



MEDICINAL PLANT WEALTH OF AN ANCIENT SACRED GROVE “PANDAVULA GUTTA” FROM EASTERN TELANGANA, INDIA

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Abstract: Pandavula Gutta is an ancient sacred grove and a geological heritage site located in the district of JayashankarBhupalpally in the Telangana state. The hill ranges are home for many prehistoric sacred habitations of panchapandavas and kuntidevi of Mahabaratha and paleolithic cave paintings of Mahabaratha and Ramayana. For its sacred and geological significance, the hills are untouched and preserved well by the local community since decades back. The present studies on pandavula gutta carried out as part of the exploration and documentation of the less known sacred groves in the Telangana state. The studies reveal the hill ranges are undisturbed and representing the leftover patch of native vegetation. Exclusively they are very rich in the medicinal plant wealth. From the study area a total of 105 medicinal plants have been reported and discussed in detail in the in the present paper. A few of them are very rare and listed in the IUCN red list threatened category also been reported.The presence of high number of medicinal plants from a small area representing the strength and conservation measures of the ancient sacred cavespandavula gutta.

INTRODUCTION

PandavulaGuttaalso known as PandavulaGuhalu, PandavulaKondalu, Pandava Caves,a prehistoric habitation site and a geological marvel older than the Himalayas. The Caves situated near Tirumalagiri&Ravulapalle villages ofRegonda Mandal,JayashankarBhupalpally district, Telangana state.A chain of hill rocks running north to south direction spread in between latitude 18.252337, longitude

79.81338 at about 814Ft. The hill rocks are home for many prehistoric habitation sites and paleolithic cave paintings. Due to their geological significance "Pandavula Gutta" has been officially recognized as the sole geo-heritage site by Geological Survey of India, Hyderabad. The paleolithic rock art paintings have been a very recently discovered (Srinivasa Chari, 2020). Before the discovery of paleolithic rock painting the hills are well known almost from 1000 years with its prehistoric habitations such as Kunti Devi caves, Panchapandavulu caves, Gonthemmaguha, Pothirajuchelima, Mekalabanda, Mungeesabunda, Thupakulagundu, Yanadhulaguhalu. Even this place derives its name Pandavula Gutta from the historical paintings found in one rock shelter and locals term the story of Mahabharata. This is the place where the Pandavas spent their life in exile for a certain period of time they believed. Even today many of the devotees from various places visit the caves of Pandavas to take a holy bath from the water which falls from the rock. It is believed that during the exile Pandavas used to drink water from the stream. The locals perform special pujas to the Panchapandavulu and Kuntidevi caves. Since decades the hill ranges are preserved by its sacred importance but it has not been documented in the earlier studies in the erstwhile state of Andhra Pradesh (www, 1996).

As part of the Ph.D. work the studies on less known sacred groves of Telangana state Pandavula Gutta recognized as unreported sacred grove and explored it. For intensive explorations made frequent visits in different seasons in the study area approximately 2000 acres from 2020 to 2023. After critical examination and identification by using floras (Gamble, 1915-36), Pullaiah, 2015) the studies reveal the hill ranges are home for many medicinal plants which are widely used in the traditional systems of medicine (Nandakarni, 1982; Parrotta, 2001; Basu, & Kirtikar 2006,). The comprehensive list of medicinal plants with their family local/common names with major uses presented in the paper.

Table 1. List of medicinal plants with their family, local/common name and medicinal uses.

S.No	Scientific name	Family	Local/common names	Local Medicinal uses
1	<i>Abrus precatorius</i> L.	Fabaceae	Gurivinda	Vitiligo (white seeds)
2	<i>Acacia torta</i> (Roxb.) Craib	Fabaceae	Konda korinta	Respiratory disorders
3	<i>Acalypha poiretii</i> Spreng.	Malvaceae	Muripinda	Piles, inflammations
4	<i>Achyranthes aspera</i> L.	Amaranthaceae	Uttareni	Toothache & gums
5	<i>Aervalanata</i> (L.) Juss. ex Schult.	Amaranthaceae	Pindikura	Kidney stones
6	<i>Alangium salviifolium</i> (L.f.) Wangerin	Cornaceae	Uduga	Bites and Reduce blood pressure
7	<i>Andrographis echinoides</i> (L.) Nees	Acanthaceae	False willows water	Malaria, respiratory infections
8	<i>Annona squamosa</i> L.	Annonaceae	Seethaphal	Insect repellent
9	<i>Aristolochia indica</i> L.	Aristolochiaceae	Eashwari	Skin diseases, Removal of toxins
10	<i>Asparagus racemosus</i> Willd.	Asparagaceae	Pilliteegalu	Female reproductive disorders
11	<i>Azadirachta indica</i> A.Juss.	Meliaceae	Vepa	Reduce the body heat
12	<i>Barleria prionitis</i> L.	Acanthaceae	Mulla gorinta	Joints swellings

13	BoswelliaserrataRoxb.	Burseraceae	Andugu	Osteoarthritis
14	Boerhaviadiffusa L.	Nyctaginaceae	Punarnava	Kidney disorders
15	Butea monosperma (Lam.) Kuntze	Fabaceae	Modugu	Kidney disorders, bone fractures
16	Buchananiaaxillaris (Desr.) Ramamoorthy	Anacardiaceae	Morli	Aphrodisiac, skin diseases
17	BuchananiaalanzanSpreng.	Anacardiaceae	Charoli	Skin diseases
18	Brideliamontana (Roxb.) Willd.	Phyllanthaceae	Panchothkam	Anthelmintic
19	Calotropisgigantea (L.) W.T.Aiton	Apocynaceae	Jilledu	Skin diseases, snake bites,
20	Carallumaadscendens (Roxb.) Haw.	Apocynaceae	Kundetikommu	Anti-obesity
21	Carissa spinarum L.	Apocynaceae	Adavikalmi	Liver diseases
22	CareyaarboreaRoxb.	Lecythidaceae	Buddadharmi	Tumors, bronchitis
23	Catunaregamspinosa (Thunb.)Triveng.	Rubiaceae	Manga	Gastrointestinal problems
24	Cleistanthuscollinus (Roxb.) Benth. Ex Hook.f.	Phyllanthaceae	Vadisaku	Antimicrobial
25	Chamaecristaabsus (L.) H.S.Irwin&Barneby	Fabaceae	Chanupala	Leucoderma, bronchitis
26	Canthiumcoromandelicum (Burm.f.) Alston	Rubiaceae	Balusu	Intestinal worms
27	Chlorophytum tuberosum (Roxb.) Baker	Asparagaceae	Musli	Diabetes, sexual disorders
28	Chloroxylonswietenia DC.	Rutaceae	Billudu	Fungal infections, Mosquito repellent
29	Cissusquadrangularis L.	Vitaceae	Nalleru	Stimulate bone growth, strength
30	Cissusrepanda (Wight & Arn.) Vahl	Vitaceae	Panibhel	Skin diseases, poisonous bites
31	Cochlospermumreligiosum (L.) Alston	Bixaceae	Kondagogu	Jaundice, sedative
32	Cratevaadansonii DC.	Capparaceae		Postmenopausal complaints
33	Crinum latifolium L.	Amaryllidaceae	Vrishakarni	Rheumatism, fistula
34	Cryptolepisbuchananii R.Br. ex Roem. &Schult.	Apocynaceae	Palateega	Inflammations
35	CurculigoorchioidesGaertn.	Hypoxidaceae	Nelathadigaddalu	Impotence
36	Cordia dichotoma G. Forst.	Boraginaceae	Iriki	Digestive disorders
37	Combretum albidumG.Don	Combretaceae	Piluki	Ulcers
38	Cymbopogon martini (Roxb.) Will.Watson	Poaceae	Nimmagaddi	Antimicrobial
39	Cynanchumviminale subsp. viminale	Apocynaceae	Somalatha	Fractures, wounds
40	Diospyros melanoxydonRoxb.	Ebenaceae	Thuniki	Digestive disorders
41	DalbergialatifoliaRoxb.	Fabaceae	Jitregi	Leprosy
42	DalbergialanceolariaL.f.	Fabaceae		Obesity
43	Dioscoreabulbifera L.	Dioscoreaceae	Adavidhunpa	Cancer, Asthma
44	Drimiaindica (Roxb.) Jessop	Asparagaceae	Nakkauiligadda	Antioxidant
45	DodonaeaviscosaJacq.	Sapindaceae	Pulivaili	Burnings

46	Dolichandronefalcata (Wall. Ex DC.) Seem.	Bignoniaceae	Oddi	Abortion, Mouth fresheners-bark
47	Enicostemaaxillare (Poir. Ex Lam.) A.Raynal	Gentianaceae	Nelagurmidi	HIV, Obesity
48	Euphorbia fusiformis Buch.-Ham. Ex D.Don	Euphorbiaceae	Stemless spurge	Galactagogue
49	Evolvulusalsinoides (L.) L.	Convolvulaceae	Vishnukrantha	Nervous disorders
50	Ehretia aspera Willd.	Boraginaceae	Paldattam	Snake bites
51	FicushispidaL.f.	Moraceae	Bommamedi	Wounds, Psoriasis
52	FicusmollisVahl	Moraceae	Rock fig	Snake bites, skin diseases
53	Gmelinaasiatica L.	Lamiaceae	Adavigummudu	Blood purifier
54	Gymnemasylvestre (Retz.) R.Br. ex Sm.	Apocynaceae	Podapathri	Diabetes
55	Getonia floribunda Roxb.	Combretaceae	Ukshi	Body pains
56	GrewiatiliifoliaVahl	Malvaceae	Thada	Fractures
57	Helicteresisora L.	Malvaceae	Nulithadu	Gastric disorders
58	Hemidesmus indicus (L.) R.Br.	Apocynaceae	Sugandhipala	Aroma, Cooling, Leprosy
59	Holarrhenapubescens Wall. ex G.Don	Apocynaceae	Palakodisha	Antidiarrheal, Anthelmintic
60	Heteropogoncontortus (L.) P.Beauv. ex Roem. &Schult.	Poaceae	Oopugaddi	Rheumatism
61	Ichnocarpusfrutescens (L.) W.T.Aiton	Apocynaceae	Nallteega	Bleeding gums
62	Ixora pavetta Andrews	Rubiaceae	Koravi	Urinary disorders
63	Lagerstroemia parvifloraRoxb.	Lythraceae		Mouth sores
64	LepidagathiscristataWilld.	Acanthaceae	Mullabanthi	Psoriasis, mouth ulcers
65	Leucas aspera (Willd.) Link	Lamiaceae	Thumi	Antifungal, Antimicrobial
66	Leucas zeylanica (L.) W.T.Aiton	Lamiaceae	Thumi	Antifungal, Antimicrobial
67	Madhucalongifolia var. latifolia (Roxb.) A.Chev.	Sapotaceae	Ippa	Wound healing, Skin diseases
68	Mallotusphilippensis (Lam.) Mull.Arg.	Euphorbiaceae	Sindhuram	Intestinal worms
69	Maeruaoblongifolia (Forssk.) A.Rich.	Capparaceae	Bhuchakragadda	Headache, Stomach disorders, Skin infections
70	Mitragynaparvifolia (Roxb.) Korth.	Rubiaceae		Gynecological disorders
71	Millusatomentosa (Roxb.) Finet&Gangnep.	Annonaceae	Wooly miliusa	Reduce body swellings
72	Mucunapruriens (L.) DC.	Fabaceae	Dhulagondi	Male infertility, nervous disorders
73	Naringicrenulata (Roxb.) Nicolson	Rutaceae	Mahabilva	Snake bites
74	OcimumfilamentosumForssk.	Lamiaceae	Adavithulasi	Antispasmodic
75	Olax scandens Roxb.	Olacaceae	Baapanamushti	Anaemia, Liver disorders
76	Ochnagamblei King ex Brandis	Ochnaceae	Narole	Antibacterial
77	Pergulariadaemia (Forssk.) Chiov.	Apocynaceae	Dhustaputeega	Anthelmintic
78	Plumbago zeylanica L.	Plumbaginaceae	Chithramulam	Digestion, Constipation,

				Piles
79	Premnatomentosa Willd.	Lamiaceae	Takkali	Antimicrobial, Liver disorders
80	Pterocarpus marsupium Roxb.	Fabaceae	Yegisa	Diabetes, Diarrhea
81	Polycarpaeacorymbosa (L.) Lam.	Caryophyllaceae	Oldman's cap	Fever, Inflammations
82	Senna auriculata (L.) Roxb.	Fabaceae	Tangedu	Digestive disorders
83	Sidaacuta Burm.f.	Malvaceae	Athibala	Abnormal vaginal discharges, Neurological disorders
84	Sidacordata (Burm.f.) Borss.Waalk.	Malvaceae	Bhumi bala	Rheumatism
85	Sidacordifolia L.	Malvaceae	Bala	Bronchial asthma
86	Soymidafebrifuga (Roxb.) A.Juss.	Meliaceae	Somi	Skin allergies, Fractures, Vaginal infections
87	Sterculiaurens Roxb.	Malvaceae	Tapsi	Blood dysentery, Joint pains, strength
88	Stephanotis volubilis (L.f.) S.Reuss, Liede&Meve	Apocynaceae	Vishamusti	Snake bites, Swellings
89	Strychnosnux-vomica L.	Loganiaceae		Cancer, Neuro disorders
90	Strychnopotatorum L.f.	Loganiaceae	Chillginja	Gonorrhea, Leucorrhea
91	Senegalia catechu (L.f.) P.J.H. Hurter & Mabb.		Sundra	High blood pressure, gastric problems
92	Stereospermum tetragonum DC.	Bignoniaceae	Kaligottu	Indigestion, hiccups, vomiting
93	Terminalia elliptica Willd.	Combretaceae	Nallamaddi	Diarrhea
94	Terminalia bellirica (Gaertn.) Roxb.	Combretaceae	Thanikaya	Hepatitis, bronchitis, digestive disorders, general debility
95	Terminalia chebula Retz.	Combretaceae	Karakayya	Cough, Oral ulcers, digestive disorders, general debility
96	Tinosporacordifolia (Willd.) Hook.f. & Thomson	Menispermaceae	Tippateega	Fever, Cancer, obesity, General debility
97	Vachellianilotica (L.) P.J.H.Hurter&Mabb.	Fabaceae	Thumma	Antimicrobial
98	Vincetoxicum indicum (Burm.f.) Mabb.	Apocynaceae	Mekameyaniaku	Asthma, Cancer
99	Vicovaindica	Asteraceae	Ponna	Scorpion bites
100	Wrightiatinctoria (Roxb.) R.Br.	Apocynaceae	Ankudu	Toothache, Gum pains
101	Waltheria indica L.	Malvaceae	Sleepy morning	Inflammations, Malaria
102	Woodfordia fruticosa (L.) Kurz	Lythraceae	Sinduree	Digestive disorders
103	Ximenia americana L.	Olacaceae	Nakkeru	Urinary tract infections
104	Ziziphosoenopolia (L.) Mill.	Rhamnaceae	Pariki	Anti-inflammatory
105	Ziziphus rugosa La.	Rhamnaceae	Gotti	HIV

RESULTS AND DISCUSSIONS

The present studies on the less known and an ancient sacred grove “Pandavula Gutta” reveals they are rich in the floristic diversity mainly flowering plants. After critical examination and identification of floristic elements, we have come to conclusion the hill ranges are home for many of the medicinal plants, which has been using in the various traditional systems of medicine. A total of 105 medicinal plants have been reported from the study area. Details of the medicinal plants provided in the table (1) along with their scientific name, family, local/common names, medicinal uses/properties in an alphabetical order. Out of 105 medicinal plants there are certain rare medicinal plants which falls under IUCN threatened category also been reported such as *Alangium salvifolium* (LC), *Butea monosperma* (LC), *Cassia fistula* (LC), *Crateva religiosa* (LC), *Chlorophytum borivilianum* (CR), *Chloroxylon switenia* (VU), *Holarrhenapubescens* (LC), *Sterculia aurea* (VU), *Wrightia tinctoria* (LC) (IUCN, 2019). Apart from the IUCN listed medicinal plants the rocky hillocks and boulders are the home for the many of the tuberous, bulbous and succulent medicinal plants such as *Asparagus racemosus*, *Plumbago zeylanica*, *Euphorbia fusiformis*, *Mucuna pruriens*, *Maerua oblongifolia* etc., also been reported. Apart from medicinal and tuberous plants the hill ranges are home for the many of the grass species including aromatic grasses *Cymbopogon martini* is growing abundantly in the hill ranges.

CONCLUSIONS

“Pandavula Gutta” is an ancient sacred grove, came to lime light a very recently after the discovery of the geological significance paleolithic rock paintings. The geological survey of India (GSI, Hyderabad) has declared it as a geological heritage site of the Telangana and taking care of its preservation. The local forest department and district administrative authority developed the “Pandavula gutta” as a rock-climbing site and made it into a tourist spot for rock climbing. But the hill ranges are well preserved for their sacred habitations for 1000 years. The local state forest department and the district administrative authority should preserve and protect the “Pandavula gutta” hills for their sacred habitations and rich floristic wealth not only for geological significance. Within the hill ranges the clearing of vegetation for making the ways for rock climbing, laying the concrete roads, habitat disturbances should be avoided and the natural vegetation within the hill ranges protected well by the in-situ conservation methods. The exotic alien weeds *Mesophaerum suaveolens*, *Lantana camara*, along the margins of the hills need to be eradicated immediately to stop the spreading of them on the hills. The entire hill ranges have to be fenced to avoid the grazing of domesticated animals for proper restoration and rejuvenation of the natural vegetation.



Plate 1. Legend: a – f. Pandavula gutta hills with vegetation; g: *Boswelliaserrata* Roxb.; h: *Chloroxylonswietenia* DC.; i: *Cymbopogon martini* (Roxb.) Will. Watson; J: *Helicteresisora* L.; K. *Holarrhenapubescens* Wall. ex G. Don; l. *Sterculiaurens* Roxb.

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