



SOME IMPORTANT ETHNOMEDICINAL PLANTS OF EASTERN GHATS OF NELLORE DISTRICT, ANDHRA PRADESH

N.S.R.KRISHNA RAO¹ AND A.LALITHAMBA²

1. Centre for Conservation of Biodiversity
and Medicinal Plants, **KAVALI**-524201.

2. Department of Botany,
D.K. Government Degree & P.G College
for Women, **NELLORE** -525001.

e.mail: rao.nsrk@gmail.com ; alalithamba@gmail.com

A cursory botanical survey of Eastern Ghats of Nellore district revealed the occurrence of valuable medicinal plants. As many as 45 plants belonging to 34 families employed in folklore medicine by Vaidyas and rural people and their therapeutic values are discussed in the present paper.

Key words: Eastern Ghats, Ethno- medicine, Nellore district

Indigenous herbal medicines have been practised by several ethnic groups in India for several centuries. This knowledge has been transmitted for several generations as folk medicine and has remained as the exclusive healing practice among tribal groups, isolated from the mainstream civilization.

The Eastern Ghats are a series of discontinuous low range of hills running generally northeast-southwest parallel to the coast of Bay of Bengal. This region has complex geography with various mountains, valleys and plains and therefore harbour huge biodiversity. These ghats are often referred to as 'Estuaries of India' and also carry a heap of ecological significance. In Andhra Pradesh, the hilly regions in the coastal districts of Srikakulam, Vizianagaram, Visakhapatnam, East Godavari, West Godavari, Krishna, Guntur, Prakasam and Nellore and the Rayalaseema districts of Chittoor, Kadapa, Kurnool and Anantapur and the Telangana districts of Khammam, Nalgonda and Mahabubnagar form the Eastern Ghats.

Nellore district is the southernmost coastal district of Andhra Pradesh, located between 79° 9' and 80° 15' E longitude and 13°

50' and 15° 6' N latitude. In this district the Eastern Ghats form a narrow range at the western border of the district between 79° 30' E longitude and 13° 50' and 15° 6' N latitude. On the west the district is separated from Kadapa district by Veligonda range. The extent of Eastern Ghats in this district is about 3000 Sq. Km. The normal average rainfall in Nellore district is about 1080 mm, while it is much lower in the western uplands of the district where Eastern Ghats are spread. The district lies in the rain shadow range with precarious and uncertain rainfall. Except for the months of November, December, January and February it is hot to very hot throughout the year with day temperature exceeding 40° C during May-June. These harsh climatic conditions have a bearing on the flora of Eastern Ghats in the form of tropical dry deciduous and thorny forests.

Indian medicinal plants have been well-documented (Kirtikar and Basu 1995, Pullaiah 2002, Jain 1991, Chatterjee and Pakrashi 1991). There have been studies on the flora of Eastern Ghats (Reddy *et al.* 2009, Venkata Raju and Pullaiah 1995) and also on ethnobotany of Eastern Ghats in Andhra Pradesh (Pattanaik *et al.* 2009, Muralidhara Rao and Pullaiah 2007,

Table 1 Therapeutic uses of some important ethnomedicinal plants of Eastern Ghats of Nellore district (A.P)

Sl. No	Botanical Name/Family/Voucher No.	Telugu Name	Therapeutic Value	Parts used
1	<i>Acacia horrida</i> (L.f)Willd/Mimosaceae/NSRK106	Paki-tumma	Psychoactive Fever; Chest affection	Leaves Leaf Infusion
2	<i>Acacia leucophloea</i> Willd/Mimosaceae/NSRK107	Tellathumma	Bronchitis; Blood purification	Bark applied orally
3	<i>Aganosma cymosa</i> (Roxb) Don / Apocynaceae/NSRK109		Snake bite	Root powder taken orally
4	<i>Alangium salvifolium</i> (L.f) Wang /Alangiaceae/AL250	Uduga	Bone fracture	Fresh leaf paste is mixed with egg's white and lime and the mixture applied externally on the fracture
5	<i>Anogeisus latifolia</i> Roxb.Ex.Dc/Combretaceae/AL252	Chirumanu	Anemia; Appetite Skin disorders	Bark extract taken orally Bark extract applied externally
6	<i>Aristolochia bracteata</i> Retz. /Aristolochiaceae/NSRK 111	Gadida gadapa	Eczema of children	Crushed leaves mixed with castor oil, applied externally
7	<i>Atlantia monophylla</i> Corr./Rutaceae/NSRK 112	Adavinimma	Snake bite Rheumatism	Fresh leaves applied externally Fruit
8	<i>Barleria buxifolia</i> L. /Acanthaceae/AL 254	Mullangorinta	Cough; Bronchitis	Root and leaf extract taken orally
9	<i>Butea monosperma</i> (Lam)Taub / Fabaceae /AL 257	Moduga	Piles	Seeds taken orally
10	<i>Cadaba fruticosa</i> (L.)Druce /Capparidaceae/NSRK 113	Adavi morinika	Eczema Worm infection	Leaf and fruit externally/ orally
11	<i>Cardiospermum canescens</i> L /Sapindaceae/AL 260	Tellabudama	Joints pain during delivery	Leaf juice mixed with cumin consumed orally
12	<i>Cassytha filiformis</i> L /Lauraceae /NSRK116	Panchiteega	Ulcers	Plant extract mixed with butter and ginger, taken orally
13	<i>Catunagerum spinosa</i> Wolf /Rubiaceae/NSRK 117	Mandanamu	Aphrodisiac; Skin disorders	Fruit orally taken/ applied externally
14	<i>Chloroxylon swietenia</i> DC /Flindersiaceae /NSRK 118	Billudu	Scorpion sting Skin ointment	Fresh stem bark ground to paste and applied on affected part Leaves
15	<i>Chomelia asiatica</i> (L.)Kuntze /Rubiaceae/AL 263	Kommi	Boils	Fruit pounded and applied externally
16	<i>Cocculus hirsutus</i> (L.) Diels /Menispermaceae/AL 264	Cheepunu teega	Eczema	Leaf juice applied externally
17	<i>Commiphora caudata</i> (W&A) Engler/Burseraceae /AL 265	Guggulu	Cracks on feet	Stem ground to a paste and applied
18	<i>Cordia obliqua</i> L /Boraginaceae/AL 265	Chinna nakkera	Ulcers	Leaves orally taken
19	<i>Corollocarpus epigeus</i> Hook. F./Cucurbitaceae/AL 266	Pamudonda	Inflammations	Whole plant
20	<i>Dendrophthe falcata</i> (L.f) Ettingsh /Loranthaceae /NSRK 119	Badanika	Psychic disorders; Wounds	Bark orally /externally
21	<i>Diospyros ferrea</i> (Willd.) Bakh/Ebenaceae/NSRK 121	Palachettu	Kidney stones; Sore throat	Fruit orally taken
22	<i>Diospyros metaxylon</i> Roxb./Ebenaceae/NSRK 122	Tuniki	Bone fracture	Stem bark ground with egg's white and applied with bandage
23	<i>Ehretia microphylla</i> Lam. /Boraginaceae/NSRK 124	Barranki	Alternative	Root orally taken Infusion of wood and bark taken orally
24	<i>Erythroxylon monogynum</i> Roxb./Erythroxylaceae/AL 267	Devadari	Dyspepsia; Stomachic	
25	<i>Euphorbia antiquorum</i> L./Euphorbiaceae/AL 269	Bommajemudu	Rheumatism Stomachic	Whole plant crushed and applied externally Milky juice
26	<i>Glossocardia bosvallia</i> DC. /Asteraceae/NSRK 127	Adavi vanam	Snake bite	Shade, dried whole plant embedded in sesame oil with a clove of garlic for a few days and given orally
27	<i>Gmelina arborea</i> Roxb. /Verbenaceae/NSRK 128	Adavigummadi	Bone fracture Scorpion sting Inflammations;	Stem bark crushed and applied as a poultice Fresh leaf paste applied externally

28	<i>Grewia hirsuta</i> Vahl. /Tiliaceae /AL 271	Juvilika	Eye and Nose disorders	Bitter leaves applied externally
29	<i>Gymnosporia montana</i> (Roth)Benth. /Celastraceae /AL 273	Pedda chintu	Gastric Ulcers; Jaundice	Root extract Leaf extract taken orally
30	<i>Manilkara hexandra</i> (Roxb)Dub /Sapotaceae /AL276	Peddapaala	Eye disorders	Whole plant
31	<i>Mukia maderaspatana</i> (L.) M.J.Roem /Cucurbitaceae /AL 278	Lingadonda	Constipation; Cough;Dyspepsia	Whole plant crushed and taken orally
32	<i>Oxystelma esculentum</i> R.Br. /Asclepiadaceae /AL 280	Dudipala	Galactagogue; Sore throat	Whole plant Leaf decoction gargled
33	<i>Pavonia odorata</i> Willd /Malvaceae /NSRK 136	Chittibenda	Antiseptic; Demulcent; Alternative; Refrigerant	Root extract taken orally
34	<i>Pentstemon microphylla</i> W&A /Asclepiadaceae /AL 281	Pulapala	Asthma; Chronic bronchitis	Whole plant extract taken orally
35	<i>Polygala chinensis</i> L /Polygalaceae /NSRK 138	Ganga-kandlaku	Bone fracture	Leaf infusion given orally
36	<i>Pouzolzia zeylanica</i> (L.)Bennet /Urticaceae /NSRK 139		To reduce delivery pains in pregnant women	Shoot crushed and applied as poultice
37	<i>Pterolobium hexapetalum</i> (Roth)Santapau Wagh /Caesalpiniaceae /AL285	Korintha		Decoction of leaves taken orally
38	<i>Pterospermum xylocarpum</i> (Gaertn)Sant. & Wagh /Sterculiaceae /AL286	Lolugu	Mild sedation	The powder of flowers is smoked as tobacco
39	<i>Rivea hypocrateriformis</i> (Desr)Choisy /Convovulaceae /AL287	Boddaku	Antidote for snake bite	Crushed roots taken orally
40	<i>Scutia myrtina</i> Kurz /Rhamnaceae /NSRK 141	Pariki	Astringent To hasten parturition	Fruit Leaf used as ointment
41	<i>Tylophora indica</i> (Burm.f) Merr. /Asclepiadaceae /NSRK147	Meka meyani Aaku	Asthma; Emetic; Expectorant	One or two leaves chewed on empty stomach for 3-4 hr. a single day gives lasting relief from asthma
42	<i>Ventilago maderaspatana</i> Gaertn /Rhamnaceae /AL 294	Surugudu	Itches; skin diseases	Root bark, stem bark mixed with sesame oil and applied externally
43	<i>Viscum articulatum</i> Burm. /Loranthaceae /AL 295	Katta badanika	Blood purifier; Fevers	Whole plant
44	<i>Wattakaka volubis</i> (L.f) Stapf /Asclepiadaceae /AL 296	Kalisaku	Eye disorders	Whole plant
45	<i>Zizyphus jujube</i> (L.) Gaertn. /Rhamnaceae /NSRK 149	Regu	Stress relief; Sore throat	Fruit chewed

Venkata Ratnam and Venkata Raju 2008, Rama Rao and Henry 1996). But so far as Eastern Ghats of Nellore district are concerned specific ethnobotanical studies are scanty and hence this present investigation.

MATERIALS AND METHODS:

In order to elicit data on ethnomedicinal plants of Eastern Ghats of Nellore district, a survey was conducted during 2008-2009. Unlike other districts of Eastern Ghats only the Yanadi tribe in small numbers inhabit the foot of the hills in this area. Aged and experienced yanadi tribal people and other herbal practitioners from other communities provided much-needed information regarding the plants

and their therapeutic values of their surroundings. During some of the trips they accompanied the team and sometimes live specimens were shown to them to elicit information. Data regarding the local name of plants and their medicinal values were elicited from them and the information provided by them was Cross-checked with other experienced elders of the localities and also with available literature. The information was recorded in field note books.

Voucher specimens were deposited with Department of Botany, Jawahar Bharati Degree & P.G. College, Kavali and Department of Botany, D.K. Government Degree & P.G. College for Women, Nellore. Identification of

the plants was done following herbaria, and descriptions provided (Pullaiah 1997; Chatterjee and Pakrashi 1995, Suryanarayana and Rao 1989, Gamble 1957, Kirtikar and Basu 1935).

The ethnomedicinal plants covered in the survey are listed in alphabetical order, with plant name, authenticity, family, local name, the therapeutic value /ailment for which it is used and the part used for the remedy (Table 1).

RESULTS AND DISCUSSION

In the present study 96 ethnomedicinal plants from 51 families are identified which itself speaks of the biodiversity of the surveyed region of Eastern Ghats. However, most of these ethnomedicinal plants and their therapeutic uses were reported earlier (Pullaiah 2002). Hence only 45 ethnomedicinal plant species which belong to 34 families and their therapeutic uses are listed here.

A scrutiny of the table shows that these plants offer remedy to a variety of common ailments, namely, disorders of the digestive system, skin disorders, snake bite, bone fracture, respiratory disorders, rheumatism, blood purifiers and tonics, eye, ear and throat diseases, nervous disorders etc. Folk drug plants found elsewhere in Eastern Ghats and used as a remedy for respiratory disorders had been reported (Reddy *et al.* 2006). Medicinal plants from Eastern Ghats used as folk remedies for insect bites have also been reported (Venkata Ratnam and Venkata Raju 2008).

Like Western Ghats, the Eastern Ghats have forests which are 'green pharmacies' and 'pharmacies of the poor'. It is a common knowledge that remedies for different body disorders could be found in one's surroundings in the form of herbal drugs, minerals and other raw materials. Proper and systematic exploration and documentation of ethnomedicinal plants with local traditional knowledge

and practices is warranted. At the same time there is an urgent need to conserve the forest wealth for posterity.

Authors are thankful to Dr .A.S. Rao, Lecturer, Government Degree College, Venkatagiri for cooperation.

REFERENCES

- Chatterjee A & Pakrashi SC 1991-95. *The Treatise on Indian Medicinal plants*. Vol 1-4. NISCAIR, CSIR, New Delhi.
- Kirtikar KR & Basu BD 1935 *Indian Medicinal plants* Vol 1-4, International Book Distributors, Dehra Dun.
- Gamble JS 1915-38 *Flora of Presidency of Madras* Vol 1-3 (Vol 3 by CEC Fischer) Adlard & Sons Ltd. London.
- Jain SK 1991 *Dictionary of Folk Medicine and Ethnobotany*. Deep Publications, New Delhi.
- Muralidhara Rao D & Pullaiah T 2007. Ethnobotanical Studies on Some Rare and Endemic Floristic Elements of Eastern Ghats Hill Ranges of South East Asia, India. *Ethnobotanical Leaflets* **11** 52-70.
- Pattnaik C, Reddy CS & Reddy KN 2009. Ethnomedicinal Survey of Threatened Plants in Eastern Ghats, India. *Our Nature* **7** 122-128
- Pullaiah T 2002 *Medicinal Plants in Andhra Pradesh (India)*. Regency Publications, New Delhi
- Pullaiah T 1997 *Flora of Andhra Pradesh (India)* 3 Vol. Scientific Publishers, Jodhpur, India.
- Rama Rao N & Henry AN 1996. *The Ethnobotany of Eastern Ghats in Andhra Pradesh, India*. Botanical Survey of India, Calcutta 259 Pp
- Reddy CS Reddy EN & Raju VS 2009. *Tree Wealth of Eastern Ghats of Andhra Pradesh: An Updated checklist*. *Checklist* **5** (2) 173-194.
- Reddy KN, Reddy CS & Trimurtulu G 2006. Ethnobotanical Survey on Respiratory Disorders in Eastern Ghats of Andhra Pradesh. *Ethnobotanical Leaflets* **10** 138-148.
- Suryanarayana B & Sreenivasa Rao A 1989 *Flora of Nellore district, Andhra Pradesh*. Gurudev Publications, Shrirampur 694 Pp
- Venkata Raju RR & Pullaiah T 1995 *Flora of Kurnool district*. Bishen singh Mahendrapal, Dehra Dun, India.
- Venkata Rathnam K & Venkata Raju RR 2008 Folk remedies for insect bites from Gundlabrahmeswaram Wildlife Sanctuary, Andhra Pradesh. *Indian Journal of Traditional Medicine* **7** (3) Pp.436-437.
- Venkata Ratnam K & Venkata Raju RR 2008 Traditional Medicine used by the Adivasis of Eastern Ghats, Andhra Pradesh for Bone Fractures. *Ethnobotanical Leaflets* **12** 19-22.