledge on health care practices (Iwu 1994; Cox and Ballick, 1994; Fabricant and Fransworth, 2001; Framce *et al.*, 1994). The developing nations approximately 80% of the population dependant on ethno-medicine are seeking health care (Farnsworth *et al.*, 1985).

Table 1: Ethnomedicinal plants used by Nukha Dora tribes of Dumbriguda Mandal, Alluri District

S.No	Botanical Name	Family	Vernacular Name	Habit	Ailment	Parts
1	<i>Andrographis paniculata</i>	Acanthaceae	Nela vemu	Herb	Boils and Blisters	Leaf
2	<i>Agave cantala</i>	Agavaceae	Kitha Nara'	Shrub	Bruises	Leaf
3	<i>Alangium salviifolium</i>	Alangiaceae	Uduga	Shrub	Bone fracture	Root
4	<i>Semecarpus anacardium</i>	Anacardiaceae	Nalla jeedi	Tree	Menstrual disorders	Fruit
5	<i>Spondias pinnata</i>	Anacardiaceae	Konda mamidi	Tree	Dysentery	Stem bark
6	<i>Alstonia scholaris</i>	Apocyanaceae	Edakula pala	Tree	Malaria	Stem bark
7	<i>Alstonia venenata</i>	Apocyanaceae	Edakula pala	Tree	Anthelmintic	Stem bark
8	<i>Ichnocarpus frutescens</i>	Apocynaceae	Pala teega'	Shrub	Hemorrhage	Root
9	<i>Wrightia arborea</i>	Apocynaceae	Tedla pala'	Tree	Snake bite	Latex
10	<i>Wrightia tinctoria</i>	Apocynaceae	Ankudu	Tree	Psoriasis	Leaf
11	<i>Caryota urens</i>	Arecaceae	Jeeluga	Tree	Dyspepsia	Inflorescence
12	<i>Aristolochia bracteolata</i>	Artisotolochiaceae	Gadida gadapa	Herb	Eczema	Leaf
13	<i>Asparagus recemosus</i>	Asparagaceae	Pillitegalu	Climber	Bronchitis	Root
14	<i>Blumea axillaris</i>	Asteraceae	Kukka pugaku'	Herb	Cooling effect	Leaf
15	<i>Sphaeranthus indicus</i>	Asteraceae	Boda taram	Herb	Impotency	Root
16	<i>Bombax ceiba</i>	Bombacaceae	Mulla buruga'	Tree	Boils and Sores	Flower
17	<i>Ehretia microphylla</i>	Boraginaceae	Nunemuntha	Shrub	Ulcers and Wounds	Stem bark
18	<i>Boswellia serrata</i>	Burseraceae	Guggilam	Tree	Insect repellent	Stem
19	<i>Caesalpinia bonduc</i>	Caesalpiniaceae	Gachakaya'	Shrub	Epilepsy	Root Bark
20	<i>Senna auriculata</i>	Caesalpiniaceae	Thangedu	Shrub	Diabetic ulcers	Whole Plant
21	<i>Cleome viscosa</i>	Cleomaceae	Kukka vaminta'	Herb	Cuts and Wounds	Leaf
22	<i>Terminalia chebula</i>	Combretaceae	Karakkaya	Tree	Cough	Fruit
23	<i>Kalanchoe laciniata</i>	Crassulaceae	Kondakalli	Herb	Bone Fracture	Leaf
24	<i>Dioscorea bulbifera</i>	Discoreaceae	Adavi dumpa'	Climber	Dyspepsia	Leaf

S.No	Botanical Name	Family	Vernacular Name	Habit	Ailment	Parts
25	<i>Dioscorea oppositifolia</i>	Discoreaceae	Tella gadda'	Climber	Cuts and Wounds	Leaf
26	<i>Dioscorea pentaphylla</i>	Discoreaceae	Dukka pendalam'	Climber	Insecticide	Tuber
27	<i>Diospyros melanoxylon</i>	Ebenaceae	Beedi aku'	Tree	Joint pains	Stem bark
28	<i>Diospyros sylvatica</i>	Ebenaceae	Nallagatha	Tree	Fits	Stem bark
29	<i>Abrus precatorius</i>	Fabaceae	Guruvinda	Climber	Abortion	Root
30	<i>Butea monosperma</i>	Fabaceae	Moduga	Tree	Abdominal disorders	Stem
31	<i>Clitoria ternatea</i>	Fabaceae	Shanku pushpi'	Climber	Antiemetics	Root
32	<i>Crotalaria retusa</i>	Fabaceae	Naga giligicha'	Shrub	Chicken pox	Root
33	<i>Crotalaria verrucosa</i>	Fabaceae	Giligitcha kaya'	Shrub	Scabies	Leaf
34	<i>Dalbergia latifolia</i>	Fabaceae	Irugudu cheva	Tree	skin diseases	Stem bark
35	<i>Curculigo orchioides</i>	Hypoxidaceae	Nela tadi'	Herb	Jaundice	Rhizome
36	<i>Leonotis nepetifolia</i>	Lamiaceae	Rana bheri	Shrub	Skin diseases	Whole Plant
37	<i>Litsea glutinosa</i>	Lauraceae	Narra alagi	Tree	Paralysis	Stem bark
38	<i>Careya arborea</i>	Lecythidaceae	Gummodu cchetti	Tree	Body swelling	Bark
39	<i>Litsea deccanensis</i>	Luraceae	Narra mamidi	Tree	Boils	Stem bark
40	<i>Woodfordia fruticosa</i>	Lythraceae	Jagipuvvulu	Shrub	Leprosy	Stem bark
41	<i>Abutilon indicum</i>	Malvaceae	Tuttura benda	Shrub	Dysentery	Leaf
42	<i>Sida acuta</i>	Malvaceae	Maha bala	Herb	Nervous weakness	Whole Plant
43	<i>Sida cordata</i>	Malvaceae	Gayapu aaku	Shrub	Paralysis	Leaf
44	<i>Thespesia populnea</i>	Malvaceae	Ganga Raavi	Tree	Skin diseases	Leaf
45	<i>Soymida febrifuga</i>	Meliaceae	Somid	Tree	Menstrual disorders	Stem bark
46	<i>Anamirta cocculus</i>	Menispermaceae	Koditeega	Climber	Uterus problem	Leaf
47	<i>Tiliacora acuminata</i>	Menispermaceae	Teega mushini	Climber	Snake bite	Root
48	<i>Tinospora cordifolia</i>	Menispermaceae	Tippa teega	Climber	Bone fracture	Stem
49	<i>Acacia leucophloea</i>	Mimosaceae	Tella thumma	Tree	Tooth ache	Stem bark
50	<i>Acacia nilotica</i>	Mimosaceae	Nalla tumma'	Tree	Diarrhoea	Stem bark
51	<i>Acacia torta</i>	Mimosaceae	Korintha	Shrub	Whooping cough	Root Bark
52	<i>Xylia xylocarpa</i>	Mimosaceae	Konda tangedu	Tree	Gonorrhoea	Root bark
53	<i>Hymenodictyon orixense</i>	Rubiaceae	Duddipa	Tree	Cuts and wounds	Stem
54	<i>Atalantia monophylla</i>	Rutaceae	Karu nimma	Shrub	Rheumatoid arthritis	Fruit
55	<i>Dodonaea viscosa</i>	Sapindaceae	Bandadi	Shrub	Muscle pain	Stem bark
56	<i>Madhuca longifolia</i>	Sapotaceae	Ippa	Tree	Stomach pains	Root
57	<i>Manilkara hexandra</i>	Sapotaceae	Pala karra	Tree	Eyesight	Root
58	<i>Ailanthus excelsa</i>	Simaroubaceae	Pedda manu'	Tree	Dysentery in poultry	Stem bark
59	<i>Smilax zeylanica</i>	Smilacaceae	Firangi chettu	Climber	Paralysis	Tuber
60	<i>Solanum anguivi</i>	Solanaceae	Vakudu	Shrub	Pains	Leaf

CONCLUSIONS

Industrialization, urbanization, modernization and the consequent developmental activities on one side and acculturation of the ethnic societies on the other have set in motion causing destruction of forests and devastation of ethnobotanical knowledge. It is high time now, that all the Governmental and Non-Governmental Organizations should redouble their efforts to conserve plants of potential economic value, particularly medicinal plants and the ecosystems they inhabit. The tribal people of the district have very good ethnomedicinal knowledge on the use of medicinal plants. In rural areas, such types of knowledge of ethnomedicinal plants were restricted to a few persons. The harvesting of the ethnomedicinal plants by the maximum use of underground parts from the wild may lead to the extinction of the species in the future.

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