

# Orchids in the Home

Anyone can grow orchids in the home without living in the tropics or having the luxury of a greenhouse. Today, houseplants are a regular part of home decoration. If you have ever successfully grown a houseplant, or enjoyed a flowering potted plant, you can grow orchids. The good news is there are plenty of options to give yourself a beautiful display of flowering orchids year round. Hint: Orchids grown in the home during the colder months will respond wonderfully well to being summered outdoors in a protected area. This will also extend the range of plant selections available to you. Be sure to read the AOS's companion sheet *Orchids in the Garden and on the Patio*.

## LIGHT

No flowering plant will do well without sufficient light. In the home, where most available light is incidental (that is, at an angle, and therefore less intense), plants will need to be fairly close to an east or west, or lightly shaded south, window. A north window will rarely provide adequate light. If light is too intense in a southern exposure, a sheer curtain could be hung to diffuse the light. Extra hours of light will not entirely compensate for poor light quality. Indeed, extending daylength artificially to more than 16 hours can be detrimental to the plants' health and often will prevent flowering.

## TEMPERATURE

The plants will be comfortable where you are comfortable. Typical home temperatures of 55 to 60 F at night and 75 F during the day are fine. Guard against excessively low or high temperatures immediately adjacent to glass windows. Some leeway for seasonal fluctuations is allowed.

## HUMIDITY

Rugs, drapes and some furniture act as giant wicks that absorb the home's humidity, as do heating and air-conditioning systems. Also, it is not advisable to have the home's interior be too wet to accommodate the plants. Solutions: Group plants to take advantage of their collective transpiration (exhaled moisture) or place them on gravel-filled humidity trays to raise the humidity to 50 percent.

## WATERING

Care must be taken to balance the rapid surface drying that can take place in the home with the plants' lower metabolic processes resulting from lower light. Each particular type of orchid will retain its basic water needs, whether for moisture or periodic dryness. The home grower also needs to give thought to the logistics of watering. You can carry plants to the sink or even outdoors (when weather allows), or water them in place and remove excessive water so the containers do not sit in water.

## FERTILIZER

Fertilize regularly at a low dosage of approximately one-quarter strength with a fertilizer appropriate to the potting mix in which your plants are grown. Fertilize less often during the winter.

## A Selection of Plants

**Angraecums Dwarf Madagascar** species, fragrant at night; bright light.

**Cattleya Alliance Hybrids and Species** Choose miniature types less than 10 inches tall; bright light of southern exposure is best.

**Dendrobiums Dwarf phalaenopsis** types, or higher-altitude miniatures; bright light at south window required.

**Oncidiums** Many types available in flower, best if smaller growing; bright light.

**Paphiopedilums** Lady's-slipper orchids grow well under home conditions, giving long-lasting blooms; provide African-violet conditions.

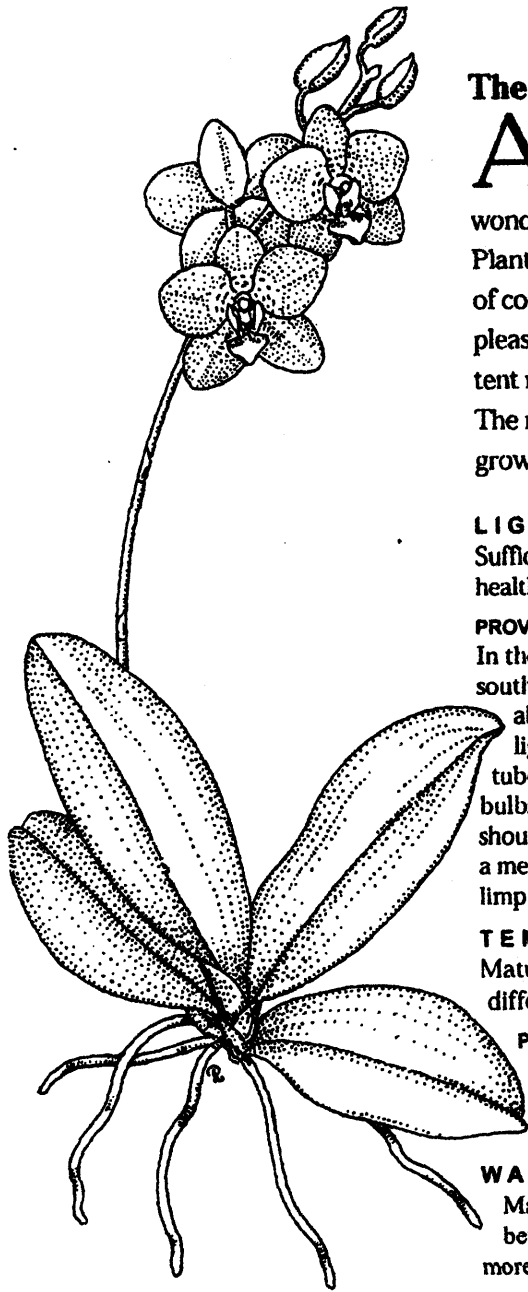
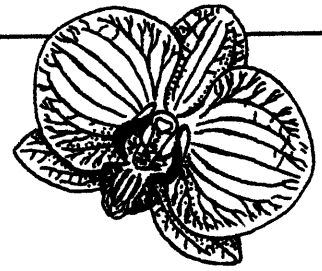
**Phalaenopsis** Moth orchids are absolutely the number-one best orchid houseplant; provide African-violet conditions.

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# Phalaenopsis

fayl-eh-NOP-siss



## The Moth Orchid

**A**n American Orchid Society demographic survey showed that Phalaenopsis have become America's favorite orchid. And no wonder. Perhaps no other orchid is better suited to home orchid growing. Plants with long-lasting sprays of lovely mothlike blooms in a broad array of colors are inexpensive and widely available, ready to give weeks of pleasure in your home or office. Simply provide modest light and consistent moisture, and they will delight you with their relative ease of culture. The main flowering season is late winter into spring, though commercial growers today can make flowering Phalaenopsis available year round.

### LIGHT

Sufficient light is important for healthy growth and flower production.

**PROVIDE** Bright light, no direct sun. In the home, an east, west or shaded south window. In a greenhouse, about 30 percent full sun. Under lights, four 40 watt fluorescent tubes and two 40 watt incandescent bulbs directly over plants. Foliage should be naturally semierect, and of a medium olive-green. Dark green, limp foliage indicates too little light.

### TEMPERATURE

Mature plants need a 15 to 20 F difference between night and day.

**PROVIDE** Nights of 60 to 65 F; days of 75 to 85 F. Seedlings need temperatures five to 10 degrees higher than mature plants.

### WATER

Mature plants should seldom dry out between waterings. Seedlings need more constant attention to moisture.

### HUMIDITY

Phalaenopsis need 60 to 70 percent humidity. In the home, place on trays of moistened pebbles. In greenhouse, use a humidifier if conditions are too dry.

### FERTILIZER

Must be provided on a regular basis because most potting media have little.

**PROVIDE** The exact fertilizer you use will depend on the mix in which your plant is growing. A good general rule is to use a balanced (10-10-10, 12-12-12 or similar ratio) fertilizer "weakly, weekly." That is, fertilize every week at one quarter to one half of the recommended dilution.

### POTTING

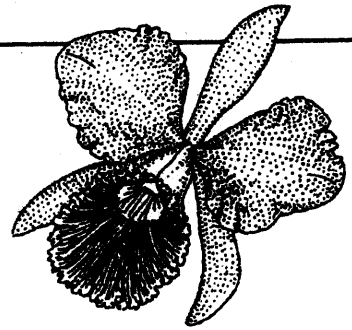
Should be done every one to two years before the mix breaks down too far. Best done in late spring after main flowering season, using a well-drained but water-retentive mix. Select pot size for root mass, not top size.

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# Cattleya

KAT-lee-ah



## The Corsage Orchid

Cattleyas are among the most commonly grown orchids, and their culture is often used as the basis for comparison with other types of orchids. Like most other cultivated orchids, cattleyas are epiphytes, or air plants. They have well-developed water-storage organs (called pseudobulbs) and large, fleshy roots. They should be potted in a porous, free-draining medium. The most commonly used are fir bark, shredded tree-fern fiber, various types of rock, processed coconut fiber and, lately, mixes based on peat moss and perlite. Keep out of cold, dry air while in bloom.

### LIGHT

Sufficient light is important for healthy growth and flower production.

**PROVIDE** Bright light, some sun. In the home, an east, west or lightly shaded south window. In a greenhouse, about 30 to 50 percent full sun. Under lights, four 40 watt fluorescent tubes and two 40 watt incandescent bulbs directly over plants. Plants should be naturally erect, without need of much staking, and of a medium olive-green color. Dark green, limp foliage indicates too little light.

### TEMPERATURE

Mature plants need a 15 to 20 F difference between night and day.

**PROVIDE** Nights of 55 to 60 F; days of 70 to 85 F. Cattleyas can tolerate temperatures up to 95 to 100 F if shading, humidity and air circulation are increased. Seedling cattleyas need temperatures five to 10 degrees higher than mature plants.

### WATER

Mature plants must dry out between

waterings. Seedlings need more-constant moisture.

### HUMIDITY

Cattleyas need 50 to 60 percent. In the home, place on trays over moistened pebbles. In greenhouse, use a humidifier if conditions are too dry.

### FERTILIZER

Must be provided on a regular basis because most potting media have little.

**PROVIDE** The exact fertilizer you use will depend on the mix in which your plant is growing. A good general rule is to use a balanced (10-10-10, 12-12-12 or similar ratio) fertilizer "weakly, weekly." That is, fertilize every week at one quarter to one half of the recommended dilution.

### POTTING

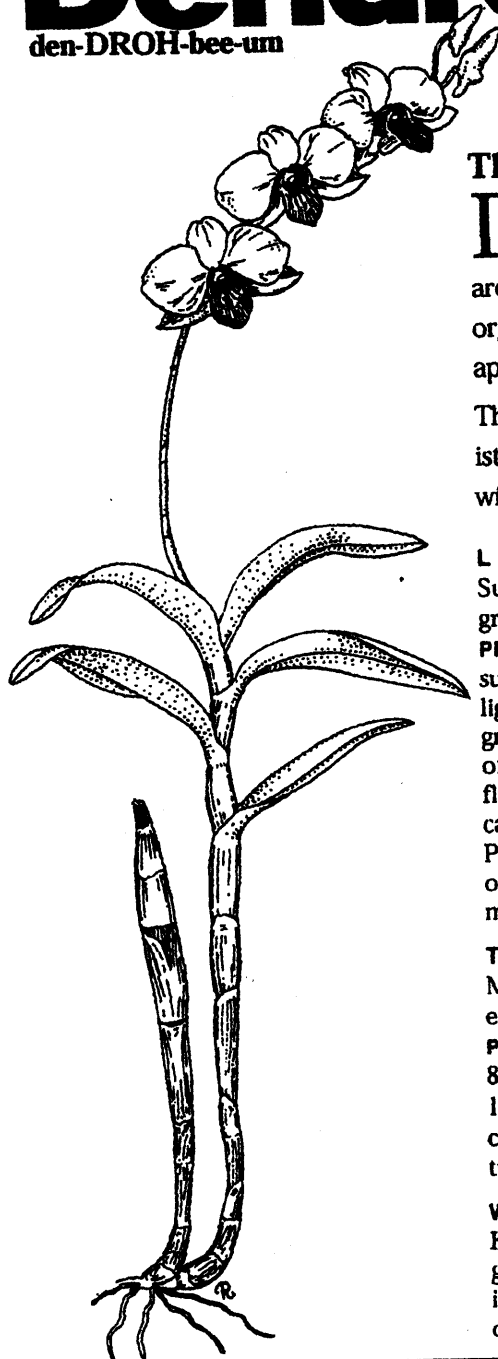
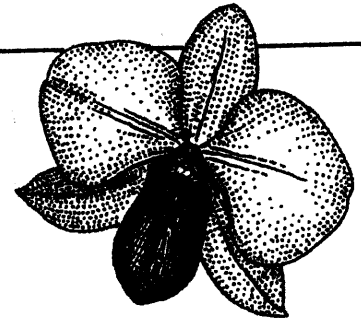
Should be done every two to three years in spring before mix loses consistency (breaks down). Pot firmly in media that have good aeration and ample drainage, allowing enough room for two years' growth.

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# Dendrobium

den-DROH-bee-um



## The Spray Orchid

**D**endrobiums are among the most commonly encountered orchids in the retail trade. Like most other cultivated orchids, dendrobiums are epiphytes, or air plants. They have well-developed water-storage organs (pseudobulbs), often called "canes" for their upright, leafy appearance. They should be potted in porous, free-draining media.

There are many different types of dendrobiums available to the specialist grower. However, hybrids involving *Den. phalaenopsis* are what you will most often encounter.

### LIGHT

Sufficient light is important for healthy growth and flower production.

**PROVIDE** Bright light, to 50 percent sun. In the home, an east, west or lightly shaded south window. In a greenhouse, about 30 to 50 percent of full sun. Under lights, four 40 watt fluorescent tubes and two 40 watt incandescent bulbs directly over plants. Plants should be naturally erect, without need of (much) staking, and of a medium olive-green color.

### TEMPERATURE

Mature plants need a 15 to 20 F difference between night and day.

**PROVIDE** Nights of 60 to 65 F; days of 80 to 90 F. Temperatures up to 95 to 100 F are beneficial if humidity and air circulation are increased. Low temperatures (below 50 F) may cause leaf drop.

### WATER

Keep evenly moist while in active growth. Allow to dry between waterings after growth is mature (indicated by terminal leaf).

### HUMIDITY

Dendrobiums need 50 to 60 percent. In the home, place on trays over moistened pebbles. In greenhouse, use a humidifier if conditions are too dry.

### FERTILIZER

Should be provided on a regular basis during the active growing period. The exact fertilizer you use will depend on the mix in which your plant is growing. A good general rule is to apply a balanced (10-10-10, 12-12-12, or similar ratio) fertilizer "weakly, weekly" during the period of active growth. That is, fertilize every week at one quarter to one half of the recommended dilution.

### POTTING

Should be done every two to three years before mix loses consistency (breaks down). Pot firmly in medium, giving aeration and ample drainage, allowing enough room for two years' growth. Dendrobiums grow best in pots small for the size of the plant.

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# Oncidium

on-SID-ee-um

This is an extraordinarily large and diverse New World genus with an equally diverse number of habitats. Oncidiums may originate anywhere from sea level in the tropics to the high elevations of the Andes. This obviously makes cultural generalizations difficult. More specific instructions may be available from the grower. Some genera included are *Aspasia*, *Brassia*, warm-growing miltonias (often called the Brazilian type) and many of their hybrids.

**LIGHT** needs can vary from bright to nearly full direct sun depending on the species. Most will thrive with one to several hours of sun a day. Generally, thicker-leaved plants, such as "mule-ear" and "equitant" oncidiums, can stand more light. In a greenhouse, 20 to 60 percent shade is required, or about 2,000 to 6,000 foot-candles, depending on the plants. In the home, east, south or west windows are ideal. Many types of oncidiums will grow under artificial light: Four fluorescent tubes supplemented with incandescent bulbs and placed 6 to 12 inches over the plants are necessary for proper growth. Metal-halide and sodium-vapor bulbs also provide sufficient light without needing to be so close to the plants.

**TEMPERATURES** for this group are generally considered intermediate to warm: 55 to 60 F at night, and 80 to 85 F during the day. Temperatures up to 95 to 100 F are tolerated if humidity and air movement are increased as the temperatures rise, a good general rule in any case.

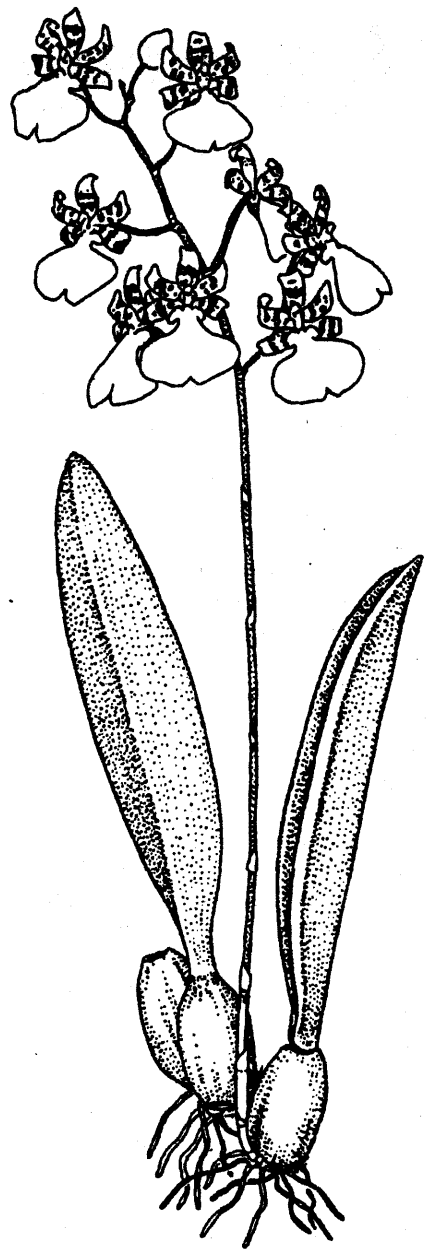
**WATER** requirements vary with the type of plant. Generally, plants with large fleshy roots or leaves need less-frequent watering than thin-leaved or thin-rooted plants. Watering should be thorough, and the medium should dry at least halfway through the pot before watering again. This may be every two to 10 days depending on weather, pot size and material, type of orchid and type of potting medium. Plants not actively growing should be watered less; many species have winter rest periods.

**HUMIDITY** should be between 30 and 60 percent. Many oncidiums require less humidity than other orchids. Most greenhouses have adequate humidity. In the home, placing the plants above moist pebbles in trays is ideal.

**FERTILIZE** regularly while plants are actively growing. Applications of 30-10-10 formulations twice a month are ideal for plants in a bark-based potting medium. A 20-20-20 formulation should be used on plants in other media or on slabs. If skies are cloudy, applications once a month are sufficient.

**POTTING** should be done when new growth is about one-half mature, which is usually in the spring. Fine-grade potting media are usually used with fine-rooted plants and coarser mixes with large-rooted plants; the standard size is medium grade. The plant should be positioned in the pot so that the newest growth is farthest away from the edge of the pot, allowing the maximum number of new growths before crowding the pot. Spread the roots over a cone of potting medium and fill in around the roots. Firm the medium around the roots. Keep humidity high and the potting medium dry until new roots form.

Equitant and mule-ear oncidiums, as well as other fleshy-leaved or large-rooted plants, can be grown on slabs of cork bark or tree fern or in pots filled with a coarse, well-drained medium such as charcoal. This allows the drying between waterings that these types need.

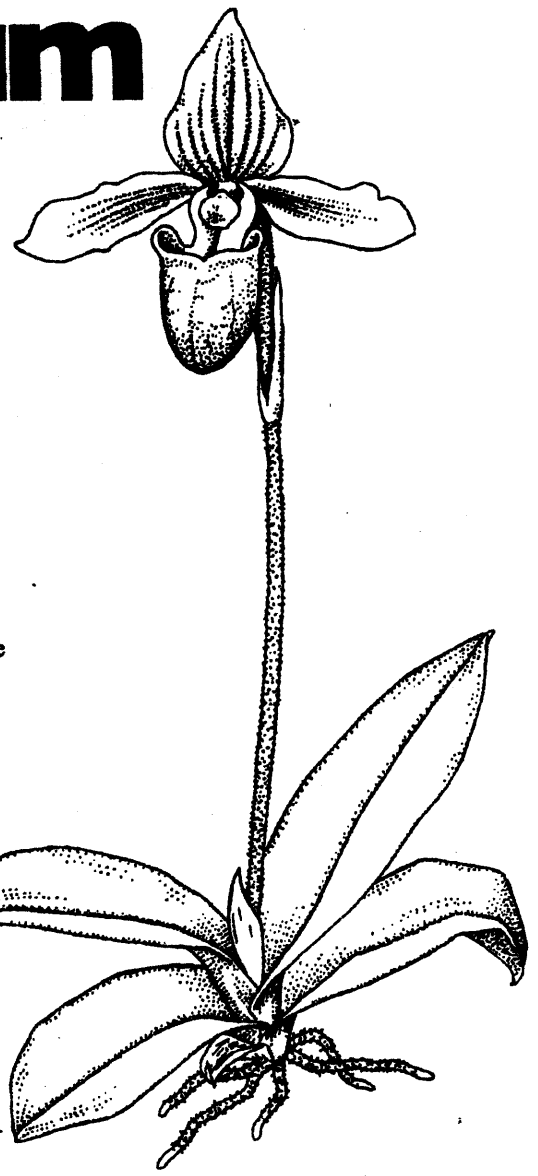


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# Paphiopedilum

paff-ee-oh-PED-ih-lum



**P**aphiopedilums, the lady's-slipper orchids, originate in the jungles of the Far East including Indonesia. They are semiterrestrial, growing in humus and other material on the forest floor, on cliffs in pockets of humus and occasionally in trees. They are easy to grow in the home, under lights or in the greenhouse.

**LIGHT** is easier to provide for paphiopedilums than many other types of orchids. They require shady conditions, as in the home in an east or west window, or near a shaded south window. In the greenhouse, shade must be provided. Give about 1,000 to 1,500 foot-candles. In the home, fluorescent lighting is excellent; suspend two or four tubes 6 to 12 inches above the leaves.

**TEMPERATURES** for paphiopedilums cover a considerable range. Paphiopedilums are traditionally separated into two groups: the warm-growing mottled-leaved types and the cool-growing green-leaved types. A third, increasingly popular group is the warmer-growing strap-leaved multi-floral paphiopedilums. Warm-growing types should be kept at 60 to 65 F during the night, and 75 to 85 F or more during the day. Cool-growing types should be kept at 50 to 60 F during the night and 75 to 80 F during the day. However, many growers raise all plants in the same temperature range with excellent results. The plants can stand night temperatures in the 40s if necessary (as when grown outside in mild climates), as well as temperatures to 95 F. Care must be taken to protect the plants from rot when cold (keep humidity low, and avoid moisture on leaves or in the crowns of the plants), and also to protect from burning when hot (shade more heavily and increase humidity and air movement around the plants).

**WATER** must be available at the roots constantly, because all plants in this genus have no pseudobulbs. All of these plants need a moist medium — never soggy, but never dry. Water once or twice a week.

**HUMIDITY** for paphiopedilums should be moderate, between 40 and 50 percent, which can be maintained in the home by setting the plants on trays of gravel, partially filled with water, so that the plants never sit in water. In a greenhouse, average humidity is sufficient. Using an evaporative cooling system in warm climates can increase the humidity. Air movement is essential, especially when humidity is high.

**FERTILIZE** on a regular schedule, but care must be taken to avoid burning of the fleshy, hairy roots. High-nitrogen fertilizers (such as 30-10-10) are recommended when potted in any fir-bark mix. In warm weather, some growers use half-strength applications every two weeks; others use one-quarter strength at every watering. It's important to flush with clear water monthly to leach excess fertilizer, which can burn roots. In cool weather, fertilizer applications once a month are sufficient.

**POTTING** should be done about every two years, or as the medium decomposes. Seedlings and smaller plants are often repotted annually. Mixes vary tremendously; most are fine- or medium-grade fir bark, with varying additives, such as perlite (sponge rock), coarse sand and sphagnum moss. Moisture retention with excellent drainage is needed. Large plants can be divided by pulling or cutting the fans of the leaves apart, into clumps of three to five growths. Smaller divisions will grow, but may not flower. Spread the roots over a small amount of medium in the bottom of the pot and fill with medium, so that the junction of roots and stem is buried  $\frac{1}{2}$  inch deep in the center of the pot. Do not

overpot; an average plant should have a 4- to 6-inch pot.

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