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Studies on Resource Potential of Tree Taxa in Forest Area of Alluri Sitaramaraju District, Andhra Pradesh, India

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Abstract **Original Research Article**

The present paper deals with about 170 plant species of 117 genera belong to 95 families have been recorded which are potentially used by the 13 tribal groups in Paderu division, Alluri Sitaramaraju District, Andhra pradesh. Of the 170 tree taxa, 85 taxa (51.07%) yield edible fruits (eaten both by humans and animals), 124 (76.70%) have timber value, 120 (73.86%) are with medicinal value, 24 (16.48%) with fiber value, 122 (12.14%) with fuel wood value, 98 (58.52%) with fodder value and 109 taxa (63.64%) of miscellaneous uses. The tribal people of this division largely depend on herbal medicines, plants products for primary health care and their daily life.

Keywords: Tree taxa, Resource potential, Paderu division, Alluri Sitaramaraju District.

INTRODUCTION

Tree species diversity varies significantly from location to location because of variations in biogeography habitat and disturbance [1]. Central Eastern Ghats constitute rich tree species diversity and as well promote livelihood security to local communities. But these forests are also under immense anthropogenic pressures [2]. Trees comprising the forest cover, serve as a substrate for millions of microbes, herbs, shrubs, climbers and diverse fauna. They provide basic needs to humans in the form of oxygen, food, timber, paper, fuel wood and medicine [3]. Tropical forests are the most complex of all the terrestrial ecosystems and generate a variety of natural resources help to sustain the livelihood of local communities [4]. These forests are rich in medicinal and economically important plants. Tropical forests are disappearing at alarming rates owing to deforestation for extraction of timber, shifting cultivation and collection of non- timber forest products (NTFPs) [5, 6]. The present study aims studies on resource potential of tree taxa in forest area of Alluri Sitaramaraju District, Andhra Pradesh.

MATERIAL AND METHOD

Study Area

Paderu division of Alluri Sitaramaraju district 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. It lies in between latitudes of 17^{o} - 50^{1} and 18^{o} - 35^{1} North and longitude of 82^{o}-17' and 83^{o}-1' East with a total geographical area of 3, 24,965 ha. There are 33 tribal groups in Andhra Pradesh. Of these, 13 tribal groups who inhabit this agency area are, Bagata, Gadaba, Kammara, Konda Doras, Khondus, Kotia, Kulia, Malis, Manne Dora, Mukha Dora, Porja, Reddi Doras or Nooka Dora and Valmiki residing in this District.

METHODOLOGY

The various methods used for the study of ethnobotany of Paderu Division Alluri Sitaramaraju District, Andhra Pradesh, India, were essentially the same as described by Jain [7, 8]; Chadwick and Mars [9] and Martin [10]. Study was under taken during the period 2021-2022.The representative taxa were collected and identified with the help of floras [11-14] and made into herbarium. The voucher specimens were housed in the Botany Department Herbarium (BDH), Department of Botany, Andhra University, Visakhapatnam.

RESULT AND DISCUSSION

The tribal people living around forest fragments are dependent for their basic needs on non-timber forest products (NTFPs) especially medicinal plants. Of the 170 taxa recorded from the study area, 165 taxa possess one or other use value (Table 1). These comprise 97.72%

of the total recorded tree taxa of study area. Of the 170 tree taxa, 85 taxa (51.07%) yield edible fruits (eaten both by humans and animals), 124 (76.70%) have timber value, 120 (73.86%) are with medicinal value, 24 (16.48%) with fiber value, 122 (12.14%) with fuel wood value, 98 (58.52%) with fodder value and 109 taxa (63.64%) of miscellaneous uses.

Table 1: Resource Potential of Tree Taxa with Their Use Values

S. No.	Name of the Taxon	E	T	M	Fi	FW	Fo	Misc.	UV
1	*Acacia catechu*	+	+	+	–	+	+	+	6
2	*Acacia leucophloea*	+	+	+	–	+	–	+	5
3	*Aegle marmelos*	+	+	+	–	+	–	+	5
4	*Aglaia elaegnoidea*	+	+	+	–	+	–	+	4
5	*Ailanthus excelsa*	–	+	+	–	–	+	+	4
6	*Alangium salvifolium*	+	+	+	–	+	–	+	5
7	*Albizia amara*	–	+	+	–	+	–	–	3
8	*Albizia chinensis*	–	+	+	–	+	+	+	5
9	*Albizia odoratissima*	–	+	+	–	+	+	+	5
10	*Albizia procera*	–	+	+	–	+	–	+	4
11	*Alstonia scholaris*	–	+	+	+	+	–	+	5
12	*Alstonia venenata*	–	–	+	–	+	–	+	3
13	*Annona reticulata*	+	–	+	–	+	–	–	3
14	*Annona squamosa*	+	–	+	–	+	–	+	4
15	*Anogeissus acuminata*	–	+	–	–	–	–	+	2
16	*Anogeissus latifolia*	–	+	+	–	–	+	+	4
17	*Antidesma acidum*	+	–	–	–	+	–	+	3
18	*Antidesma ghaesembilla*	+	+	–	–	+	–	–	3
19	*Artocarpus heterophyllus*	+	+	+	–	+	–	+	5
20	*Atalantia monophylla*	–	–	–	–	+	–	+	2
21	*Azadirachta indica*	+	+	+	–	+	+	+	6
22	*Barringtonia acutangula*	+	+	+	–	–	–	+	4
23	*Bauhinia malabarica*	+	–	–	–	+	–	–	2
24	*Bauhinia purpurea*	+	+	+	+	+	+	+	7
25	*Bauhinia racemosa*	–	+	+	+	+	–	–	4
26	*Bauhinia semla*	–	+	–	–	+	–	+	3
27	*Bauhinia variegata*	+	+	+	+	+	+	+	7
28	*Bischofia javanica*	+	+	+	–	+	–	+	5
29	*Bombax ceiba*	+	+	+	+	–	+	+	6
30	*Bridelia cinerascens*	+	+	+	–	+	+	+	6
31	*Bridelia monoica*	+	+	+	–	+	–	–	4
32	*Bridelia montana*	–	+	+	–	+	–	+	4
33	*Buchanania axillaris*	+	–	–	–	+	–	–	2
34	*Buchanania lanzan*	+	+	+	–	+	+	+	6
35	*Butea monosperma*	–	+	+	+	+	+	+	6
36	*Callicarpa arborea*	–	–	+	–	+	–	+	3
37	*Callicarpa tomentosa*	–	+	+	–	+	–	+	4
38	*Canthium dicoccum*	–	+	+	–	+	–	–	3
39	*Careya arborea*	+	+	+	+	+	–	+	6
40	*Caryota urens*	+	–	+	+	+	–	+	5
41	*Casearia tomentosa*	–	–	+	–	+	–	+	3
42	*Casearia graveolens*	–	–	–	–	+	–	–	1
43	*Cassia fistula*	–	+	+	–	+	–	+	4
44	*Cassine glauca*	+	+	+	–	+	–	+	5
45	*Ceiba pentandra*	–	+	+	+	–	+	+	5
46	*Chloroxylon swietenia*	–	+	+	–	+	–	+	4
47	*Chukrasia tabularis*	–	+	–	–	+	–	+	3
48	*Cipadessa baccifera*	–	–	+	–	+	+	–	3
49	*Cleistanthus collinus*	–	+	+	–	+	–	–	3
50	*Cleistanthus patulus*	–	–	–	–	+	–	–	1
51	*Cochlospermum religiosum*	–	–	+	+	–	+	+	4
52	*Cordia dichotoma*	+	+	+	–	–	–	–	3
53	*Crateva magna*	+	+	–	–	+	–	–	3
54	*Dalbergia latifolia*	–	+	+	–	+	+	+	5

S. No.	Name of the Taxon	E	T	M	Fi	FW	Fo	Misc.	UV
55	*Dalbergia paniculata*	–	+	+	–	+	+	+	5
56	*Dichrostachys cinerea*	–	+	+	–	+	+	–	4
57	*Dillenia indica*	+	+	+	–	+	–	+	5
58	*Dillenia pentagyna*	+	+	–	+	+	–	+	5
59	*Diospyros chloroxylon*	+	+	–	–	+	+	–	4
60	*Diospyros malabarica*	+	–	+	–	+	–	+	4
61	*Diospyros melanoxylon*	+	+	+	–	–	–	+	4
62	*Diospyros montana*	–	+	+	–	+	–	–	3
63	*Diospyros sylvatica*	+	+	–	–	+	–	–	3
64	*Dolichandrone falcata*	–	+	–	+	–	–	–	2
65	*Elaeocarpus tectorius*	–	+	–	–	+	–	–	2
66	*Eriolaena hookeriana*	–	+	–	–	–	+	–	2
67	*Erythrina suberosa*	–	+	–	+	+	–	–	3
68	*Erythrina variegata*	+	+	+	+	–	+	+	6
69	*Erythroxylon monogynum*	+	–	+	–	+	–	+	4
70	*Euphorbia antiquorum*	–	–	+	–	–	–	+	2
71	*Ficus arnottiana*	–	–	+	–	–	+	–	2
72	*Ficus auriculata*	+	–	+	–	–	+	+	3
73	*Ficus benjamina*	–	+	+	+	–	–	+	4
74	*Ficus exasperata*	–	–	–	–	+	–	+	2
75	*Ficus hispida*	+	–	+	+	+	–	–	4
76	*Ficus microcarpa*	–	+	+	–	+	–	–	3
77	*Ficus palmata*	+	+	+	–	–	+	–	4
78	*Ficus racemosa*	+	–	+	–	–	+	–	3
79	*Ficus semicordata*	–	–	–	–	–	–	–	0
80	*Ficus tinctoria*	–	–	+	–	+	+	–	3
81	*Ficus tomentosa*	–	–	–	–	+	–	–	1
82	*Firmiana colorata*	–	+	–	+	–	+	+	4
83	*Flacourtia jangomas*	+	+	+	–	–	–	–	3
84	*Gardenia gummifera*	–	+	+	–	–	–	+	3
85	*Gardenia latifolia*	+	+	–	–	–	–	+	3
86	*Garuga pinnata*	+	+	–	–	+	+	+	5
87	*Glochidion ellipticum*	–	–	–	–	–	–	–	0
88	*Glochidion velutinum*	–	–	–	–	+	–	–	1
89	*Glochidion zeylanicum*	–	+	+	–	+	–	–	3
90	*Gmelina arborea*	+	+	+	–	–	+	+	5
91	*Gmelina asiatica*	+	–	+	–	–	–	–	2
92	*Grewia damine*	+	+	–	–	–	–	–	2
93	*Grewia rothii*	+	–	–	+	–	–	–	2
94	*Grewia tiliifolia*	+	+	+	+	–	–	–	4
95	*Gyrocarpus americanus*	–	+	–	–	–	–	–	1
96	*Haldinia cordifolia*	–	+	+	–	+	+	+	5
97	*Homalium nepaulense*	–	–	–	–	–	–	–	0
98	*Holoptelea integrifolia*	–	+	–	–	+	–	+	3
99	*Hymenodictyon orixense*	–	+	+	–	–	+	+	4
100	*Ixora pavetta*	+	+	+	–	–	–	+	4
101	*Kydia calycina*	–	+	–	+	+	+	–	4
102	*Lagerstroemia parviflora*	–	+	–	+	+	+	+	5
103	*Lannea coromandelica*	+	+	+	–	–	–	+	4
104	*Leea indica*	+	–	+	–	–	–	–	2
105	*Lepisanthes tetraphylla*	+	+	–	–	–	–	–	2
106	*Limonia acidissima*	+	+	+	–	+	–	+	5
107	*Litsea glutinosa*	+	+	+	–	–	+	+	5
108	*Maba buxifolia*	+	–	–	–	–	–	–	1
109	*Macaranga peltata*	–	+	+	–	–	–	+	3
110	*Madhuca indica*	+	+	+	–	+	–	+	5
111	*Madhuca longifolia*	+	+	+	–	+	–	+	5
112	*Mallotus philippensis*	–	+	+	–	–	+	+	4
113	*Mangifera indica*	+	+	–	–	+	–	–	3
114	*Manilkara hexandra*	+	+	+	–	+	+	–	5

S. No.	Name of the Taxon	E	T	M	Fi	FW	Fo	Misc.	UV
115	*Memecylon edule*	–	+	–	–	–	–	+	2
116	*Mesua ferrea*	+	+	+	–	–	–	+	4
117	*Meyna spinosa*	–	–	–	–	–	–	–	0
118	*Michelia champaca*	+	+	+	–	–	+	+	5
119	*Miliusa tomentosa*	+	+	–	–	–	+	+	4
120	*Miliusa velutina*	+	+	+	+	–	–	–	4
121	*Mimusops elengi*	+	+	+	–	–	+	+	5
122	*Mitragyna parvifolia*	–	+	+	+	+	+	+	6
123	*Morinda pubescens*	+	+	–	–	+	+	+	5
124	*Murraya paniculata*	+	–	+	–	–	–	+	3
125	*Naringi crenulata*	+	+	–	–	–	–	+	3
126	*Nyctanthus arbortristis*	–	–	+	–	+	–	+	3
127	*Ochna obtusata*	–	–	+	–	–	+	+	3
128	*Oroxylum indicum*	+	–	+	–	–	+	+	4
129	*Ougeinia oojeinensis*	–	+	+	+	–	+	+	5
130	*Phoenix sylvestris*	+	–	+	+	–	–	+	4
131	*Phyllanthus emblica*	+	+	+	–	–	–	+	4
132	*Pittosporum nepaulense*	–	+	+	–	+	–	+	4
133	*Polyalthia cerasoides*	+	+	–	–	+	–	–	3
134	*Polyalthia suberosa*	+	+	+	–	–	–	–	3
135	*Pongamia pinnata*	–	+	+	–	+	+	+	5
136	*Premna latifolia*	+	–	+	–	–	+	–	3
137	*Premna tomentosa*	–	+	+	–	+	–	–	3
138	*Protium serratum*	+	+	+	–	–	–	–	3
139	*Pterocarpus marsupium*	–	+	+	–	–	+	+	4
140	*Pterospermum xylocarpum*	–	+	+	–	+	–	–	3
141	*Radermachera xylocarpa*	+	+	+	–	+	–	+	5
142	*Sapindus emarginatus*	–	+	+	–	–	–	+	3
143	*Saraca asoca*	–	+	+	–	–	+	+	4
144	*Schleichera oleosa*	+	+	+	–	+	+	+	6
145	*Schrebera swietenoides*	–	+	+	–	+	–	+	4
146	*Semecarpus anacardium*	+	+	+	–	–	–	+	4
147	*Sloanea sterculiacea*	–	+	–	–	–	–	–	1
148	*Soymida febrifuga*	+	+	–	+	–	–	+	4
149	*Sterculia urens*	+	+	+	+	–	+	+	6
150	*Sterculia villosa*	+	+	–	+	+	–	+	5
151	*Stereospermum colais*	–	+	+	–	+	+	–	4
152	*Stereospermum personatum*	–	+	+	–	+	+	–	4
153	*Streblus asper*	+	+	+	–	+	+	–	5
154	*Strychnos nuxvomica*	–	+	+	–	+	–	+	4
155	*Strychnos potatorum*	+	+	+	–	+	–	+	5
156	*Syzygium cumini*	+	+	+	–	+	+	+	6
157	*Tamarindus indica*	+	+	+	–	+	–	+	5
158	*Terminalia alata*	–	+	+	–	+	–	+	4
159	*Terminalia arjuna*	–	+	+	–	+	+	+	5
160	*Terminalia bellirica*	+	+	+	–	–	+	+	5
161	*Terminalia chebula*	+	+	+	–	–	–	+	4
162	*Toona ciliata*	–	+	+	–	–	–	+	3
163	*Trema orientalis*	+	+	+	+	+	+	+	7
164	*Trichilia connaroides*	–	+	+	–	–	–	–	2
165	*Vitex altissima*	–	+	+	–	–	–	–	2
166	*Vitex leucoxylon*	–	+	+	–	–	–	–	2
167	*Vitex pinnata*	–	+	+	–	–	–	–	2
168	*Walsura trifoliata*	–	+	+	–	–	–	+	3
169	*Wendlandia gamblei*	–	–	–	–	–	–	+	1
170	*Wrightia arborea*	–	–	+	–	–	–	–	1

E-Edible; T-Timber; M-Medicinal; F-Fiber; FW-Fuel wood; Fo-Fodder

Highest number of use values (7 different uses) have been recorded for *Bauhinia purpurea, Bauhinia variegata* and *Trema orientalis* followed by 6 uses with *Acacia catechu, Azadirachta indica, Bombax ceiba,*

Bridelia airy-shawii, Buchanania lanzan, Butea monosperma, Careya arborea, Erythrina variegata, Mitragyna parvifolia, Schleichera oleosa, Sterculia urens and *Syzygium cumini;* species with 5 uses are: *Acacia leucophloea, Aegle marmelos, Alangium salvifolium, Albizia chinensis, Albizia odoratissima, Alstonia scholaris, Artocarpus heterophyllus, Bischofia javanica, Caryota urens, Cassine glauca, Ceiba pentandra, Dalbergia latifolia, Dalbergia paniculata, Dillenia indica, Dillenia pentagyna, Garuga pinnata, Gmelina arborea, Haldinia cordifolia, Lagerstroemia parviflora, Limonia acidissima, Litsea glutinosa, Madhuca indica, Madhuca longifolia, Manilkara hexandra, Michelia champaca, Mimusops elengi, Morinda pubescens, Ougeinia oojeinensis, Pongamia pinnata, Radermachera xylocarpa, Sterculia villosa, Streblus asper, Strychnos potatorum, Tamarindus indica, Terminalia arjuna,* and *Terminalia bellirica,* 47 species are found with 4 uses; 42 species with 3 uses and 21 species with 2 uses and remaining 9 species with one use.

Edible Wild Plants

Many forest species yield edible fruits, leaves and tubers, which are of great economic importance. The analysis in this regard indicates that 85 (51.07%) tree species possess edible value in study area. *Acacia catechu, A. leucophloea, Aegle marmelos, Aglaia elaegnoidea, Annona reticulata, A. squamosa, Antidesma acidum, A. ghaesembilla, Artocarpus heterophyllus, Atalantia monophylla, Azadirachta indica, Barringtonia acutangula, Bauhinia malabarica, B. purpurea, B. variegata, Bischofia javanica, Bombax ceiba, Bridelia airy-shawii, B. monoica, Buchanania axillaris, B. lanzan, Careya arborea, Caryota urens, Cassine glauca, Cordia dichotoma, Crateva magna, Dillenia indica, D. pentagyna, Diospyros chloroxylon, D. malabarica, D. melanoxylon, D. sylvatica, Erythrina variegata, Erythroxylon monogynum, Ficus auriculata, F. hispida, F. palmata, F. racemosa, Flacourtia jangomas, Gardenia latifolia, Garuga pinnata, Gmelina arborea, G. asiatica, Grewia damine, G. rothii, G. tiliifolia, Ixora pavetta, Lannea coromandelica, Leea indica, Lepisanthes tetraphylla, Limonia acidissima, Litsea glutinosa, Maba buxifolia, Madhuca indica, M. longifolia, Mangifera indica, Manilkara hexandra, Mesua ferrea, Michelia champaca, Miliusa tomentosa, M. velutina, Mimusops elengi, Morinda pubescens, Murraya paniculata, Naringi crenulata, Oroxylum indicum, Phoenix sylvestris, Phyllanthus emblica, Polyalthia cerasoides, Schleichera oleosa, Semecarpus anacardium, Sloanea sterculiacea, Soymida febrifuga, Sterculia urens, Sterculia villosa, Streblus asper, Strychnos potatorum, Syzygium cumini, Tamarindus indica, Terminalia bellirica, T. chebula, Trema orientalis, Wrightia tinctoria, Xantolis tomentosa, Xylia xylocarpa, Ziziphus mauritiana* and *Z. xylopyrus.*

Timber Yielding Plants

A total of 124 (76.70%) tree taxa reported from the study area have timber value. Significant medicinal plants include: *Acacia catechu, Aegle marmelos, Aglaia elaegnoidea, Ailanthus excelsa, Alangium salvifolium, Albizia amara, Albizia chinensis, Albizia odoratissima, A. procera, Alstonia scholaris, Anogeissus acuminata, A. latifolia, Atalantia monophylla, Azadirachta indica, Barringtonia acutangula, Bauhinia purpurea, B. racemosa, Bridelia airy-shawii, B. monoica, B. montana, Buchanania lanzan, Butea monosperma, Cassine glauca, Chloroxylon swietenia, Chukrasia tabularis, Cleistanthus collinus, Cordia dichotoma, Dalbergia latifolia, D. paniculata, Dillenia indica, Dillenia pentagyna, Diospyros chloroxylon, D. melanoxylon, D. montana, Elaeocarpus tectorius, Eriolaena hookeriana, Ficus benjamina, Firmiana colorata, Gardenia gummifera, Glochidion zeylanicum, Gmelina arborea, Gyrocarpus americanus, Haldinia cordifolia, Holoptelea integrifolia, Hymenodictyon orixense, Ixora pavetta, Kydia calycina, Lagerstroemia parviflora, Lannea coromandelica, Madhuca longifolia, Mallotus philippensis, Mangifera indica, Mitragyna parvifolia, Phyllanthus emblica, Pittosporum nepaulense, Polyalthia cerasoides, Pterocarpus marsupium, Pterospermum xylocarpum, Radermachera xylocarpa, Semecarpus anacardium, Stereospermum personatum, Streblus asper, Strychnos nuxvomica, Strychnos potatorum, Syzygium cumini, Tamarindus indica, Terminalia alata, T. arjuna, Trema orientalis, Vitex pinnata, Wrightia tinctoria, Xantolis tomentosa, Xylia xylocarpa* and *Ziziphus xylopyrus.*

Medicinal Plants

A total of 120 (73.86%) tree taxa reported from the study area have medicinal value. Significant medicinal plants include: *Acacia catechu, A. leucophloea, Aegle marmelos, Aglaia elaegnoidea, Ailanthus excelsa, Alangium salvifolium, Albizia amara, A. chinensis, Alstonia scholaris, Alstonia venenata, Annona reticulata, A. squamosa, Anogeissus latifolia, Artocarpus heterophyllus, Azadirachta indica, Barringtonia acutangula, Bauhinia purpurea, Bauhinia racemosa, Bauhinia variegata, Bischofia javanica, Bombax ceiba, Bridelia airy-shawii, Bridelia monoica, Bridelia montana, Buchanania lanzan, Butea monosperma, Callicarpa arborea, Canthium dicoccum, Careya arborea, Caryota urens, Casearia tomentosa, Cassia fistula, Cassine glauca, Ceiba pentandra, Chloroxylon swietenia, Cipadessa baccifera, Cleistanthus collinus, Cochlospermum religiosum, Cordia dichotoma, Dalbergia latifolia, Dillenia indica, Diospyros malabarica, Erythrina variegata, Flacourtia jangomas, Gardenia gummifera, Glochidion zeylanicum, Gmelina arborea, Gmelina asiatica, Leea indica, Limonia acidissima, Madhuca longifolia, Mallotus philippensis, Manilkara hexandra, Mitragyna parvifolia, Murraya paniculata, Nyctanthus arbortristis, Ougeinia oojeinensis, Phoenix sylvestris, Phyllanthus emblica, Pittosporum nepaulense, Polyalthia suberosa,*

Pongamia pinnata, Pterocarpus marsupium, Pterospermum xylocarpum, Semecarpus anacardium, Sterculia urens, Stereospermum colais, Stereospermum personatum, Streblus asper, Strychnos nuxvomica, Strychnos potatorum, Terminalia arjuna, T. bellirica, T. chebula, Toona ciliata, Trema orientalis, Trichilia connaroides, Vitex pinnata, Walsura trifoliata, Wrightia arborea, Xantolis tomentosa, Xylia xylocarpa, Zanthoxylum armatum and *Z. mauritiana*.

Fiber Yielding Plants

The tree taxa with high percentage of fiber in different plant parts accounted for about 24 species (16.48%) in the study area. Significant taxa include: *Alstonia scholaris, Bauhinia purpurea, Bombax ceiba, Butea monosperma, Careya arborea, Caryota urens, Ceiba pentandra, Cochlospermum religiosum, Dillenia pentagyna, Dolichandrone falcata, Erythrina suberosa, Erythrina variegata, Ficus hispida, Firmiana colorata, Grewia rothii, Grewia tiliifolia, Kydia calycina, Lagerstroemia parviflora, Miliusa velutina, Mitragyna parvifolia, Ougeinia oojeinensis, Phoenix sylvestris, Soymida febrifuga, Sterculia urens, Sterculia villosa* and *Trema orientalis.*

Fuel Wood Plants

A total of 98 tree taxa are prominently used as fuel wood in the study area. Significant taxa include: *Acacia catechu, Alangium salvifolium, Albizia amara, Albizia chinensis, Albizia procera, Annona squamosa, Atalantia monophylla, Azadirachta indica, Bauhinia purpurea, Bauhinia racemosa, Bridelia monoica, Buchanania lanzan, Careya arborea, Cassia fistula, Cassine glauca, Chloroxylon swietenia, Cleistanthus collinus, Cleistanthus patulus, Dichrostachys cinerea, Dillenia indica, Diospyros chloroxylon, Elaeocarpus tectorius, Erythrina suberosa, Holoptelea integrifolia, Limonia acidissima, Madhuca indica, Mitragyna parvifolia, Morinda pubescens, Pongamia pinnata, Premna tomentosa, Radermachera xylocarpa, Schleichera oleosa, Schrebera swietenoides, Sterculia villosa, Stereospermum colais, Stereospermum personatum, Strychnos potatorum, Syzygium cumini, Terminalia arjuna, Trema orientalis, Xantolis tomentosa, Xylia xylocarpa, Ziziphus mauritiana* and *Z. xylopyrus.*

Plants of Forage Value

A total of 57 species are used as fodder. Significant taxa include: *Acacia catechu, Albizia chinensis, Azadirachta indica, Bauhinia purpurea, B. variegata, Bridelia airy-shawii, Buchanania lanzan, Butea monosperma, Cipadessa baccifera, Dalbergia latifolia, Dalbergia paniculata, Dichrostachys cinerea, Diospyros chloroxylon, Ficus palmata, Ficus racemosa, Ficus tinctoria, Garuga pinnata, Haldinia cordifolia, Kydia calycina, Lagerstroemia parviflora, Manilkara hexandra, Mitragyna parvifolia, Morinda pubescens, Pongamia pinnata, Schleichera oleosa, Stereospermum colais, Stereospermum personatum, Streblus asper, Syzygium cumini, Terminalia arjuna, Trema orientalis* and *Ziziphus mauritiana*.

Trees of Miscellaneous Uses

109 tree taxa are recorded of miscellaneous importance. Seventeen of them are significant yielding gum. These are *Acacia leucophloea, Anogeissus latifolia, Bombax ceiba, Butea monosperma, Cochlospermum religiosum, Lannea coromandelica, Macaranga peltata, Pterocarpus marsupium* and *Sterculia urens*. A total of 6 dye yielding tree species are registered from the study area. They include *Kydia calycina, Schleichera oleosa, Wendlandia tinctoria, Oroxylum indicum* and *Mallotus philippensis*. Fruits of *Cleistanthus collinus* are used as fish poison. *Hymenodictyon orixense, Wendlandia gamblei, Bridelia airy-shawii, Dalbergia latifolia, Ficus racemosa, Ficus arnottiana, Ficus hispida, Stereospermum personatum* and *Stereospermum colais* are the fodder yielding species mainly for cattle. Essential oils are extracted from the *Madhuca indica* and *Pongamia pinnata*.

CONCLUSION

Alluri Sitarama Raju district is situated on the East Coast of India. Paderu Division is the biggest forest division of Alluri Sitaramaraju known as Agency area, situated in the hilly tracts of Eastern Ghats of India. Attempts have been made in the present study to list out various plant resources and their utilization in the Paderu division. The basic data provided here can be utilized for further studies on conservation and cultivation of plant species and for the development of traditional medicine and economic welfare of tribal people of these divisions by different Governmental or Non- Governmental organizations in the state. The information gathered from the tribal people whom reaveals cheap crude drugs obtained from plant sources still plays an important role in the interior forest areas for curing various ailments.

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