

SARAMSA ORCHID SANCTUARY, RANIPOOL, SIKKIM*

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ABSTRACT

An erstwhile experimental garden at Saramsa is now a Sanctuary of Tropical Orchids of Sikkim with about 200 species under cultivation. Slipper orchids like *Paphiopedilum fairieanum*, the elegant *Cymbidium eburneum* and *Dendrobium chrysotoxum* are conserved here.

INTRODUCTION

Sikkim is one of the most beautiful States of our Indian Union. It is the homeland of many interesting and beautiful orchids. In nature these beautiful orchids are not much seen presently. So cultivation and conservation has become important as these are prohibited for export under CITES. The first comprehensive treatise on orchids was brought out by King & Pantling (1898) wherein about 600 species were described. Later, Bruhl (1926) provided a guide to identify these orchids in nature.

LOCATION, PHYSIOGRAPHY AND CLIMATE

Saramsa is about 14 km from Gangtok on 31A National High way on way to Siliguri and about 3 km from Ranipool. The Saramsa Orchid Sanctuary was established during 1970-71 by the Forest Department. Subsequently the Government of Sikkim under notification declared it as an

'Orchid Sanctuary' for cultivation and conservation of tropical orchids.

It has an area of approximately 30 acres by the side of the river Rongnechu where other tributary 'Site Khola' joins the river. The entire area has a gradient slope which depicts a picturesque spot and is at an elevation of 600-650 m.

In general the soil ranges from brown clay to dark grey. The brown clay soil is generally shallow and poor whereas the dark grey soil is porous and rich in humus thus retaining moisture. Fortunately the soil of Saramsa Orchid Sanctuary belongs to the later category which helps in luxuriant growth of the tropical orchids.

It lies between 27°20' North Latitude and 88°37' East Longitude. The annual rain fall ranges between 360-520 mm and the rainy season starts from April and continues till September. The climate on the whole is very moist and damp. About 200 species of orchids are under the cultivation at Saramsa.

Previously this sanctuary was the private orchard of Late Chogyal wherein tropical fruit trees like Jack-fruit, Litchi, Mango, Guava, Citrus were cultivated. Ipecac cultivation for commercial utilization was also

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tried in a portion of the land by Sri J. S. Lal, the first Dewan. The Forest department later converted it into an Orchid Sanctuary for conservation and cultivation of tropical Orchids.

As one enters the gate an avenue of *Podophyllum* and tree fern (*Cyathea spinulosa*) leads to the glass house. The epiphytic orchids like *Dendrobium chrysotoxum*, *Coelogyne nitida*, *Bulbophyllum gymnopus* and *Ascocentrum ampullaceum* grace the bridle path.

Near the glass house, the terrestrial bamboo orchid (*Arundina graminifolia*) and *Epidendrum radicans* (exotic) present a beautiful look. There are two separate houses for cacti and succulents.

The dominant trees like "Tooni" (*Toona ciliata*), "Chilaune" (*Schima wallichii*), "Malata" (*Macaranga denticulata*), "Mawa" (*Engelhardtia spicata*) and *Acacia* sp. present

a beautiful view from over which hang different species of orchids.

A shrubby undergrowth of *Podophyllum*, *Edgeworthia gardneri*, *Camellia* sp. and herbs like *Polygonum molle*, species of *Impatiens*, *Anaphylis*, *Primula* constitute the ground flora making a congenial niche for the growth of native and exotic species.

A few interesting species like *Cymbidium lowianum*, *Dendrobium falconeri* and *Goodyera hispida* have been introduced from Eastern India and are thriving well.

As many as 200 species of orchids are now under cultivation at Saramsa. In all 50 genera are represented which include *Acampe*, *Acanthephippium*, *Aerides*, *Agrostophyllum*, *Arundina*, *Bulbophyllum*, *Cleisostoma* and others. The status of conservation and importance of useful endemic and threatened species is given in the under noted table.

Endemic Orchids Conserved

Name of the species	Locality	Altitude
<i>Bulbophyllum clarkeanum</i> King & Pantl.	Western Bhutan	500 m.
<i>Bulbophyllum cornu-cervi</i> King & Pantl.	Engo ridge	835 m.
<i>Bulbophyllum triste</i> Reichb.f.	Tista valley	500 m.
<i>Calanthe biloba</i> Lindl.	Dentam	1166 m.
<i>Eulophia geniculata</i> King & Pantl.	Tista valley	1136 m.
<i>Goodyera grandis</i> King & Pantl.	Tista valley & Rumtek	500-1335 m.
<i>Liparis deflexa</i> Hook.f.	Goke	668 m.
<i>Nephelaphyllum grandiflorum</i> Hook.f.	Tista valley	600-834 m.
<i>Oberonia demissa</i> Lindl.	Tista valley	600 m.
<i>Oberonia lobulata</i> King & Pantl.	Tista valley	550 m.
<i>Oberonia pachyphylla</i> King & Pantl.	Tista valley foothills	300 m.
<i>Oberonia prainiana</i> King & Pantl.	Tista valley	300 m.
<i>Paphiopedilum venustum</i> (Wall, ex, Sims.) Pfitz.	Tista valley	840 m,

Enumeration of Orchids (conserved for cultivation and multiplication) in Saramsa Orchid Sanctuary, Ranipool, Sikkim with their Status.

Name	Status	Occurrence
<i>Acampe rigida</i> (Buch.-Ham. ex Smith) P. F. Hunt	Threatened	All introduced excepting the few naturally occurring in the garden such as <i>Pholidota articulata</i> , <i>Pholidota imbricata</i> and <i>Thelasis longifolia</i>
<i>Acampe ochracea</i> (Lindl.) Hochr.	Threatened	
<i>Acampe papillosa</i> (Lindl.) Lindl.	Threatened	
<i>Acanthephippium sylhetense</i> Lindl.	Common	
<i>Aerides multiflorum</i> Roxb.	Fair	
<i>Aerides odoratum</i> Lour.	Fair	
<i>Aerides fieldingii</i> Jennings	Common	
<i>Agrostophyllum khasianum</i> Griff.	Restricted	
<i>Arundina graminifolia</i> (D. Don) Hochr.	Fair	
<i>Ascocentrum ampullaceum</i> (Roxb.) Schlechter	Rare	
<i>Biermannia bimaculata</i> King & Pantl.	Restricted	
<i>Bulbophyllum affine</i> Lindl.	Fair	
<i>Bulbophyllum careyanum</i> (Hook.) Spreng.	Threatened	
<i>Bulbophyllum cornu-carvi</i> King & Pantl.	Restricted	
<i>Bulbophyllum guttulatum</i> (Hook.f.) Seidenf.	Restricted	
<i>Bulbophyllum hirtum</i> (Smith) Lindl.	Common	
<i>Bulbophyllum odoratissimum</i> Lindl.	Threatened	
<i>Bulbophyllum ornatissimum</i> (Reichb. f.) Sm.	Rare	
<i>Bulbophyllum triste</i> Reichb. f.	Threatened	
<i>Calanthe biloba</i> Lindl.	Threatened	
<i>Calanthe masuca</i> (D. Don) Lindl.	Vulnerable	
<i>Chiloschista lunifera</i> (Reichb. f.) J. J. Sm.	Vulnerable	
<i>Cleisocentron trichromum</i> (Reichb. f.) Bruhl	Threatened	
<i>Cleisostoma bambusarum</i> King & Pantl.	Threatened	
<i>Cleisostoma filiforme</i> (Lindl.) Garay	Threatened	
<i>Cleisostoma striatum</i> (Reichb. f.) Garay	Vulnerable	
<i>Cleisostoma subulatum</i> Blume	Fair	
<i>Coelogyne barbata</i> Griff.	Common	
<i>Coelogyne flaccida</i> Lindl.	Threatened	
<i>Coelogyne flavida</i> Hook. f. ex Lindl.	Vulnerable	
<i>Coelogyne fuscescens</i> Lindl.	Endangered	
<i>Coelogyne ovalis</i> Lindl.	Threatened	
<i>Cymbidium aloifolium</i> (L.) SW.	Restricted	
<i>Cymbidium eburneum</i> Lindl.	Restricted	
<i>Cymbidium lancifolium</i> Hook. f.	Threatened	
<i>Cymbidium mastersii</i> Griff. ex Lindl.	Threatened	
<i>Cymbidium munronianum</i> King & Pantl.	Restricted	
<i>Cymbidium pendulum</i> (Roxb.) Swartz.	Vulnerable	
<i>Cymbidium simonsianum</i> King & Pantl.	Fair	
<i>Dendrobium aduncum</i> Wall.	Fair	
<i>Dendrobium anceps</i> Swartz.	Vulnerable	
<i>Dendrobium aphyllum</i> (Roxb.) Fisch.	Threatened	
<i>Dendrobium capillipes</i> Reichb. f.	Restricted	
<i>Dendrobium cathcartii</i> Hook. f.	Vulnerable	
<i>Dendrobium chrysotoxum</i> Lindl.		

Contd.

Name	Status	Occurrence
<i>Dendrobium crepidatum</i> Griff.	Fair	
<i>Dendrobium cumulatum</i> Lindl.	Fair	
<i>Dendrobium densiflorum</i> Lindl.	Endangered	
<i>Dendrobium denudens</i> D. Don	Endangered	
<i>Dendrobium devonianum</i> Paxt.	Restricted	
<i>Dendrobium falconeri</i> Hook. f.	Fair	
<i>Dendrobium farmeri</i> Paxt.	Fair	
<i>Dendrobium fimbriatum</i> Hook. f. var. <i>oculatum</i> Hook. f.	Vulnerable	
<i>Dendrobium formosum</i> Roxb. ex Lindl.	Fair	
<i>Dendrobium infundibulum</i> Lindl.	Endangered	
<i>Dendrobium jenkinsii</i> Wall. ex Lindl.	Threatened	
<i>Dendrobium lindleyi</i> Steud.	Threatened	
<i>Dendrobium lituiflorum</i> Lindl.	Restricted	
<i>Dendrobium moschatum</i> (Buch. —Ham.) Swartz	Fair	
<i>Dendrobium nobile</i> Lindl.	Endangered	
<i>Dendrobium parishii</i> Reichb. f.	Fair	
<i>Dendrobium pauciflorum</i> King & Pantl.	Fair	
<i>Dendrobium peguanum</i> Lindl.	Endangered	
<i>Dendrobium stuposum</i> Lindl.	Restricted	
<i>Dendrobium sulcatum</i> Lindl.	Fair	
<i>Dendrobium thyrsiflorum</i> Reichb. f.	Threatened	
<i>Dendrobium transparens</i> Wall. ex Lindl.	Fair	
<i>Dendrobium williamsonii</i> Day & Reichb. f.	Threatened	
<i>Ephemerantha macraei</i> (Lindl.) P. F. Hunt & Summerh.	Endangered	
<i>Eria acervata</i> Lindl.	Fair	
<i>Eria amica</i> Reichb. f.	Threatened	
<i>Eria biflora</i> Griff.	Threatened	
<i>Eria bractescens</i> Lindl.	Fair	
<i>Eria desyphylla</i> Parish & Reichb. f.	Endangered	
<i>Eria fragrans</i> Reichb. f.	Restricted	
<i>Eria paniculata</i> Lindl.	Fair	
<i>Eria pannea</i> Lindl.	Endangered	
<i>Eria pumila</i> Lindl.	Restricted	
<i>Eria spicata</i> (D. Don) Hand.-Mazz.	Restricted	
<i>Eria stricta</i> Lindl.	Fair	
<i>Eulophia bicallosa</i> (D. Don) P. F. Hunt & Summerh.	Restricted	
<i>Eulophia gepiculata</i> King & Pantl.	Restricted	
<i>Eulophia mannii</i> Hook. f.	Restricted	
<i>Gastrochilus calceolaris</i> (Smith.) D. Don.	Fair	
<i>Gastrochilus dasypogon</i> (Smith.) Kuntze	Fair	
<i>Gastrochilus inconspicuum</i> (Hook. f.) Seidnf.	Restricted	
<i>Goodyera grandis</i> King & Pantl.	Fair	
<i>Goodyera hispida</i> Lindl.	Fair	
<i>Goodyera procera</i> (Ker-Gawl.) Hook.f.	Common	
<i>Habenaria stenopetala</i> Lindl.	Fair	

Contd.

Name	Status	Occurrence
<i>Hetaeria rubens</i> (Lindl.) Benth.	Restricted	
<i>Hygrochilus parishii</i> (Veitch & Reichb. f.) Engl. & Pantl.	Vulnerable	
<i>Liparis histriata</i> Par. & Reichb. f.	Restricted	
<i>Liparis deflexa</i> Hook. f.	Fair	
<i>Liparis duthiei</i> Hook. f.	Fair	
<i>Liparis plantaginea</i> Lindl.	Fair	
<i>Liparis viridiflora</i> (Blume) Lindl.	Fair	
<i>Luisia trichorhiza</i> (Hook.) Blume	Endangered	
<i>Luisia volucris</i> Lindl.	Fair	
<i>Micropera obtusa</i> (Lindl.) Tang & Wang	Vulnerable	
<i>Nephelaphyllum grandiflorum</i> Hook. f.	Restricted	
<i>Nephelaphyllum pulcherum</i> Blume var. <i>sikkimensis</i> Hook. f.	Rare	
<i>Oberonia brachystachya</i> Lindl.	Restricted	
<i>Oberonia demissa</i> Lindl.	Restricted	
<i>Oberonia ensiformis</i> (Sm.) Lindl.	Fair	
<i>Oberonia iridifolia</i> (Roxb.) Lindl.	Fair	
<i>Oberonia jenkinsiana</i> Lindl. ex Griff.	Fair	
<i>Oberonia lobulata</i> King & Pantl.	Vulnerable	
<i>Oberonia pachyphylla</i> King & Pantl.	Vulnerable	
<i>Oberonia prainiana</i> King & Pantl.	Restricted	
<i>Oberonia recurva</i> Lindl.	Restricted	
<i>Oberonia rufilabris</i> Lindl.	Vulnerable	
<i>Otochilus fusca</i> Lindl.	Common	
<i>Otochilus porrecta</i> Lindl.	Common	
<i>Panisea uniflora</i> (Lindl.) Lindl.	Vulnerable	
<i>Paphiopedilum fairieanum</i> (Lindl.) Stein.	Vulnerable	
<i>Paphiopedilum insigne</i> (Wall. ex Lindl.) Pfitz.	Rare	
<i>Paphiopedilum spicerianum</i> (Reichb. f.) Pfitz.	Rare	
<i>Paphiopedilum venustum</i> (Wall. ex Sims.) Pfitz.	Rare	
<i>Paphiopedilum villosum</i> (Lindl.) Stein	Vulnerable	
<i>Papilionanthe teres</i> (Roxb.) Schltr.	Restricted	
<i>Peristylis goodyeroides</i> (D. Don) Lindl.	Restricted	
<i>Phaius flavus</i> (Bl.) Lindl.	Threatened	
<i>Phaius nanus</i> Hook. f.	Threatened	
<i>Phaius tankervilleae</i> (Herit) Blume	Threatened	
<i>Phalaenopsis mannii</i> Reichb. f.	Restricted	
<i>Phalaenopsis parishii</i> Reichb. f.	Restricted	
<i>Pholidota articulata</i> Lindl.	Common	
<i>Pholidota imbricata</i> Hook.	Common	
<i>Podochilus cultratus</i> Lindl.	Restricted	
<i>Porpax meirax</i> King & Pantl.	Restricted	
<i>Rhyncostylis retusa</i> Blume	Fair	
<i>Robiquetia spathulata</i> (Blume) J. J. Sm.	Restricted	
<i>Robiquetia succisa</i> (Lindl.) Scidenf. & Garay	Restricted	

Contd.

Name	Status	Occurrence
<i>Schoenorchis gemmata</i> (Lindl.) J. J. Sm.	Restricted	
<i>Thelasis longifolia</i> Hook. f.	Fair	
<i>Thelasis pygmaea</i> (Griff.) Lindl.	Restricted	
<i>Vanda coerulea</i> Griff. ex Lindl.	Vulnerable	
<i>Vanda cristata</i> Lindl.	Vulnerable	
<i>Vanda teres</i> Lindl.	Vulnerable	
<i>Zeuxine reflexa</i> King & Pantl.	Endangered	

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Plate 1. *Paphiopedilum fairieanum* (Lindl.) Stein.



Plate 2. *Paphiopedilum villosum* (Lindl.) Stein.



Plate 3. *Calanthe masuca* (D.Don) Lindl