

Orchid Culture — 2 — Growing Outdoors and in Windows

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ALL ORCHID HOBBYISTS are faced with the challenge of finding - or creating - a suitable environment in which to grow orchids. Those new to the hobby don't usually build a greenhouse overnight, and with good reason, considering both the initial expense of materials and labor, and the astronomical heating costs now involved in maintenance. It is not surprising that a large proportion of today's growers, novices and veterans alike, choose one of the other less expensive alternatives for cultivating orchids. With some ingenuity and persistence, conditions conducive to the growing and flowering of orchids can be achieved anywhere - from below ground level to the tops of tall buildings, inside under entirely artificial light, or outdoors in a more natural setting.

OUTDOORS

Most of us live in areas which afford some months of the year appealing to both humans and orchids. Common sense would suggest taking advantage of what nature can provide by placing the plants outdoors during this time. It could be on a balcony or roof, if you live in an apartment building, or in the yard, deck or patio, if you live in a house. The orchids usually respond positively, whether you grow on windowsills, under lights, or even in a greenhouse, during the more inclement times of the year. During my years of growing orchids in Florida, I was always amazed by the improved growth and flowering of my plants when they were taken out of the greenhouse and grown outdoors after the threat of cold temperatures in the spring. In the patio or hanging in trees in the backyard, the plants received far superior air circulation, lower daytime temperatures, and the beneficial rains of those notorious Floridian downpours.

If you are not so fortunate as to have warm weather year around, but you do intend to grow your orchids outdoors at least part of the year, act conservatively. In the spring, wait until warmer weather is assured (night temperatures not much lower than 50°F) — you could easily save yourself a good deal of frantic effort which might be necessary to protect your orchids from a sudden cold snap. Orchids, like humans, become conditioned to their surroundings. Therefore be wary of the radically different conditions of the outdoors. Even some of the high-light-requiring vandaceous genera will surely burn if suddenly taken from the relatively shaded environment of a greenhouse or the indoors into the bright, unfiltered sunlight of a late spring day. After all, people burn too! Unfortunately with orchids unsightly burned areas do not necessarily peel or fall off, and they can drastically reduce photosynthesizing capacity. Provide some temporary additional shading until the plants have had a chance to acclimate, then gradually remove it, watching carefully for any adverse reaction. Watering schedules which are fairly routine and unvarying indoors will be jarred beyond recognition outdoors. Watering needs will very likely be more frequent and more erratic due to the greater variation of conditions outdoors. Daily attention will be necessary until an adjustment is made to outdoor growing, both by your plants, and by yourself with respect to your own habits in caring for your orchids.

Though the vandaceous genera, once acclimated, can be grown with little protection from the sun, provided they receive compensating levels of water, most other popular genera will need some shading outdoors. This can be provided by trees or other plant life, or by means of conventional shading materials such as the slats of a lath house-type construction, saran screening, fiberglas, etc. Plants can be shifted and shading altered until a proper level of light is reached, one that causes no burning and is in balance with other cultural factors that you or nature will provide. Orchids generally benefit from being off the ground, both in terms of enhanced circulation and perhaps in a lessening of pest and disease activity. Makeshift benches, hangers for trees, or some more substantial arrangement can

accomplish this end.

With the approach of fall and winter and their inexorable cold, caution is again the key. Many of the widely grown genera of orchids, particularly cymbidiums, *Dendrobium nobile* and its hybrids, paphiopedilums, and even phalaenopsis, respond to the cooler nights of fall by slowed growth and, eventually, flowering. Though these orchids should be exposed to those beneficial early fall nights in the 50's F, for safety's sake all plants should be brought indoors before the chance of even an unexpected frost exists, and before night temperatures drop much below 50°F. This precaution allows the time, too, for a last good cleaning and spraying of your orchids outdoors, so that you do not inadvertently bring some of nature's less desirable creatures indoors!

There are a number of successful indoor orchid growers who very justifiably assert that "summering" orchids outdoors is not worth the additional effort and exposure to pests and diseases. Nevertheless, the favorable response of orchids to this treatment is a well-known fact, and it is worth the consideration of the beginner, especially if the collection involved is but a small one.

WINDOWS

Once nature turns a cold shoulder on you and your orchids, and the outdoors becomes once more an inhospitable place, where can your plants survive, even prosper, within the confines of your home? A logical place would be at the windows, where the sun can still shine but the cold not penetrate. Choose the windows which receive the most direct sunshine, those facing east, west, and south (particularly during wintertime in the northern hemisphere). In the event of too much light, shading can always be applied. Direct sunshine at least for a couple hours of the day is essential for adequate growth and flowering of orchids, even for the more shade-loving genera, unless the level of indirect light is very high (*e.g.*, a tall, north window, or a skylight, with a good deal of transmitting surface facing the sky itself).

A confined area receiving sunlight from windows facing two directions or more is best because of the prolonged period of direct sunlight resulting, and because of the convenience of being able to separate the area off from the rest of the living space, allowing better control of growing conditions. The smaller the space for growing indoors, the easier it is to maintain an acceptable level of humidity.

I am surrounded, as I write, by an excellent example of this principle. My office, located on the southwest corner of the third floor of the American Orchid Society offices here in Cambridge, Massachusetts, receives no less than 6 hours of blinding sunlight each sunny day through an L-shaped window area. If I were not occupying this space and attempting to do some work, I could easily transform the small area into nearly greenhouse conditions simply by closing the door, pulling up the blinds and opening the window slightly for ventilation. As it is, I prefer not to sit at my desk in a perpetual sweat wearing sunglasses, despite the fact that it has been below 0°F too many days to count this winter! In spite of my desperate tampering with the blinds in order to preserve a patch of cooler shade on my desk, and the less-than-ideal humidity which is the best that wet gravel in trays can accomplish in a room opened to a larger, heated office space, the orchids in my windows are doing quite well, even at times astonishingly well. It was a rare event, in my experience, to have two flower spikes simultaneously on an ascocenda, even in the bright sunshine of a Floridian summer. However, this is the case with an ascocenda I have here in my office. Likewise, a mixed collection of other van-daceous genera, *Cattleya* alliance hybrids, oncidiums, catasetums, and a calanthe, are all growing successfully.

It should not come as a revelation, then, to hear that many a porch has been converted into a productive "indoor greenhouse" (*see* BIBLIOGRAPHY). If you have a porch or sunroom, by all means make use of it! If you don't, you can install one of the many "window greenhouses" available to hobbyists and achieve the same or better conditions, on a smaller scale (read Mary Helleiner's detailed article on window greenhouses in the December 1980 BULLETIN).

Orchids in pots need a surface on which to rest, indoors as well as outdoors, and most conventional windowsills need some minor modification for this purpose. Metal braces attached to the sills at one-foot intervals very adequately support 18-inch-wide, 1½-inch-deep, 4-foot-long trays filled with gravel and covered with orchids, here at the Cambridge office. These trays were purchased at a local garden center separate from the tiered light garden for which they were originally intended. As a very necessary feature they each have a plug which can be removed for drainage (in our case, into carefully placed buckets) when watering. The porous gravel, also purchased locally, not only keeps the orchids out of any residual water in the tray but also is a significant source of humidity, particularly on sunny days when the sunlight greatly raises its temperature. In a confined area, the humidity from such a source is perhaps sufficient, but if you grow or intend to grow in a larger room of your home, consider one of the many humidifiers on the market today. On the other hand, a confined area is more likely to need additional ventilation, or the circulation created by a fan. Air, particularly humid air, should be in constant circulation for the general health of your orchids, and to lessen the incidence of disease.

If you are not so fortunate as to have large, sunny windows in your homes, why not supplement the existing light with artificial light — or depend entirely on man's invention? Orchids can be grown successfully under lights, and there exists a well-developed technology and technique to support you in such an endeavor. The next article for this series will deal with this ingenious alternative for growing orchids. — 84 Sherman Street, Cambridge, Massachusetts 02140.

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Cool-growing orchids prefer to stay cool in the summer. A fluctuation of 10 to 20 degrees between day and night temperatures is essential for all orchids and triggers them to produce flowers. This difference is most important for cool- and intermediate-growing orchids because of the conditions they are used to in the wild. In the winter, it's possible to achieve this fluctuation by lowering your home's thermostat or by moving an orchid to a cooler spot, like a porch or a garage, at night. Appearance of fungal or bacterial diseases on orchids can be an indication of cultural problems. The first step is to identify the disease. It grew more blooms & seemed happy in a filtered light area of our bay window all winter until mid-April. At the end of April, it went downhill quickly.