



RESEARCH ARTICLE

MEDICINAL USES OF ORCHID BY TRIBES IN INDIA: A REVIEW

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ARTICLE INFO

Article History:

Received 18th July, 2013

Received in revised form

27th August, 2013

Accepted 20th September 2013

Published online 10th October, 2013

Key words:

Orchidaceae, Tribes, Indigenous, India.

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ABSTRACT

Orchidaceae family constitute the second largest family in the flowering plants and they came under the order Asparageles of the family Monocots. In India, there are about 645 tribes and mostly they settle in remote/forest areas. They depend on indigenous system of medicine for treating disease. The present paper deals with the medicinal use of orchid by various tribes in India. The investigation brought the therapeutic potentials of 88 orchid species belonging to 45 genus for the treatment of different disease and ailments like curing scorpion and snake bites, leucoderma, eczema, tumor, diarrhoea, earache, sexually transmitted diseases, dysentery, paralysis, acidity, cholera, wounds and sores, chest pains, arthritis, syphilis, pregnancy, bone fractures, spermatorrhea, muscular pains, asthma, menstrual disorder etc. by the different types of tribes in India.

INTRODUCTION

Orchids are the second largest group of flowering plants comprising about 788 genera and 18,500 species (Mabberley). The family Orchidaceae Juss is with nearly 22,500 species belonging under 779 genera considered as one of the biggest family of the world after the family Compositae (Rajendran *et al.*, 1997). They are distributed throughout the world, except the hot desert and Antarctica. 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% (Rajendran *et al.*, 1997). Recently it has been reported that orchid molecules are important in reducing fevers, serving as anti-impotence aids, increasing the white blood cell count, curing eye diseases, treating fatigue and headaches and most importantly, functioning as anti-cancer agents (Bulpitt, 2005). The tribes in India use some of the Orchid to treat ailments and some of these belong to the genus *Aerides*, *Bulbophyllum*, *Cymbidium*, *Eulophia*, *Habenaria*, *Pholidota*, *Vanda* etc. providing some essential therapeutic compounds to cure different ailments. The tubers of orchids like *Habenaria* and *Eulophia* referred as "Amarkand" were used for blood purification, leprosy, unconsciousness, youthfulness and to increase vigour. Species of *Malaxis* for providing strength, enhancing sperm formation and in diseases like tuberculosis and cold and cough. "Jeevanti" the name referred to *Flickingeria macraei* in Ayurveda has been effectively used as an expectorant. In asthma and bronchitis. It is said to be highly effective in night blindness (Chowdhery, 1998). *Rhynchosstylis retusa* also acts as a symbol of fertility and merriment in Assam. The inflorescence is also used in the marriage ceremony of the local people of Assam. The flowers of some other orchids like *Vanda tessellata* and *Coelogyne nitida* are used to adorn hair of girls of Assam and Arunachal Pradesh in local festival. The flowers of *Papilionanthe teres* is used as offering to Lord Buddha and spirits by the Khamtis

and other Tai ethnics of Assam and Arunachal Pradesh. *Dendrobium hookerianum*, *nobile* and *gibsonii* are considered as the symbol of purity and sanctity by the local people of Arunachal Pradesh. The young Nagawomen of Manipur put the orange flower of *Dendrobium densiflorum* behind their ears. Flowers of *Vanda coerulea* kept by the women of Manipur in hair during the autumn Puja festival. Inflorescence of *Liparis* species used in Manipur by all the tribes as a binding for an ornament for armlets or leg or to decorate the weapons (Medhi and Chakrabarti, 2008). Orchids possess a wide range of chemical compounds including alkaloids, flavonoids, phenanthrenes, bibenzyl derivatives and terpenoids. These compounds are useful as diuretic, anti-inflammatory, anti-rheumatic, anti-carcinogenic, hypoglycemic, anticonvulsive, antimicrobial, neuroprotective, relaxation and antiviral activities (Rajendran *et al.*, 1997). The present paper deals with the tribes of Andhra Pradesh and Tamil Nadu (Rajendran *et al.*, 1997, Ramesh *et al.*, 2012), Uttarkhand, Western Himalaya (Jeewan *et al.*, 2008), Niyamgiri Hill Ranges, Orissa (Dash *et al.*, 2008) and North East India (Medhi & Chakrabarti, 2008, Chakrabarti, 2009).

RESULTS AND DISCUSSION

The investigation brought the therapeutic potentials of 88 orchid species belonging to 45 genus for the treatment of different disease and ailments like curing scorpion and snake bites, leucoderma, eczema, tumor, diarrhoea, earache, sexually transmitted diseases, dysentery, paralysis, acidity, cholera, wounds and sores, chest pains, arthritis, syphilis, pregnancy, bone fractures, spermatorrhea, muscular pains, asthma, menstrual disorder etc. by the different types of tribes in India.

Conclusion

From this study it is clear that this tribe has sound knowledge about the medicinal values of plants available in their area. Hence, there is an urgent need of their protection so that this ethnic knowledge and their bearers, who are struggling for their existence can be saved. Proper measures must be initiated in terms of documenting the

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Table 1. Enumeration of Orchid species used as medicine by the tribe with their Scientific name, habitat, parts used and diseases

S.No.	Name of species	Habitat	Use of part	Diseases
1	<i>Acampe carinata</i> (Griff.)Panig.	Epiphyte	Root	Scorpion and Snake bites, stomach disorder and acidity.
2	<i>Acampe papillosa</i> (Lindl.)	Epiphyte	Root	Rheumatism, sciatica, neuralgia, syphilis and uterine diseases.
3	<i>Acampe praemorsa</i> (Roxb.) Blatt. & Mc Cann	Epiphytic	Root	Arthritis
4	<i>Aerides crispum</i> Lindl.	Epiphytic/ Lithophyte	Whole plant	Ear deafness
5	<i>Aerides multiflorum</i> Roxb.	Epiphytic	Leaves	Cuts and wounds
6	<i>Aerides odorata</i> Lour.	Epiphytic	Roots and Leaves	Tuberculosis
7	<i>Anoectochilus regalis</i> Bl.	Terrestrial	Stems and Leaves	Ingredients in certain medicinal oils
8	<i>Arundina graminifolia</i> (D.Don) Hochr	Terrestrial	Stems	To treat the cracks on heels
9	<i>Bulbophyllum cariniflorum</i> Rchb.	Epiphytic	Root	Abortion
10	<i>Bulbophyllum neilgherrense</i> Wight	Epiphytic	Bulbs and leaves	Leucoderma
11	<i>Calanthe sylvatica</i> Lindl.	Terrestrial	Flower	Nasal bleeding
12	<i>Calanthe tricarinata</i> Lindley	Terrestrial	Leaves and Pseudobulbs	Sores, eczema and aphrodisiac
13	<i>Calanthe triplicate</i> (Willd.) Ames	Terrestrial	Roots and Pseudobulb	Swollen hands, diarrhea, masticatory and gastrointestinal disorders.
14	<i>Cleisostoma williamsonii</i> (Rchb.f.) Garay	Epiphytic	Leaves and Stem	Fractured bones
15	<i>Coelogyne cristata</i> Lindley	Epiphytic	Pseudobulbs	Constipation and aphrodisiac
16	<i>Coelogyne ovalis</i> Lindl.	Epiphytic	Whole plant	Cough, urinary infections and eye disorders.
17	<i>Coelogyne punctulata</i> Lindl.	Epiphyte/Lithophyte	Pseudobulbs	Burn injuries
18	<i>Corymborkis veratrifolia</i> (Reinw.) Bl.	Terrestrial	Fresh leaves	Emetic to cure fever in children
19	<i>Cremastra appendiculata</i> (D.Don) Makino	Terrestrial	Roots and Tubers	Toothache, emollient, abscesses, scrofula, freckles, antidote for snakebite
20	<i>Cymbidium aloifolium</i> (L.) Sw.	Epiphytic	leaves	Ear pain, paralysis, fracture bones and inflammatory condition.
21	<i>Cymbidium ensifolium</i> Sw.	Lithophyte	Flower and Roots	Gonorrhea and sore eyes.
22	<i>Cymbidium giganteum</i> Sw.	Epiphytic	Leaves	Wounds
23	<i>Cymbidium hookerianum</i> Rchb.f.	Terrestrial	Seeds	Cuts and injuries as haemostatic
24	<i>Dactylorhiza hatagirea</i> (D.Don) Soo	Terrestrial	Whole plant	Tonic, aphrodisiac, diabetes, diarrhea, dysentery, expectorant, astringent, convalescence, impotence and malnutrition.
25	<i>Dendrobium densiflorum</i> Wall.	Epiphyte	Leaves	Bone fractures
26	<i>Dendrobium fimbriatum</i> Lindl.	Epiphytic	Leaves	Liver upsets and nervous debility
27	<i>Dendrobium herbaceum</i> Lindl.	Terrestrial	Leaves	Wounds and syphilis
28	<i>Dendrobium moschatum</i> Wall. Ex D.Don	Epiphytic	Leaves	Earache
29	<i>Dendrobium nobile</i> Lindl.	Epiphytic	Seeds	Freshly cut wounds
30	<i>Dendrobium ovatum</i> (Willd.) Kraenzl.	Epiphyte	Stem	Constipation and stomach ache
31	<i>Dienia muscifera</i> Lindl.	Terrestrial	Tuber	Tonic to strengthen kidneys
32	<i>Echioglossum williamsonii</i> (Rchb.f.) Szlach.	Epiphytic	Leaf	For swelling of hands and legs and bone fracture
33	<i>Epipactis helleborine</i> (L.) Crantz	Terrestrial	Leaves, Rhizome	Intermittent fever and aphrodisiac.
34	<i>Eria bambusifolia</i> Lindl.	Epiphytic	Whole plant	Hyper acidity and Stomach disorder
35	<i>Eria muscicola</i> Lindl.	Epiphytic	Whole Plant	Chest, heart, lungs, eyes, ears and nervous system
36	<i>Eria pannea</i> Lindl.	Terrestrial	Roots and Leaves	Bathing in case of ague and bone ache.
37	<i>Eulophia camprestris</i> Wall.	Terrestrial	Rhizome	Tonic, Stomach problems, Cough, Paralysis and also used as aphrodisiac.
38	<i>Eulophia dabia</i> (D.Don) Hoch.	Terrestrial	Tubers	Cough and cold
39	<i>Eulophia epidendraea</i> (Koen.) Schltr.	Terrestrial	Rhizomes	Boils and Breat feeding Problems
40	<i>Eulophia herbacea</i> Lindl.	Terrestrial	Tubers	Salep
41	<i>Eulophia nuda</i> Lindl.	Terrestrial	Tuber	Tonic, aphrodisiac, blood purifier and vermifuge
42	<i>Eulophia spectabilis</i> (Dennst.) Suresh	Terrestrial	Tuber	Aphrodisiac
43	<i>Flickingeria macraei</i> (Lindl.) Seidenf.	Terrestrial	Root	Skin allergy, eczema
44	<i>Geodorum densiflorum</i> (Lam.) Schltr.	Terrestrial	Root	Menstruation Problems
45	<i>Geodorum recurvum</i> (Roxb.) Alston	Epiphytic	Stem	Suppress tumors
46	<i>Goodyera repens</i> (L.) R.Br.	Terrestrial	Whole plant	Syphillis and blood purifier.
47	<i>Goodyera schlech</i> Rchb.f.	Terrestrial	Tincture of the Plant	Tonic for internal injuries and improving blood circulation
48	<i>Gymnadenia orchidis</i> Lindl.	Terrestrial	Tuber	Tonic, aphrodisiac
49	<i>Habenaria commelinifolia</i> (Roxb.) wall.exlindl.	Terrestrial	Root	Cure spermatorrhea

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50	<i>Habenaria edgeworthii</i> Hook.f.ex Collett	Terrestrial	Roots and Leaves	Purification of blood
51	<i>Habenaria intermedia</i> D.Don	Terrestrial	Tubers	Edible and used as health tonic
52	<i>Habenaria longicorniculata</i> Graham	Terrestrial	Tuber	Leucoderma
53	<i>Haebanaria marginata</i> (Coleb)	Terrestrial	Tubers	Malignant ulcer, flatulence.
54	<i>Habenaria plantaginea</i> Lindl.	Terrestrial	Tuber	Chest pain and Stomach pain
55	<i>Habenaria roxburghii</i>	Terrestrial	Tuber	Lambidus
56	<i>Herminium lanceum</i> (Thunb. Ex Susartz) Vujik.	Terrestrial	Whole plant	Urination
57	<i>Liparis odorata</i> Lindl.	Epiphytic	Leaves	Burns, cancerous ulcers and gangrene.
58	<i>Luisia tenuifolia</i> Bl.	Epiphytic	Whole plant	Boils and tumours
59	<i>Luisia trichorhiza</i> (Hook.) Bl.	Epiphytic	Root	Jaundice, muscular pain and anti-diarrhea for cattle
60	<i>Malaxis acuminata</i> D.Don.	Terrestrial	Bulbs	Bronchitis and tonic
61	<i>Malaxis muscifera</i> (Lindley Kuntze	Terrestrial	Rhizome	Tonic
62	<i>Nervilia aragoana</i> Gaudich	Terrestrial	Leaves appearing after flowers and whole plant	Ayurvedic drugs, commonly used as protective medicine after childbirth
63	<i>Orchis latifolia</i> Scop.	Terrestrial	Tuber and Root	Nerve tonic and Aphrodisiac
64	<i>Papilionanthe teres</i> Schltr.	Epiphytic	Leaves	High fever
65	<i>Pecteilis susannae</i> (L.)Raf.	Terrestrial	Tubers	Boils
66	<i>Phaius tankervilleae</i> (Banks) Blume	Terrestrial	Pseudobulbs	Bone fracture and dysentery
67	<i>Pholidota articulata</i> Lindley	Epiphytic	Whole plant	Tonic
68	<i>Pholidota chinensis</i> (Rchb.f.) De Vogel	Lithophyte	Pseudobulbs and Tincture	Scrofula, feverish stomach ache, toothache, internal bleeding, haemorrhage, asthmatic cough, tuberculosis and dysentery
69	<i>Pholidota imbricata</i> Hook.	Epiphytic/Terrestrial	Pseudobulb	Rheumatic pains
70	<i>Pholidota pallid</i> Lindl.	Epiphytic	Pseudobulb	Rheumatic pains
71	<i>Pleione maculate</i> Lindl.& paxton	Terrestrial	Pseudobulb	Liver complaints and stomachache
72	<i>Polystachya concreta</i> (Jacq.) Garay & H.R. Sweet.	Epiphytic/Terrestrial	Tuber	Arthritis
73	<i>Ponerorchis chusua</i> (D.Don) Soo		Tuber	Diarrhoea, dysentery and chronic fever
74	<i>Rhynchostylis retusa</i> (L.) Bl.	Epiphyte	Root	Blood dysentery, emollient, wounds.
75	<i>Satyrium nepalense</i> D.Don.	Terrestrial	Root	Diarrhoea Tonic, dysentery and malaria.
76	<i>Seidenfia rheedii</i> (Sw.) Szlach.	Terrestrial	Root	Cholera
77	<i>Spathoglottis plicata</i> Bl.	Terrestrial	Whole plant	Rheumatism
78	<i>Spiranthes sinensis</i> (Persoon) Ames	Terrestrial	Tubers	Tonic
79	<i>Tropidia curculigioides</i> Lindl.	Terrestrial	Roots	Diarrhoea, Malaria
80	<i>Vanda coerulea</i> Griff. Ex Lindl.	Epiphytic	Leaves	Eye disease, diarrhea, dysentery and External Skin diseases.
81	<i>Vanda cristata</i> Linn.	Epiphytic	Stem and Leaves	Tonic
82	<i>Vanda roxburghii</i> R.Br.	Epiphytic	Root and Leaves	Ear treatment of otitis, inflammatory, rheumatism, nervous system, Syphilis, antidote for poisoning.
83	<i>Vanda spathulata</i> Spreng.	Epiphytic	Leaves, Flower and Stems	Skin diseases, diarrhea, asthma, tuberculosis and madness.
84	<i>Vanda tessellata</i> (Roxb.) Hook. ex G.Don	Epiphytic	Root	Sexually Transmitted diseases, Ear pain, fever, dyspepsia, Bronchitis, Bone fracture, Skin disease, Rheumatism and Nervous disorders.
85	<i>Vanda testacea</i> (Lindl.) Rchb.f.	Epiphytic	Leaves and Root	Ear ache, Asthma.
86	<i>Vanda teres</i> Lindl.	Epiphytic	Leaves and Stem	High Fever and Cough and cold
87	<i>Vanilla walkeriae</i> wight	Epiphytic	Stem	Fever and Cattle
88	<i>Zeuxine longilabris</i> (Lindl.) Benth.	Terrestrial	Whole Plants	Whooping cough

indigenous knowledge system of the tribe. Further research and scientific experimentations of the traditional medicines must be encouraged.

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