

AN OVERVIEW ON ORCHIDS

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Abstract

Orchid is the one of the beautiful flower in the whole world. Generally it is cultivated for flower production all over the world. Ethnic groups of mainly north eastern Asian and some different places all over the world are also use it as a traditional medicine. In this present study we are reviewing the traditional use and conservation and also including traditional food by the different ethnic groups of different communities of different places of orchid on the bases of several literature studies. It is believed that from the 200 BC, the Chinese people are cultivating this species for their daily life use. In the Indian subcontinent, several orchid species are also used in different Ayurvedic formulation. But in India still now in this sector not so much exploration is done. The main object of this paper to give an overall over view in orchid study, also to encourage the researchers for their further studies which can be helpful to the society as well as the researchers.

Key words

Orchid, Sacred groves, Traditional food.

INTRODUCTION

From the ancient time traditional medicine is used by the different ethnic communities all over the world for curing the different disease. On the bases of that traditional knowledge natural recourses are general focused for new drug formulation for several diseases, for that reason plant are getting a special focused by the academic and industrial researchers [1]. From the ancient time (200 BC) orchids are used as tonic, astringent, analgesic anti-inflammatory agent according to Chinese pharmacopoeia. In the other hand, we found that the Greek people first identified this plant, On bases of 372-286 BC nomenclatures this phenomena get generic name

which comes from “Orchis” which means “The Testicles” according to Greek word. Greek people believe that it is having a good medicinal value in respect to human beings. Several orchid species are also used as an active ingredient in the medicinal formulation one of the oldest traditional medicine system that is Ayurveda [2]. Orchid is one of the largest species having colourful flower in the plant family. Near about 24,000 species of orchids are there all over the country and generally this are grow in humid environment condition of tropical countries as a hanging condition of the forest trees, rocks and also inhabiting damp woods and grassy slopes preferring acidic soils.

More than 100 genera and more than 900 species are found in the north eastern part of Himalaya [3]. Traditional Chinese Medicine is one of the oldest medicinal system, here we also found the orchid as an ingredient in many formulation. We found that near about 800 genera and 25,000 species in one family orchid are there all over the world in point of other literature. Now in

everywhere orchids are cultivated for daily life uses, *Vanilla planifolia* is the biggest example which is a rich source of vanillin which is used as foodstuff flavouring reagent. There are several ingredients in Ayurveda, *Asthavarga* is one of them. We find 8 medicinal plants (Table 1) are used in *Asthavarga* for Ayurvedic formulation, these 8 plants are reported as orchids [4].

Table 1 Medicinal plant used in Asthavarga

Sl. No.	Ayurvedic Name	Botanical Name	Family	Part Used
1	Jivaka	<i>Malaxis muscifrea</i>	Orchidaceae	Bulb
2	Kakoli	<i>Roscoeia procera</i>	Zingiberaceae	Root
3	Kshira Kakoli	<i>Fritillaria roylei</i>	Liliaceae	Root
4	Mahameda	<i>Polygonum cirrifolium</i>	Polygonaceae	Rhizome
5	Meda	<i>Polygonum verticillatum</i>	Polygonaceae	Rhizome
6	Riddhi	<i>Habenaria intermedia</i>	Orchidaceae	Root
7	Rishbhaka	<i>Malaxis acuminata</i>	Orchidaceae	Pseudo-bulb
8	Vridhhi	<i>Habenaria edgeworthii</i>	Orchidaceae	Root

Conservation of orchids by traditional natural habit

North eastern region of Himalayas mainly the India's ethnic people (tribal people) are conserving the orchids. People are conserving the orchids by sacred groves of this region. Generally these orchids are found in the forest region in the big big trees in a hanging condition which are a good atmosphere for it and the ethnic people of

this region are protect these trees on the basis of their religion practices and social cultures (Table 2). Generation to generation this people are conserving this species in absences of their conservation on the basis of natural worship. Sacred forests represent a long traditional of environmental conservation by the tribal of this region, for that reason also the biodiversity of the forest in maintained [5].

Table 2 Conservation of orchids by sacred groves

State	Local term	Number of documented sacred grove
Arunachal Pradesh	Gumpa Forests (Sacred groves attached to Buddhist monasteries)	65
Assam	Than, Madaico	40
Manipur	Gamkhap, Manhak (Sacred bamboo reserves)	365
Meghalaya	Law Lyngdhoh	83
Sikkim	Gumpa Forests	56

According to Table 2 Arunachal Pradesh, Assam, Manipur, Meghalaya and Sikkim ethnic people are conserving the orchids by sacred groves. In this way, tribal communities (Meghalayan-Khasis, Garos, Jaintias and so on) are conserving this species on the bases of their various religious beliefs.

Scientific conservation technic

Orchids are one of the highly demandable flowering plants distributed throughout the world. For that reason, government as well as non-government organization, research institute are focused in this matter of orchid conservation and also try to increase the production of orchids by in-situ and ex-situ conservation process [6].

Traditional food

The ethnic tribal groups of north eastern India used the wild orchids as a food. *Cephalanthera ensifolia*, *Habenaria acuminata*, *Habenaria susannae*, *Orchids latifolia*, *Microstylis wallachii*, and *Pholidata articulate* are some species which pseudo bulbs, roots and rhizomes are taken as

food of this region by boiling or preparing curry.

They also take it as a nutritious health drink. Stems of *Dendrobium* orchids are given to the cows as fed to increase the milk yield and the pseudo bulb of *Cymbidium* orchids is fed to the cattle to improve their health [5].

Traditional uses of orchids

The ethnic people of Nepal use several orchid species for the treatments of skin burns, fractured or dislocated bones, headaches, fever, wounds, insect repellent, blood purifier, snake bite antidote etc. (Table 3). Orchids are mainly used as powder or juice, paste, solely or mixed with milk, honey or wheat flour. Orchid extracts are also used orally and also applied externally [7].

Table 3 Traditional use of orchids by people of Nepal

Scientific name	Local name	Parts used	Traditional use	Commercial trade
<i>Acampe praemorsa</i> (Roxb.) Blatt.	Parajivi, Rasna (Sanskrit)	Root	Powder used in treating rheumatism and for cooling effect.	Medicinal
<i>Aerides odorata</i> Lour.	Parajivi	Leaves	Paste of leaves used externally to treat wounds	Floricultural, Medicinal
<i>Brachycorythis obcordata</i> (Lindl.)	Gamdol	Tubers	Powder mixed with milk and consumed as tonic	Medicinal
<i>Bulbophyllum odoratissimum</i> (Sm.)	Thurjo	Entire plant	Powder used in treating tuberculosis, chronic inflammation and fractures.	Medicinal
<i>Coelogyne nitida</i> (Wall. ex D. Don)	Banlasun, Thuur	Pseudo bulb	Paste consumed against headaches and fever. Paste applied externally on burns.	Floricultural, Medicinal
<i>Cymbidium iridioides</i>	Thuur	Leaves, pseudo bulb	Powder of pseudo bulb consumed as tonic. Leaf juice applied externally to stimulate blood clotting in deep wounds.	Floricultural, Medicinal
<i>Dendrobium longicornu</i>	Kause	Pseudo bulb, root	Juice of stems is consumed against fever. Boiled root fed to livestock	Floricultural, Medicinal

			suffering from coughs.	
<i>Epipactis helleborine</i>		Root	Juice consumed to cure insanity and gout.	Medicinal
<i>Eria spicata</i>	Parajivi	Pseudo bulb	Powder consumed during stomach ache, paste applied externally against headaches.	Medicinal
<i>Flickingeria macraei</i>	Jiwanti	Entire plant.	Paste used against snake bites, general debility, as stimulant and demulcent.	Medicinal
<i>Gymnadenia orchidis</i>		Tubers	Powder used to treat gastric, urine and liver disorders.	Medicinal
<i>Habenaria intermedia</i>	Riddhi	Root, leaves	Powder used for blood diseases.	Medicinal
<i>Habenaria pectinata</i>	Seto musli	Tubers, leaves	Leaf juice applied on snake bites. Tuber used against arthritis.	Medicinal
<i>Pholidota pallida</i>	Thurjo, Patharkera	Root, pseudo bulb	Paste used to relieve fever, powder to induce sleep and to cure abdominal pain, juice used for navel pain.	Floricultural, Medicinal
<i>Thunia alba</i>	Golaino	Entire plant	Paste used on fractured bones.	Medicinal

Orchids are used for the treatment of boils, pus ulcers, malignant swelling and breast cancer in Japan, Korea, Mongolia and China. Japan, Korea and Taiwan ethnic people are used different species of *Dendrobium* (Shi-hu) for kidney and

stomache problem. In China, the tuber of *Bletilla striata* is used as an ethnomedicine for the treatment of pneumorrhagia and pneumonophthisis [6].



Fig.1: View of Orchids

Scientifically proved medicinal value of some orchid species

Cymbidium aloifolium (L.) SW. containing alkaloids, flavonoids, steroids, cardiac glycosides, coumarins, triterpenoids, terpenes, anthocyanins, aromatic amino acid, phenols, tannins, saponins etc. and having antimicrobial activity [8].

Dendrobium crumenatum containing alkaloid, saponin, terpenoid, flavonoid and reducing sugar. This species also having antibacterial activity [9]. *Eria spicata*, *Bulbophyllum affine*, *Vanda cristata*,

Rynchostylis retusa, Dendrobium nobile and Dendrobium amoenum are having antimicrobial

activity [10].



Fig.2: overlook of Cymbidium aloifolium (L) SW

Potted Orchids

In the present scenario beside production of cut flowers, orchids also have great potential

as potted ornamentals. Many of the Indian species, northeastern Himalayan species in particular, are suitable for their direct use as high value potted novelty. Unfortunately, this still remains a gray

area and suffers from lack of attention and realization of its tremendous potential. Genus Aerides, Arachnanthe, Bulbophyllum, Calanthe, Coelogyne, Cymbidium, Dendrobium, Eria, Phaius, Phalaenopsis, Pleione, Rynchostyles, Vanda were found to possess the desirable characteristics as pot plants. The number will be higher if hanging types are also considered [11].



Fig.3: View on Potted Orchid

CONCLUSION

Out of many medicinal aromatic plants, many orchids have been used as traditional system of medicines.

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Orchidaceae is one of largest family among angiosperms with more than 30,000 species of 750 genera in the world. Orchids are nature's most

extravagant group of flowering plants distributed throughout the world from tropics to high alpine. They exhibit incredible range of diversity in size, shape and colour of their flowers. Though orchids are grown primarily as ornamentals, many are used as herbal medicines, food, and other have cultural value by different

cultures and tribes in different parts of the world.

However, this natural orchid wealth of the environment

as a whole and of this region in particular, is yet to be judiciously utilized and managed to harvest economic benefit. Moreover, there is always the danger of losing most of the valuable orchid wealth, unless scientific conservation measures are taken along with proper utilization. This is evident from the very painful fact that many of these beautiful, once abundant species, are now rare and some of them are already no more visible in the wild [11].

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