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Floristic Diversity Of Ayurvedic Medicinal Plants On Dandoba Hill, Sangli, Maharashtra, India

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ABSTRACT :

Dandoba hills which is famous for temple of lord Shiva in Sangli district of State of Maharashtra is declared as reserved forest by the Forest Department, Govt. of Maharashtra and with its tropical dry deciduous jungle shows a wide range of medicinal plants described in Floras and classical Ayurvedic texts. With the increased emphasis on documenting traditional medicinal information, the assessment of medicinal plant diversity described in classical Ayurvedic texts has gained importance in recent years. Ayurveda preserves a vast bank of medicinal shrubs that play an important role in Ayurvedic therapeutic formulations and its clinical practice. The present paper is based on a consolidated documentation of 65 Ayurvedic shrubs available on the respective study area and their mentioned indications in reference to respective Ayurvedic texts. Many of these shrubs continue to be widely used for their therapeutic properties, indicating the depth and aliveness of India's traditional medicinal knowledge. This study engages both literature study of the ancient texts and field study of the study area.

KEYWORDS: Ayurveda, Medicinal plants, Ethnobotany, Pharmacognosy, Maharashtra

INTRODUCTION

Ayurveda, one of the world's oldest medical systems, is deeply rooted in the use of medicinal plants for maintaining health and managing diseases. Classical Ayurvedic texts such as Charaka Samhita, Sushruta Samhita, and Nighantus describe a rich diversity of herbs, shrubs, trees, and climbers used in therapeutic formulations. Among these, medicinal shrubs represent an important category due to their wide therapeutic range, accessibility, and sustainable availability.

In recent years, the need for documentation and conservation of traditionally used medicinal resources has increased significantly. While several floristic studies have reported regional plant diversity, there is limited consolidated work focusing specifically on Ayurvedic shrubs as mentioned in classical literature. Unlike previous floristic studies that documented dicotyledonous diversity from the same study area, the present work focuses on the diversity of specifically medicinal shrubs recorded in classical literature. Many of these shrubs continue to be used in Ayurvedic medicine for their pharmacological actions such as anti-inflammatory, digestive, immuno-modulatory, and rejuvenative properties.

The present study seeks to bridge this gap by compiling and correlating the existing literature and ancient literatures. The study provides botanical identities, traditional uses, and therapeutic significance, hence offering a collective reference for researchers, students and practitioners.

STUDY AREA

Dandoba Hill is a reserve forest in Miraj taluka of Sangli district located between 1645'N and 1733' N latitude and 7341' E and 7342' E with 20km band of diversity of flora and fauna. The area situated between the rivers 'Krishna' and 'Yerala' is on an approx altitude of 800m and slopes towards south-east.

METHODOLOGY

As the present study is both field-based and literature-based and relies on practical observation and examination of the existing diversity for all 6 seasons throughout the year and then systematic analysis of classical Ayurvedic texts and respective existing floras. Primary texts referred include Flora of India, Flora of Kolhapur district, Flora of Presidency of Bombay, Charak Samhita, Sushrut Samhita, Ashtang Hruday, Yogratnakar, Bhavaprakasha Nighantu, and other traditional compilations.

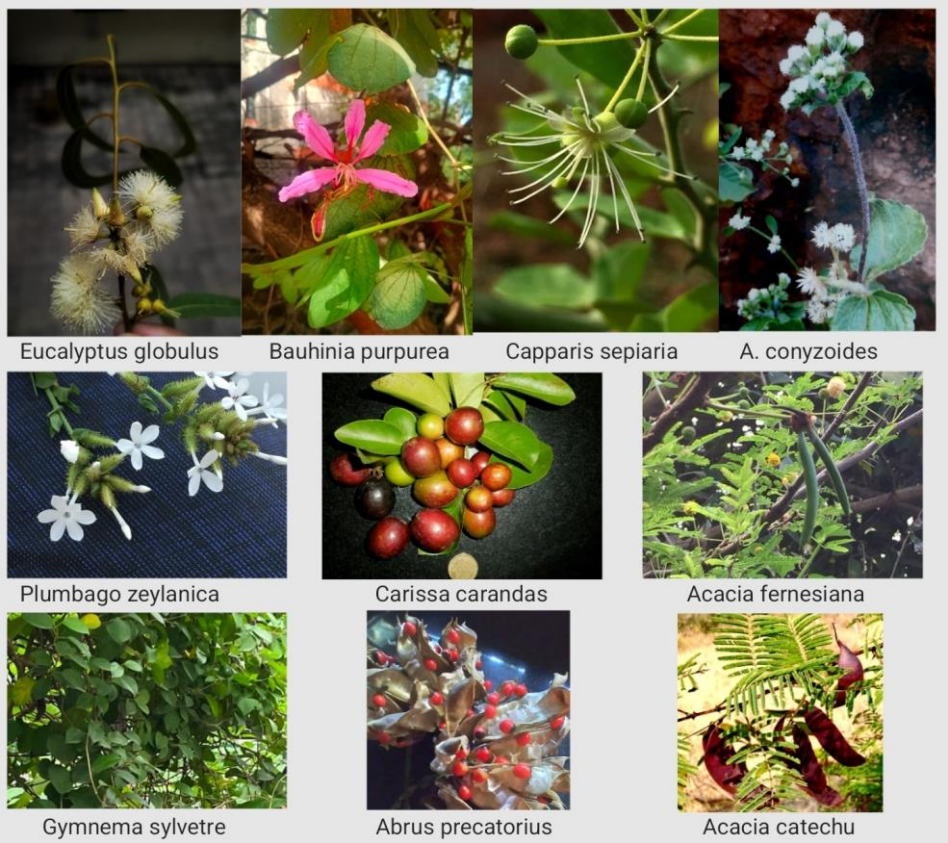
Each shrub mentioned in these texts was listed and cross-verified for botanical identification using mentioned floras which are recognized botanical databases and recent taxonomic literature. Traditional therapeutic indications were taken directly from classical verses and supported by commentary literature, recent research articles, blogs and practical observations.

The final list includes 65 shrubs, each confirmed for its classical reference, botanical identity (where clearly established), and few primary therapeutic applications in Ayurveda.

RESULT AND DATA DISCUSSION

Family	Botanical name	Local name	Sanskrit name	Useful part	Indication
Anonaceae	Anona squamosa	Sitaphal	Sitaphal	Fruit, root	Diarrhoea, inflammation
Astraceae	Tridax procumberence	Dagdipala	Jayantived	Leaves	Wound healing, diarrhoea, anti-hypertensive
	Emilia sanchifolia	Sadamandi	Sasasruti	Whole plant	Anti-inflammatory, antiseptic, anthelminthic
	Tricholepis radicans (Roxb)	Raan kardai	Bramhadandi	Aerial parts, roots	Aphrodisiac, nerve tonic, diuretic, anti-inflammatory
	Eichinops echinatus (Roxb)	Katechendu	Ushnakantak	Whole plant	Aphrodisiac, fever, pain, UTD
	Vernoria cineria	Sahadevi	Sahadevi	Whole plant	Fever, skin and eye disorders
	Blumea lacera Burm.	Bhamurda	Kukundar	Leaves, root	Rhinitis, headache, Haemorrhoids
Amaranthaceae	Amaranthus spinosus	Kathemath	Tanduliyak	Whole plant	Menorrhagia, UTI, eczema
	Achyranthus aspera L.	Aghada	Apamarg	Whole plant	Scrapping, detox, ano-rectal condition
Asclepidaceae	Calotropis gigantea	Rui	Arka	whole plant, latex	Swelling, inflammation, piles, purgative
	Gymnema sylvetre (Retz)	Meshashrungi	Meshashrungi	Leaves	Diabetes, cough-cold, fever
	Caralluma fimbriata	Makadshingi	Yugmphalottam	Aerial parts	Appetizing suppression, analgesic, carminative
Apocynaceae	Carissa congesta	Karvanda	Koranda	Whole plant	Anaemia, acidity, diabetic ulcers
Celastraceae	Celastrus paniculatus Willd.	Kanguni	Jyotishmati	Seeds, leaves, oil	Cognitive functioning, mental health RA
Cactaceae	Opuntia dillenii	Nivdunga	Vajrakanthak	Cladodes	Anti-inflammatory, analgesic, hepatoprotective
Papilionaceae	Sesbania sesban	Shevri	Jayanti	Whole plant	Anti-inflammatory, skin disorders, appetizer, blood purifier
	Pongamia glabra	Karanj	Karanja	Seed, seed oil, roots	Skin disorders, joint pain, Dental and skin disorders
	Abrus precatorius	Gunja	Gunja	Seeds	Skin diseases, joint pain, paralysis, alopecia, sciatica
	Dalbergia sissao Sensu MIG	Shisam	Shisam	Bark, heartwood	Haemorrhoids, leucoderma, RA, Syphilis, Sciatica
	Butea monosperma	Palash	Palasha	Whole plant	Deworming, Skin diseases, Dysentery, UTD
	Indigofera cordifolia	Bechaka	Neelini	Whole plant	indigestion (Purgative), dizziness, spleenomegaly, ascites, bloating, worms
Caesalpinaceae	Bauhinia purpurea	Apata	Kanchnar	Bark, flowers, roots	Glandular inflammation, tumours, wound healing, diarrhoea
	Tamrindus indica	Chinch	Amlika	Fruit pulp, seeds	Digestant, balances doshas, laxative
	Cassia tora	Takla	Chakramarda	Seeds, leaves, roots	ringworm infection, itching, wounds, inflammation
	Cassia auriculata	Tarvad	Avartaki	Flowers	Diabetes, improving complexion
	Caesalpinia bonducella	Sagargota	Latakaranja	Seeds, leaves, roots	Diarrhoea, vomiting, haemorrhoids
Mimosaceae	Dichrostachys cineria DC.	Durangi babul	Virataru	Roots, bark	Diuretic, anthelminthic, toothache, leprosy
	Prosopis cineraria	Shami	Shami/Kalpataru	Bark, leaves, pods	Bleeding disorders, bronchitis, hyperglycaemia, tooth and ear aches
	Acacia nilotica	Deshibabul	Babbul	Bark, gums,pods	Oral health, wound healing, dysentery
	Acacia fernesiana	Devbabul	Irimeda	Bark, heartwood, flowers	Oral health, skin diseases, menstrual cramps
	Acacia catechu	Khair	Khadir	Heartwood	Eczema, psoriasis, acne, gingivitis
	Acacia leocophloea	Hivar	Arimedha	Bark	Bronchitis, asthma, vomiting, thirst, burning
	Acacia concinna	Shikakai	Saptala	Pods	Hair cleansing, dandruff, conditioning
Bignoniaceae	Tecoma stans	Pivali phutani	Swarnapushpa	Flowers, leaves, roots	Hyperglycaemia, anthelminthic, diuretic
Boraginaceae	Trichodesma indicum	Chotakalpa	Adhapushpi	Whole plant	IBS, Loss of appetite, pain and swelling with RA, UTI, Dysmenorrhea

	Terminalia arjuna	Arjun	Arjun	Bark	Heart diseases, wounds, fractures, UTI, DM
	Terminalia catappa	Khota badam	Badam	Leaves, bark, kernel	Digestive issues, leprosy, sores, inflammation, general debility
Capparidaceae	Capparis sepiaria	Kanthar	Himsra	Root bark	Liver disorders, flatulence swelling poisonous bite
	Capparis zeylanica	Waghati	Vyaghranakhi	Root bark, leaves, flowers	Immunostimulant, appetizer
Convulvulaceae	Evolvulus alsinoides	Shankha-pushpi	Shankha-pushpi	Whole plant	Memory enhancer, Anxiolytic, Hypertension, Stomach and duodenal ulcers
	Ipomea nil (Roth)	Kala dana	Krushnabeej	Seed	Constipation, Oedema/dropsy, anthelminthic
Solanaceae	Solanum xanthocarpum	Kate	Kantakari	Whole plant	Respiratory problems, Renal calculi, urine retention
	Solanum nigrum	Kamoni	Kakamachi	Whole plant	Fever, Liver cirrhosis, cough, asthma
Rubiaceae	Morinda citrifolia	Bartondi	Noni	Fruits, leaves	Digestive issues, DM, HTN, Arthritis
Zygophyllaceae	Tribulus terrestris	Gokshur	Gokshura	Fruit, root	UTD, Kidney stones, PCOS, Debility
	Balanities aegyptiaca	Hinganbet	Ingudi	Seed oil, fruit, bark	Leprosy, leucoderma, intestinal worms, haemorrhoids
Papavoraceae	Argimone mexicana	Piwladhotra	Swarnaksheeri	Latex	Skin diseases, conjunctivitis, scorpion stings, non-healing wounds
Myrtaceae	Eucalyptus globulus	Nilgiri	Tailaparna	Essential oil from leaves	Rhinitis, nasal congestion , cough, bronchitis, asthma
Plumbaginaceae	Plumbago zeylanica	Chitrak	Chitrak	Root	Enhances digestion and metabolism
Nyctaginaceae	Boerheavia diffusa	Punarnava	Punarnava	Root	Oedema, dysuria, anaemia, dyspepsia, rasayana
Lythraceae	Lawsonia inermis	Mehndi	Mehndi	Leaves	As a cosmetic, skin diseases involving inflammation, fever, bleeding disorders, dysuria
Lamiaceae	Ocimum gratissimum	Raantulas	Arjaka	Leaves, seeds, roots	Excess sputum, cough, anorexia, repeated hiccups, vomiting
	Leonitis nepetilifolia	Deepmal	Granthiparni	Leaves, whole plant	Coughs, bronchial asthma, symptomatic flu, menstrual pain
Moraceae	Ficus bengalensis	Vad	Nyagrodha/Wata	Whole plant	Hyperglycaemia, diarrhoea, rheumatism, wound-swelling, strengthen uterine muscles during pregnancy
	Ficus glomerata	Udumbar	Udumbar	Bark, leaves, fruits	Dysentery, menorrhagia, haemoptysis, bone fractures
	Ficus riligiosa	Pimpal	Ashvattha	Whole plant	Chronic ulcer, stomatitis, menstrual irregularities, wound healing
Rhamnaceae	Ziziphus mauritiana	Bor	Badari	Fruit	Bleeding disorders, excessive thirst, burning sensation fever, indigestion
Malvaceae	Abutilon indicum	Mudra	Atibala	Whole plant	General debility, paralysis, facial palsy
	Sida cordifolia	Bala	Bala	Whole plant	Aphrodisiac, increases strength and immunity
Scrophulariaceae	Verbascum chinensis (Bail)	Kutaki	Kutaki	leaves, flowers	Cough, bronchitis, asthma, anti-inflammatory, analgesic, anti-spasmodic
Tilaceae	Grewia asiatica	Phalasa	Parushaka	Fruit	Fever, thirst, burning sensation
Miliaceae	Azadiracta indica	Kadulimba	Nimba	Whole plant	Skin and blood disorders, plaque, gingivitis, lice, arthritic pain
Verbanaceae	Latana indica	Ghaneri	Chaturangi	Leaves, roots, flowers	Cold, whooping cough, Skin disorders, diarrhoea
Oleaceae	Jusminum auriculatum Vahl.	Jai	Juhi	Roots, leaves, flowers	Dysuria, urolithiasis, nephrolithiasis, ulcers, anorexia
Euphorbiaceae	Mallotus philippensis (Lam)	Shendari	Kampillak	Fruit	Eczema, intestinal worms, renal calculi



LIMITATIONS

The present study was conducted on a complete area of patch of 20kms still not covering many species which could be found in the Sangli district and adjacent districts of the State of Karnataka. Also this study was strictly done in observation of dicotyledonous plants. Future studies must include a wider study area including monocotyledonous plants and study related to its ethnopharmacy.

CONCLUSION

The present work offers a consolidated documentation of 65 medicinal plants studied on a small dry deciduous patch of reserve forest. Many of these shrubs like *bala, atibala, punarnava, chitrak,* etc are seen to be used in current Ayurvedic therapeutics, indicating the relevance of traditional plant knowledge and their properties. This study contributes to the preservation and understanding of Ayurvedic flora, and provides a useful foundation for future studies for students of Botany, Ayurveda, Pharmacy and conservative biology.

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