

# INDIA IS HOME TO 1,256 SPECIES OF ORCHID, SAYS FIRST COMPREHENSIVE SURVEY

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*Aerides odorata*, epiphytic orchid, found upto 2000m.

The Botanical Survey of India has come up with the first comprehensive census of orchids of India putting the total number of orchid species or taxa to 1,256.

*Orchids of India : A Pictorial Guide*, a publication detailing all the species of India was unveiled earlier this month by the Ministry of Environment, Forest and Climate Change.

The 1,256 species or taxa of orchids belong to 155 genera and 388 species are endemic to India. The publication, authored by Paramjit Singh, former director of BSI, A.A. Mao the present director of the institute, scientists S.S. Dash, S.K. Singh, D.K. Agarwala and J.S. Jalal, also contains photographs of 775 species.

Orchids can be broadly categorised into three life forms: epiphytic (plants growing on another plants including those growing on rock boulders and often termed lithophyte), terrestrial (plants growing on land and climbers) and mycoheterotrophic (plants which derive nutrients from mycorrhizal fungi that are attached to the roots of a vascular plant). About 60% of all orchids found in the country, which is 757 species, are epiphytic, 447 are terrestrial and 43 are mycoheterotrophic.

The epiphytic orchids are abundant up to 1800 m above the sea level and their occurrence decreases with the increase in altitude. Terrestrial orchids, which grow directly on soil, are found in large numbers in temperate and alpine region whereas mycoheterotrophic orchids, mostly associated with ectomycorrhizal fungi, are found in temperate regions, or are found growing with parasites in tropical regions.

A State-wise distribution of orchid species point out that the Himalayas, North-East parts of the country and Western Ghats are the hot-spots of the beautiful plant species.

The highest number of orchid species is recorded from Arunachal Pradesh with 612 species, followed by Sikkim 560 species and West Bengal; Darjeeling Himalayas have also high species concentration, with 479 species.

While north-east India rank at the top in species concentration, the Western Ghats have high endemism of orchids.

There are 388 species of orchids, which are endemic to India of which about one-third (128) endemic species are found in Western Ghats. The publication points out that Kerala has 111 of these endemic species while Tamil Nadu has 92 of them. Among the 10 bio geographic zones of India, the Himalayan zone is the richest in terms of orchid species followed by Northeast, Western Ghats, Deccan plateau and Andaman & Nicobar Islands. "The publication is the result of years of hard and methodical research through careful examination of protologues, literature and voucher herbarium specimens. Every record has been verified from published floras, revisionary works, doctoral thesis and scientific papers," Mr. Mao said.

Considering the importance of orchids in floriculture, the publication, which has photographs of

60% of all species, is the first authentic inventory and will be useful for researchers, growers, nature lovers and people with different backgrounds, Mr. Mao said.

Marked by extremely beautiful flowers with unique shape and ornamentation, orchids have complex floral structure that facilitates biotic cross-pollination and makes them evolutionarily superior to the other plant groups.

Another interesting factor is that the entire orchid family is listed under appendix II of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) and hence any trade of wild orchid is banned globally.

“Some of the orchids like Dendrobium , Phalaenopsis, Oncidium and Cymbidium are quite popular in floriculture trade and have a demand both within and outside country,” Mr. Dash, an author said.

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