

## SOME MEDICINAL ORCHIDS OF SOUTHERN INDIA

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**ABSTRACT:** *Ethnobotanical Studies were carried out in some parts of Andhra Pradesh and Tamil Nadu to identify orchids reported to have medicinal properties and to study their botanical distribution. This has resulted in the recording of 9 orchids used by the local population.*

### INTRODUCTION

Orchidaceae is one of the few largest plant families, consisting of very fascinating and colourful flowers. They have a wide ecological range and their growth is closely co-related to environmental conditions. There are about 24,000 species in the world (Hawkes, 1965) usually restricted to the humid forests of tropical countries, chiefly on trees and rocks. However, many are terrestrial, inhabiting damp woods and grassy slopes, almost all the members of this family range from epiphytic herbs which are rather selective to saprophytic herbs which prefer acidic soils. Some orchids also grow under extreme climatic conditions. In India, the family is represented by over 131 genera and 956 species, concentrated chiefly in the Himalayas, north-East region and peninsular India, the rate of endemism in the peninsular India is 11%. The genus *Habenaria* and *Bulbophyllum*, are followed by *Dendrobium*, *Oberonia* and *Eria* with the highest representation of the endemic species in peninsular India (Ahmedullah & Nayar, 1987).

The native population, particularly in high altitudes in different parts of south India in one way or another makes use of some orchids to treat ailments and to season their

food. Some of these, belong to the genus *Aerides*, *Bulbophyllum*, *Cymbidium*, *Eulophia*, *Habenaria*, *Pholidota*, *Vanda* and *Zeuxine* providing some essential therapeutic compounds to cure different ailments. The present study reports that the fresh plants or rhizome are widely used to cure common diseases such as ear pain, stomach pain, leucoderma, whooping cough and finger abscess.

Ethnobotanical studies were conducted in ethnically different groups in Northern circars (Srikakulam, Vizianagaram and Visakhapatnam districts), Godavari valley (Adilabad, East Godavari, Karim Nagar, Khammam, Warrangal and West Godavari districts) and Nallamalais (Kurnool, Mahabubnagar and Prakasam districts) of Andhra Pradesh and southern western ghats of Anamalai hills, Nilgiris and Tirunelveli hills of Tamil Nadu. This has resulted in the collection of 9 orchids spread out in the forests and their appropriate season of collection. These species are recommended for phytochemical/ pharmacological studies.

### METHODOLOGY

The data presented here are the outcome of a series of extensive and intensive exploration trips conducted over a period of six years. The information on the orchids used, more of application and dosage was gathered from knowledgeable inhabitants and these were cross-checked, critically analysed and documented. Every attempt was made to prepare voucher specimens. Besides, local names were collected. There are found to vary from place to place and tribe to tribe. All the specimens collected were identified in MH with the help of floras, recent monographs and revisions.

## ENUMERATION

Genera and species are arranged in alphabetical order, Descriptions of plants follows set order – name of the species, includes original citation of correct name followed by synonyms if any, thereby facilitating relevant botanical references, followed by local name(s); of the tribe (s) who use them a brief description of the species, habitat distribution and information on uses.

**1. *Aerides crispum*** Lindl., Gen. Sp. Orchid. Pl. 239. 1833; Hook F., Fl. Brit India 6: 45 1890; C.E.C. Fischer in Gamble, Fl. Madras 1442. 1928 (reor.ed 3: 1008.1957). A Lindleyanum Wight, Icon. Pl Ind Orient. T. 1677. 1891. “SEVITTU OLAI”

A robust epiphyte or lithophyte. Leaves oblong or linear-oblong, apex unequally bluntly 2-lobed. Flowers in simple racemes, longer than the leaves, pinkish white, shaded with darker pink often fragrant. Fairly common in moist deciduous, semi-evergreen forests and grasslands, 300-600m.

**Uses:** Plants powdered, boiled in neem oil, filtered and 2 to 3 drops poured into ears

once during night for 3 days to cure pain and ear deafness.

**2. *Bulbophyllum neilgherrense*** Wight, Icon. Pl. Ind Orient. T. 1650.1851; Hook F., Fl Brit India 5:761. 1860; C.E.C Fischer in Gamble, Fl Madras 1418. 1928 (repr. Ed 3: 992. 1957); Ahmedullah & Nayar, Endem. Pl Ind Region i:224. 1987- “KALMEL PULLURUVI”

An epiphytic herbs; pseudobulbs globular-conical, to 4cm tall. Leaves narrowly elliptic to broadly oblong. Flowers in racemes, many flowered, erect, brownish – yellow or greenish purple, lip entire or toothed auricles; scape stout, shorter or longer than the leaf. Fairly common in the western Ghats, Konkan- Karnataka region, travancore and Nilgiris, 800-1000m.

**Uses:** The bulbs and leaves ground into fine paste mixed with cow’s milk, orally administered for leucoderma.

**3. *Cymbidium aloifolium*** (L) Sw in Nova Acta regiae Soc Sci Upsal. 6:73. 1799, Wight, Icon, Pl. Ind orient. tt. 1687 & 1688. 1851; Hook f., Fl. Brit. India 6:8.1890; C.E.C. Fischer in Gamble, Fl Madras 1436. 1928 (repr.ed 3: 1004. 1957). *Epidendrum aloifolium* L., Sp. Pl. 1350. 1753. *Cymbidium bicolor* Hook f., Fl Brit India 6: 11.1980-“ MANU RAMA,U”, “PEDDA VAJOMOJLA”

An epiphytic herb; pseudobulb 4-5 cm long. Ovoid. Leaves linear-oblong, 30-60 x 2-3.75 cm. Scapes and racemes 20-50 cm long, erect below, decurved above, flowers yellowish red, lateral lobes mottled with brown-purple, In all hilly tracks, in semi-evergreen and moist deciduous forests, to 1200m.

**Uses:** The aerial roots made into paste and plastered tightly on fractured bones by Koyas.

**4. *Eulophia epidendrea*** (Koen). Schltr. Orchideen 346. 1915; C.E.C. Fischer in Gamble, Fl Madras 1434. 1928 (repr.ed 3: 1003. 1957); Joseph & Ansari, in Henry et al., Fl/Tamil Nadu 1,3:12 1989. serapias epidendrea Koen. In Retz., Obs, Bot 6: 65.1791. *Linodorum virens* Roxb., Fl. Coromand coast t 38 1795. *Eulophia virens* (Roxb.) R.Br. ex Lindl. In bot Reg. 7:sub t. 573 1821; Wight, Icon Pl Ind orient t. 913. 1844-1845; Hook. F., Brit. India 6:1. 1890.-“NERUNJI KIZHANGU”.

A terrestrial, pseudobulbous herbs; pseudobulbs green. Leaves linear, 70-80cm long. Flowers in spikes, slender few-flowered flowers yellow-green; lip white with pink veins, nerves and crests red. It is found in plains, scrub jungles, sheltered among thickets, from sea-level to 100m among rocks.

**Uses:** Rhizome paste mixed with castor oil (*Ricinus communis*) and applied on boils appear near groin of males by palliyan and the same applied on breast of feeding mother to control pain due to milk clotting by palliyan.

**5. *Habenaria plantaginea*** Lindl., Gen Sp. Orchid.Pl.323. 1835; Wight Icon., Pl Ind, orient t. 1710. 1815; Hook. F., Fl Brit india6: 141. 1890; C.E.C Fischer in gamble, fl. Madras 1470. 1928 (repr. Ed 3: 1027. 1957)-“KUSUMA GADDA”.

A slender herb. Leaves radical. Stem up to 30 cm long. Flowers pure white; lip much longer than sepals, with a linear midline and broad oblique side lobes of same length; spur green, 15-25mm, longer than ovary. Common among grasses on rocky hill slopes

at lower attitudes or on the hills to 600 (900)m on the slopes.

**Uses:** Tubers ground with black pepper (*Piper nigrum*) and garlic (*Allium sativum*) and the paste made into pill administered for chest pain and stomach pain by Koyas 1-2 pills (Each 5-10 gm) twice a day till cure.

**6. *Habenaria roxburghii*** Nicolson in saldanha & Nicolson, Fl. Hassan Dist. 834. 1976; Joseph & Ansari in Henry et al., Fl Tamil Nadu 1.3: 16. 1989. *Habenaria platyphylla* Spreng., Syst. Veg 690. 1826; Wight, Icon Pl Ind orient t. 1709. 1851; Hook f., Fl Brit. India 6: 140. 1890; C.E.C. Fischer in Gamble, Fl Madras 1470. 1926 (Repr. Ed 3: 1027. 1957). “RENI HALAG”.

A tuberous terrestrial herbs, 25-35 cm tall. Leaves orbicular, thick 3-5 in a rosette, adpressed to the ground, dark green to glaucous, waxy. Flowers pure white in densely clustered at tip of a long erect peduncles. Endemic to the south Deccan. Rare in scrub jungles to 8700m, often sheltered inside thorny hushes or on the thin layer of soil by exposed rocks. Common in poor dry soil, in scrub under light cover.

**Uses:** tuber extract mixed with sugar (*Saccharum officinarum*) and taken orally for cooling effect by lambidis.

**7. *Pholidata pallida*** Lindl. In Edward's Bot Reg 21: Sub.t. 1777. 1836; summerhayes, Rep Third world Orch. Conf. 3.11. 1966; Joseph & Ansari, in Henry et al., Fl Tamil Nadu 1,3: 23. 1989.*P. imbricata* sensu Lindl. In Edward's Bot Reg in 14.t. 1213 1828, non Lindl. In Hook f., Exot. Fl t. 138. 1825; Wight, Icon Pl Ind orient. t. 907. 1844-1845; Hook, f, Fl Brit India 5: 845. 1890; C.E.C Fischer in gamble. Fl Madras 1431. 1928 (repr. Ed 3. 1000. 1957). “PANNAI”

A pendent epiphyte with an ovoid or cylindrical-conical, uninodal pseudobulb terminated by 1-2 leaves. Flowers closely arranged, distinctly on upper half of a slender, pendulous spikes. It grows inside shoals on trees; common in semi evergreen forests as an epiphyte as well as lithophytes.

**Uses:** Rhizome paste applied for finger abscess by kadars.

**8. *Vanda tessellata*** (Roxb) Hook ex G. Don in Lond Hort Brit 372. 1830; C.E.C Fischer in Gamble, Fl. Madras 1445. 1928 (repr.ed : 1010. 1957); Joseph & Ansari in Henry et al., Fl Tamil Nadu 1,3:26. 1989. *Ephidendrum tessellatum* Roxb., Fl Coromand.t. 42.1975. *Vanda Roxburghii* R.Br. in Bot Reg 6t. 506. 1820 Hook. F., Fl., Brit. India 6: 52. 1890- "BADANIKA, TENDGA POOL; BADE AJANIKA".

An epiphyte on trees. Remarkable for its large reddish flowers and tessellate sepals and petals, lip with two freshly longitudinal ridges. In all districts above sea-level to 600 (750)m. Characteristically in dense masses to 4m tall, often compactly clothing the trunk of decaying trees.

#### **References:**

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Hawkes, A.D. 1965. *Encyclopedia of cultivated orchids*. Faber Limited, London.

**Uses:** the aerial roots and leaves ground with tender bud of phoenix loureirii and the paste plastered over for bone fracture and the extract given orally for the same by konda reddis and Koyas – 5 spoonfuls twice a day till cure. Leaf juice poured into the infected ears by koyas and also applied on skin diseases by jatapus and Nukadoras, tender velaman roots cooked and eaten by Gonds.

**9. *Zeuxine longilabris*** (Lindl). Benth. Ex Hook. F., Fl Brit India 6: 107-1890; C.E.C Fischer in Gamble, Fl Madras 1456. 1928 (repr.ed. 3: 1018. 1957). *Monochilus Longilabre* Lindl.. Gen So., Orchid. Pl 487. 1840 *M. affine* sensu wight, Icon. Pl. Ind/orient. t 1728.1851. non Lindl. 1840.- "MANNU PANNE".

Rhizomatous perennial, slender herbs. Leaves membranous, midrib whitish. Flowers white. Common among decaying leaves along roadsides, inside shoals, inside thickets, 800-1300m

**Uses:** Entire plant ground and made into pills, orally administered 3 pills a day for 3 days for whooping cough by Kadars.