



## Cultural Requirements of *Odontoglossum*

By Wally Thomas and Barbara Thomas

Few lovelier sights exist than a spray of lacy multihued odontoglossums arching out from the lush green foliage. About 175 species of *Odontoglossum* (o-don-toh-GLOSS-um) hail from the high, cool elevations of the Andes. Closely related genera, with similar cultural needs, occur in Mexico, and Central and South America. Consequently, these orchids thrive and are most popular in those areas that can most easily provide cool moist growing conditions.

A number of intergeneric hybrids involving odontoglossum have been created. These combine *Odontoglossum* with such genera as *Brassia* (*Odontobrassia*), *Miltonia* (*Odontonia*), *Cochlioda* (*Odontioda*) and *Oncidium* (*Odontocidium*). Often these hybrids produce flowers closely resembling the shapes and colors seen in odontoglossums, yet the plants will thrive under much warmer conditions than will purebred odontoglossums.

Odontoglossums, similar in habit to miltonias, are sympodial: bright green leaves arise from oval-and-somewhat-flattened pseudobulbs. The main inflorescence emerges from under the protection of the largest basal side leaf. A second spike may come from the other side of the pseudobulb. There are usually eight to fifteen flowers along the inflorescence, which may branch on species cultivated under ideal conditions. Late autumn and spring are the main blooming times, but hybrids may flower year round. The blooms remain on the plants for several weeks, and, when cut and floated in a shallow bowl of water, last particularly well.



**Temperature and Humidity** Night temperatures of 52 to 55 F and day temperatures of 65 to 70 F are ideal. However, plants in prime condition will tolerate a wider range, from a low of 45 F to a high of 90 F, for several days. High temperatures tend to prevent the flowers from opening properly, particularly the lip of *Odontoglossum crispum*. Evaporative coolers installed in greenhouses in warm climates increase the chances of raising odontoglossums successfully.

To maintain cool and humid conditions in the greenhouse, water under the benches most mornings and, on bright days, water the leaves (but just enough so that they will be dry by nightfall). This scheme is one way to prevent red spider mites, a microscopic culprit that damages foliage and flowers.

A humidity of 65 percent is ideal, but odontoglossums are surprisingly tolerant of moderately lower or higher levels.

**Light** Odontoglossums require between 1,500 and 2,000 foot-candles of light. The maximum light permissible results in faint red streaks in the leaves. They may be raised in maximum light, which results in improved flower substance, when provided with cool temperatures and plenty of air movement. In the house, an east-facing window is best. During the frost-free months, set odontoglossums outside in a breezy spot with full open light but no direct sunlight.

**Air Movement** Odontoglossums thrive in an atmosphere that is fresh and buoyant from the use of fans, ventilation and misting.

**Watering** The frequency of watering depends on the potting mix and ventilation. Odontoglossums require lots of moisture when rooted in a free-draining mix, but expect decreased vigor if the mix is allowed to remain

soggy. Periodically, collect rain water and use it to rinse fertilizer salts that accumulate in the mix. Excess fertilizer causes leaf tips to brown.

**Fertilizing** Nourish odontoglossums in bark mixes with 20-20-20 fertilizer diluted to one-quarter to one-half of the recommended strength. However, this fertilizer contains neither calcium, magnesium nor sulfur, making it necessary to add these elements where water is soft. Fertilize three of every four waterings, then apply plain water the fourth time.

**Potting** Bark mixes continue to be the standard potting media for odontoglossums. One mix consists of one part coarse sand, one part coarse shredded peat, one part perlite and four parts fine bark. When an 8-inch pot is used as the measuring cup for these ingredients, add a small handful each of bone meal and dolomitic lime to the total.

Begin with the mix employed by the successful growers of local orchid societies. Repot specimens raised in bark every 12 to 18 months, before the chips decompose, stay too wet and possibly harm the health of the roots. The best time to report is when the new growth emerges after flowering, which is mainly in the spring but sometimes in the fall. Once beyond the seedling stage, it is essential that the rhizome be cut and examined for rot, which appears as black and/or reddish areas. Flame sterilize the cutting tool – pruning shears, a knife or single-edged razor blade – between each cut. When clear white shows in the rhizome, flame the broad blade of the shears and hold it against the raw surface to sear it closed. Remove old shriveled bulbs and any dead or unhealthy roots. Invert a small pot in the center bottom of the pot in which the odontoglossum will be planted. Hold the plant so that the base of the rhizome is about ½ inch below the rim of the outer pot. Position the plant so that there is room for at least one new growth in front. Ladle in the mix, jiggling the larger pot between handfuls. Fill the pot to the rim; the pseudobulbs should be slightly buried. Thoroughly soak the medium after 24 hours.

Odontoglossums can be grown with great success in rockwool. One successful mix is 90 percent medium grade absorbent rockwool and 10 percent perlite. Fill the container so the medium remains loose around the roots (but not so the plant moves around in the container).

Another alternative is perlite, which has been soaked in a tub to get rid of the fine dust. Position the plant in the container and fill the vessel with the perlite. Then spread a ½ inch-thick layer of pea gravel over the inert medium. The Kord 8-inch saucerless baskets are excellent for this technique, since they provide a reservoir for bottom fertilization through capillary action. They are particularly suitable for windowsill growing. It is easy to pot in perlite and repotting is only required when the plant outgrows the container. Most importantly, over-watering is unlikely. When experimenting with rockwool and perlite, try only a few plants for the first six months. Hydroponic complete fertilizer management is required (but not difficult) and the results are outstanding.

Reprinted from *Growing Orchids*, a culture handbook published by the American Orchid Society. To receive a free colorful brochure about this wonderful hobby and to learn more about growing orchids, contact the

American Orchid Society at *Fairchild Tropical Botanic Garden*  
10901 Old Cutler Road, Coral Gables, FL 33156 Phone: (305) 740-2010 Fax: (305) 740-2011  
Email: The [AOS@aos.org](mailto:AOS@aos.org) Website: [www.aos.org](http://www.aos.org)

**Akatsuka Orchid Gardens** \* P.O. Box 220 \* Volcano, Hawai'i 96785  
Phone: (808)967-8234 Toll Free: 1-888-967-6669 Fax: (808) 967-7140  
Email: [info@akatsukaorchid.com](mailto:info@akatsukaorchid.com) Website: [www.akatsukaorchid.com](http://www.akatsukaorchid.com)