

# Catasetum

kat-ah-SEE-tum

This unusual group of orchids offers fascinating, waxy flowers that often have the peculiar habit of discharging their pollen masses (pollinia) onto pollinators. Almost always deciduous, the pseudobulbous plants have strict growing and resting periods. Most flower before entering a dormant period when they drop their leaves.

**LIGHT** should be strong, especially near the end of the growth period. Early in the annual growth cycle, plants will tolerate less light, from 1,500 to 3,000 foot-candles. Plants grow best with light levels of 3,000 to 6,000 foot-candles, or one-half to three-fourths full sun. As pseudobulbs mature, harden them by giving slightly more light.

**TEMPERATURES** reflect the fact these orchids are native to hot tropical areas and grow during the rainy summer months. During this growing period, day temperatures of 80 to 100 F and night temperatures of 60 to 65 F are beneficial. After growths mature, temperatures can be reduced to 55 F at night, with day temperatures of 70 to 85 F.

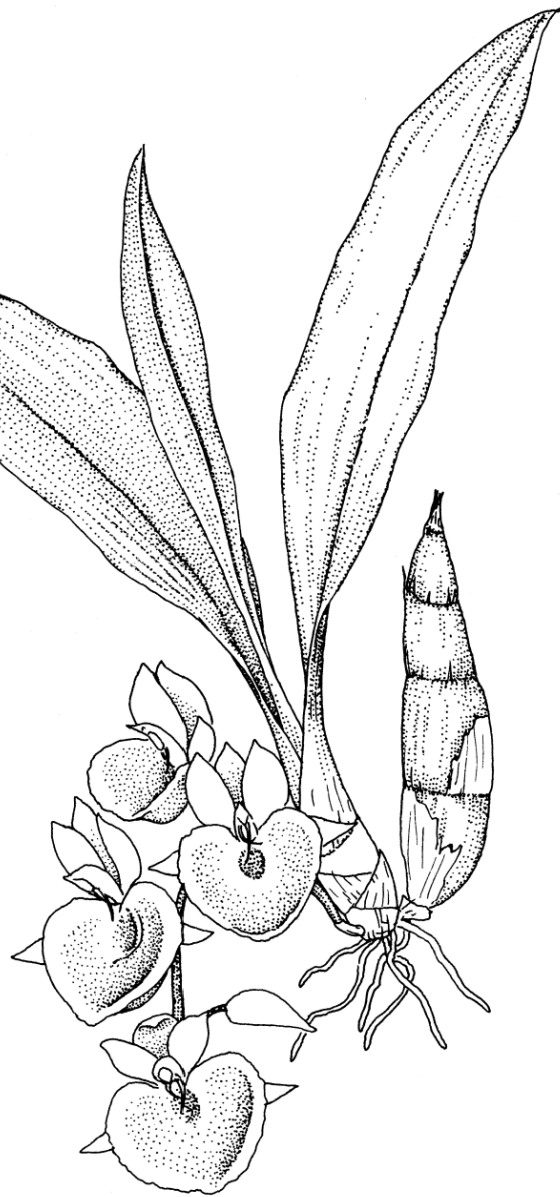
**WATER** is a critical factor for the production of large pseudobulbs that result in best flowering. A great quantity of water must be stored by the plant in a relatively short growing season. Water heavily as new leaves are forming. As the pseudobulb matures, gradually reduce watering frequency. Leaves will yellow and drop. At this time, watering should be stopped completely until new growth begins. Water during this dormant period only if the pseudobulbs shrivel severely.

**HUMIDITY** should be 40 to 60 percent. This can be provided in the home by placing the plants on trays of gravel, only partially filled with water so that the plants do not sit in the water. Air should always be moving around the plants to prevent fungal or bacterial disease, especially if high humidity or cool temperatures exist. In the greenhouse, the humidity is best increased

by use of a humidifier. Evaporative cooling increases humidity while cooling the air.

**FERTILIZE** and water regularly to produce strong pseudobulbs. Use a high-nitrogen formulation (such as 30-10-10) while plants are in active growth, slowly tapering off as pseudobulbs form. A blossom-booster formulation (such as 10-30-20) should be used in the autumn, except for plants that normally bloom in the spring. Frequent applications of a dilute concentration of fertilizer are more effective than occasional applications of strong concentrations.

**POTTING** should be timed to coincide with the initiation of new growth, usually in the spring. New roots will be produced quickly at that time, and plants will experience minimal setback. These plants have vigorous root systems and require a rich, moist potting medium during the growing season. Many growers bare-root their plants during the resting period to ensure dryness at that time. Fine-grade media are common for smaller pots; medium-grade media are used only in larger pots. Sphagnum moss is used successfully for plants in many areas, as it provides tremendous water- and fertilizer-holding capacities. Some plants can be grown on slabs of tree fern or other material, which makes it easier to keep them dry during dormancy; however, it is harder to keep them moist while growing. When well grown, these orchids can be divided down to one mature pseudobulb and will then flower on the next mature growth. Spider mites are a common pest of these orchids



when in leaf. Control spider mites by keeping humidity high or spraying with recommended miticides.

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# Catasetinae Plant Culture

## Cycnoches, Catasetums, Mormodes, and Clowesia

The cultural information below is a generalization and will apply in most situations; however each grower and growing environment is different. I encourage you to make adjustments based on your own experience and growing conditions.

Catasetinae have a distinctive growth and rest period (dormancy). For best plant growth it is important to understand and respect these growth phases. When the plants are in active growth maintain constant root zone moisture and fertilize regularly. This is essential to optimizing the development of new growth. When the plants are dormant little or no water is needed as the pseudobulbs store enough moisture and nutrients to survive the dormancy.

Catasetinae plant culture is not difficult. All it takes is an understanding of the seasonal growth patterns. The plants' vegetative state signals to the grower their changing needs. Interpret the signals and make the appropriate cultural adjustments. Here is what to look for:

**Early spring:** Catasetinae begin their new growth in early spring. However, watering should wait until the new growth has well-developed new roots. This means you should let the new roots grow to an approximate length of 3-5" before you begin watering. Let me emphasize this point. Wait to water until the new roots are well developed. The waiting to water is not easy; my natural instinct is to begin watering when I see new growth, but I have learned through trial and error that it is better to wait to water than start watering too soon. I also believe that Catasetinae roots deteriorate during dormancy, and in the following year they are not as effective at taking up moisture and nutrients. This makes the new roots vital in the plants' health. This reinforces the message about not watering too early.

**Mid-Season:** Once the new roots are sufficiently developed, this is the period where the plants are rapidly developing their new pseudobulbs. There is a surprising amount of growth that occurs in these 3-4 months; often the plants will double their size. Due to this, the plants require constant moisture and regular fertilization. In most cases, irrigation will be needed 2 or 3 times a week. A balanced fertilizer at full strength is suitable for this rapid growth. Light levels at or above those suggested for Cattleya will help insure strong good growth and flowering. This is the time when the fruits of your labor will begin to pay off as the flowering season is in underway.

**Late Season:** Sometime after flowering, in the late autumn the plants will begin to enter the dormancy phase. Understanding the signals of the onset of dormancy and the factors triggering it are important to a healthy plant culture. The plant's first signals are the yellowing and browning of the leaves, at this time stop fertilizing and reduce watering by one-half and when most leaves are yellow/brown and have dropped off cease watering altogether. The general rule to follow is: by the 15<sup>th</sup> of November stop fertilization and reduce watering by one-half. Most leaves should have yellowed or fallen off by the 1<sup>st</sup> of January. However, if the plants still have leaves all irrigation should be stopped at this time.

**Dormancy:** The onset of dormancy is caused by several factors; the maturity of the pseudobulb, shorter day length, cooler day/night temperatures, and a reduction of root zone moisture. In most of the country dormancy occurs naturally; however when the plants are cultivated in warm growing areas such as in South Texas, Florida, Hawaii, or in the home or under lights sometimes dormancy needs to be encouraged. I have found that stopping watering in early January regardless of the number of green leaves will trigger the dormancy.

Note: Watering during dormancy should only be done if the plant shrivels severely. Usually a single irrigation is sufficient to restore the bulbs.

Here's a summary:

- As the new growth develops wait to irrigate until the new roots are well-developed and are 3 to 5" long. (Don't be in a hurry to water; it is better to wait)
- Irrigate and fertilize frequently while the plants are in active growth.
- Stop fertilization and reduce irrigation by one-half around by mid November.
- Cease watering by the 1<sup>st</sup> of January.

**Light levels:** Catasetinae like light levels comparable to Cattleyas at about 2500-4000 foot candles (fc) However, the plants are widely adaptable and do well with light levels as low as 1500 fc and as high as 5000 fc. For optimal growth I suggest a Southern exposure or a location where all the plants will receive plenty of bright, filtered light

**Potting mix:** For mature plants I have been using a 3:1 of mix of fine 'Kiwi Bark' and medium Perlite. For seedlings up to a 3" pot size I like to use New Zealand sphagnum moss with the bottom 1/3 of the pot filled with Styrofoam peanuts. However, this genus is not too particular in what it is potted in, and any well drained media will work well.

**Containers:** I prefer to grow in plastic pots; however clay pots, baskets, and cork slabs will all work. Catasetinae don't like to be over potted; select a pot size that will allow for 2-3 years of growth.

**Fertilizer:** When in active growth, regularly use one teaspoon of your favorite fertilizer per gallon of water.

**Air movement:** Catasetinae enjoy abundant air movement. If you are growing in a greenhouse use air circulating fans. Also, hanging the plants allows for maximum air movement around them and often they do best hanging.

**Repotting and Dividing:** Is done as the new growth is just starting to develop and before the new roots start to show. (Remember no watering until the roots are well established, 3-5" long). Unlike most orchid plants Catasetinae do well when divided in to 2 bulb pieces. Divisions are made by cutting with a sterile tool or by pulling the bulbs apart. I try to keep the size of my plants between 2 and 5 bulbs.

**Insect pests:** Catasetinae are generally pest free. However spider mites are attracted to the soft leaves of these plants. Spider mites are quite small. They live and feed on the undersides of the leaves. Take care in checking for them as the plants are developing the new leaves and control them with a recommended miticide from your garden center. Although the leaves will drop off during dormancy this is not an excuse to not treat for them.

Above information courtesy of Sunset Valley Orchids

[https://www.sunsetvalleyorchids.com/htm/culture\\_catasetinae.html](https://www.sunsetvalleyorchids.com/htm/culture_catasetinae.html)

