The Alaska Orchid Society

New Member Packet

FAQs

Frequently Asked Questions About Orchids

The American Orchid Society receives hundreds of orchid-related questions each month in a variety of media: telephone, fax, e-mail and, yes, even through the mail. Director of Conservation Ned Nash, who has answered the majority of these queries, has gathered the most frequently encountered questions here.

WHERE DO I CUT THE FLOWER SPIKE WHEN IT IS FINISHED?

The simple answer: *When most orchids have finished blooming, the spike should be cut off with a sharp, sterile blade as close to the base of the spike as is practical.* Of all of the more commonly available orchids, only phalaenopsis (the moth orchid) will rebloom from its old spike. Phalaenopsis will generally rebloom given a little extra care. The spike should be cut between the scar left by the first flower and the last node (swollen, jointed area on the stem). One of the lower nodes will then initiate a new spike that will generally produce flowers within eight to 12 weeks. Younger or weaker plants may not rebloom. It is also a good idea to cut the spike off entirely by midsummer to allow the plant to grow strongly to produce next year's bloom.

HOW OFTEN SHOULD I WATER?

The simple answer: *Once every four to seven days depending on season and dryness of the home.* Allow the plants to approach dryness, gauged by pot weight or by the pencil trick (the point of a sharpened lead pencil, when inserted into the medium, will darken with moisture if the plant has enough water), and apply sufficient water so that it drains freely through the container. Never allow any potted plant to sit in its own water.

Cattleya

Flowering plants may require more-frequent waterings to make up for the greater burden of the flowers. Plants will require less water when not in active growth (generally winter months), and more while growing (generally spring and summer months). Increased frequency of watering will not make up for a poor root system. If roots are not plump and alive, repotting may be called for, or the plant may have been recently repotted by the vendor, in which case it will require raised humidity to compensate for the lack of supporting root uptake. Last, plants with thinner, softer foliage will generally require more water than those with harder, more succulent leaves. Plants with pseudobulbs (such as dendrobiums and cattleyas) generally need to dry out more between waterings than do those without (such as phalaenopsis).

DO ORCHIDS NEED TO BE FERTILIZED WHILE THEY ARE IN FLOWER? WHAT FERTILIZER SHOULD I USE?

The simple answer: *Yes, if anything, flowering plants need extra fertilizer.* Your plants will need to be fertilized with a product appropriate to the medium in which they are grown. In general, plants in a bark-based mix will need a fertilizer high in nitrogen (usually in a 3-1-1 ratio), while a balanced fertilizer will do for all others (usually a 1-1-1 ratio). If in doubt, fertilize with the same balanced fertilizer you use for your other container plants. Orchids will do far better with too little fertilizer than with too much. The old adage, "feed weakly, weekly" is appropriate. Fertilize every week with a dilute solution.

WHEN SHOULD I REPOT?

The simple answer: *When fresh rooting activity is expected (generally in the spring) or is very evident, generally every one or two years.* Fresh rooting activity is best shown by the succulent green root tips on plump white roots. Often, the main flush of rooting will come from the base

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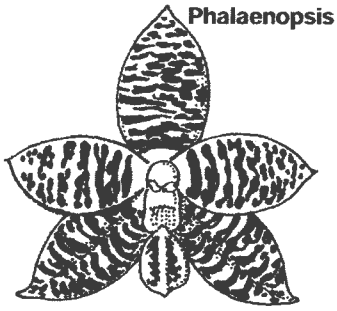
Illustrations by Marion Sheehan

of the plant (in the case of phalaenopsis), or from the developing newest growth (in the case of dendrobiums and other orchids with pseudobulbs, such as cattleyas). Orchid plants need repotting for one or a combination of two main factors: Potting mix breakdown, often evidenced by dead roots, or the plant outgrowing the container. In the first case, a larger pot may not be required, simply replacement of the growing medium. In the second case, the plant may need dividing or may be shifted into a larger pot. Fresh media should always be used. A good general rule of thumb is to pot for the bottom of the plant, the root system, and not for the top, the foliage. Freshly repotted plants should be placed in a shady, humid area until continued new root growth is observed. In general, if in doubt, pot in the spring.

WHAT IS THE BEST POTTING MATERIAL?

The simple answer: *Best is whatever your vendor or source recommends and stocks.* Orchids, in general, will grow satisfactorily in many different potting mixes if watering and fertilizing are adjusted appropriately. That is, if the basic requirements for moisture, root aeration and support are accommodated, the most readily available media in your particular area are probably those that have proven to work the best. Orchids are grown today commercially in a variety of media, from fir bark to sphagnum moss to the increasingly popular peat-based mixes best exemplified by Pro-Mix. Watering frequency is generally inversely proportional to the porosity of the medium used. In other words, the faster the mix drains, the more often you'll have to water.

Paphiopedilum



Phalaenopsis

WHAT IS THE BEST ORCHID FOR GROWING IN THE HOME?

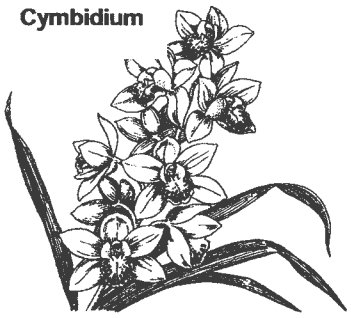
The simple answer: *One of the most widely available orchids of the mass market types is also the best for the home — the phalaenopsis or moth orchid.* Many homes have insufficient light levels for the reflowering of most orchids. However, there are a few orchids that will grow in lower light and will reflower under home-light conditions. Home-light means light provided by a slightly shaded south window, or an east or west window. Phalaenopsis will grow easily under the same conditions enjoyed by African violets. Another good choice, but usually only for those already initiated into orchid appreciation, is *Paphiopedilum* or the slipper orchids. These, like phalaenopsis, have relatively attractive foliage, and will reflower in home conditions giving weeks of floral display. Both need to be kept evenly moist. Do not allow to fully dry out, and fertilize regularly with a weak dilution of any available fertilizer.

MY ORCHID'S LEAVES ARE WRINKLED AND LEATHERY. WHY?

The simple answer: *Lack of water or dehydration.* The next step is to determine why the plant is not getting sufficient water. First, look at the roots. If they appear a healthy white or green and are plump, and the medium is in good shape, suspect underwatering, especially if the roots are white and the pot is very light. If, on the other hand, the roots are in poor condition, suspect root loss. If the plant has no roots, it cannot take up any water, no matter how much you give it. In this case, the cause may be root loss owing to overwatering or medium deterioration, or a recently repotted and poorly established plant. The immediate solution is to raise humidity in the plants' vicinity to reduce stress on whatever roots there may be, and then deal with whether to repot or to simply wait until the plant establishes in the fresh medium.

CAN I GROW ORCHIDS OUTDOORS?

The simple answer: *Yes. Especially if you live in a frost-free or nearly frost-free area, there is a wide variety of orchids that will grow and flower with light shade outdoors year round.* Where winters are cold, orchids can be grown on the patio or under trees in the warmer months when frost does not threaten. This is often a wonderful solution for orchid growers in colder climates, and enables the plants to grow so much better than they would if left indoors all year. Growers in frost-free areas with cooler summer nights (below 60 F in August and after) can grow cymbidiums, one of the finest of all garden orchids. Where summer nights are warmer, many varieties of vandas and cattleya types are appropriate.



Cymbidium

If your questions have not been answered here, read the Beginner's Care Sheets for the five most popular-grown genera included with your New Member Packet.

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 Madagascaran 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

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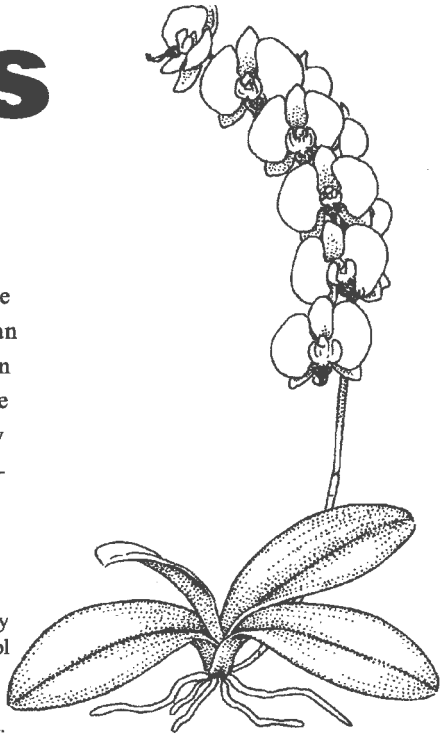

Phalaenopsis, the moth orchid, is perhaps the best orchid for growing in the home, and is also a favorite with greenhouse growers. Well-grown plants can flower often, sometimes with a few flowers throughout the year, though the main season is late winter into spring. Average home temperatures and conditions are usually sufficient. Flower stems on certain hybrids can be forced to rebloom by cutting the tip off after the initial flowering. Only healthy plants should be induced to flower repeatedly. Culture for *Doritis,* a related genus, thought by some to be conspecific with *Phalaenopsis,* and *Doritaenopsis,* a hybrid between the two genera, is the same as for pure *Phalaenopsis.*

LIGHT is easy to provide for phlaenopsis. They grow easily in a bright window, with little or no sun. An east window is ideal in the home; shaded south or west windows are acceptable. In overcast, northern winter climates, a full south exposure may be needed. Artificial lighting can easily be provided. Four fluorescent tubes in one fixture supplemented by incandescent bulbs are placed 6 to 12 inches above the leaves, 12 to 16 hours a day, following natural day length. In a greenhouse, shade must be given; 70 to 85 percent shade, or between 1,000 and 1,500 foot-candles, is recommended. No shadow should be seen if you hold your hand one foot above a plant's leaves.

TEMPERATURES for phalaenopsis should usually be above 60 F at night, and range between 75 and 85 F or more during the day. Although higher temperatures force faster vegetative growth, higher humidity and air movement must accompany higher temperatures, the recommended maximum being 90 to 95 F. Night temperatures to 55 F are desirable for several weeks in the autumn to initiate flower spikes. Fluctuating temperatures can cause bud drop on plants with buds ready to open.

WATER is especially critical for phalaenopsis. Because they have no major water-storage organs other than their leaves, they must never completely dry out. Plants should be thoroughly watered and not watered again until nearly dry. In the heat of summer in a dry climate, this may be every other day; in the winter in a cool northern greenhouse, it may be every 10 days. Water only in the morning, so that the leaves dry by nightfall, to prevent rot.

HUMIDITY is important to phalaenopsis, the recommended humidity being between 50 and 80 percent. In humid climates, as in greenhouses, it is imperative that the humid air is moving. Leaves should be dry as soon as possible, always by nightfall. In the home, set the plants on trays of gravel, partially filled with water, so that the pots never sit in water.

FERTILIZE on a regular schedule, especially if the weather is warm, when the plants are most often growing. Twice-a-month applications of high-nitrogen fertilizer (such as 30-10-10) are appropriate where bark-based media are used. Otherwise, a balanced fertilizer is best. When flowering is desired, a high-phosphorus fertilizer (such as 10-30-20) can be applied to promote blooming. Some growers apply fertilizer at one-quarter strength with every watering; this is best for warm, humid conditions. When cooler, or under overcast conditions, fertilizer should be applied twice per month at weak strength.

POTTING is best done in the spring, immediately after flowering. Phalaenopsis plants must be potted in a porous mix. Potting is usually done every one to three years. Mature plants can grow in the same container until the potting medium starts to decompose, usually in two years. Root rot occurs if plants are left in a soggy medum. Seedlings usually grow fast enough to need repotting yearly, and should be repotted in a fine-grade medium. Mature plants are potted in a medium-grade mix. To repot, remove all the old medium from the roots, trim soft, rotted roots, and spread the remaining roots over a handful of medium in the bottom of a new pot. Fill the rest of the pot with medium, working it among the roots, so that the junction of the roots and the stem is at the top of the medium.

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Paphiopedilum

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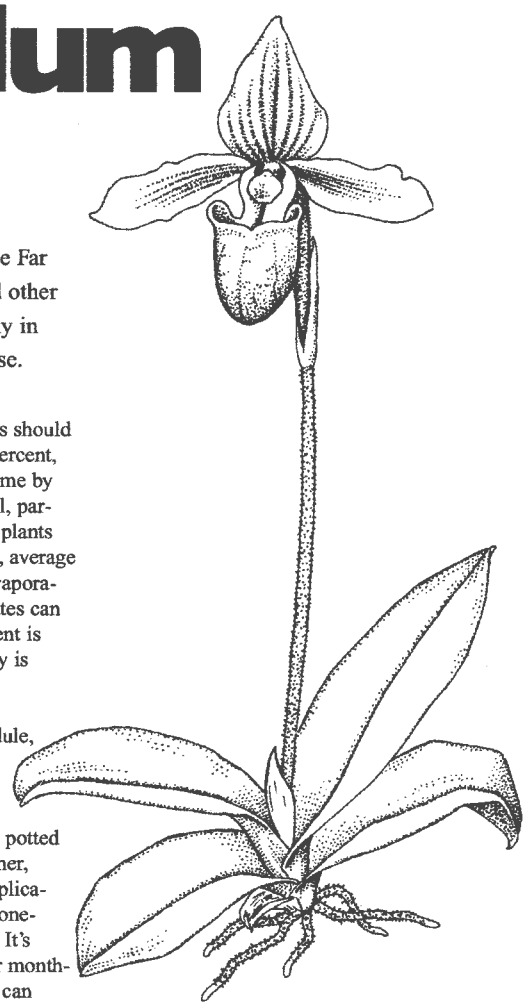

Paphiopedilums, the lady's-slipper orchids, originate in the jungles of the Far East including Indonesia. They are semiterrestrial, growing in humus and other material on the forest floor, on cliffs in pockets of humus and occasionally in trees. They are easy to grow in the home, under lights or in the 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 multifloral 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 ½ 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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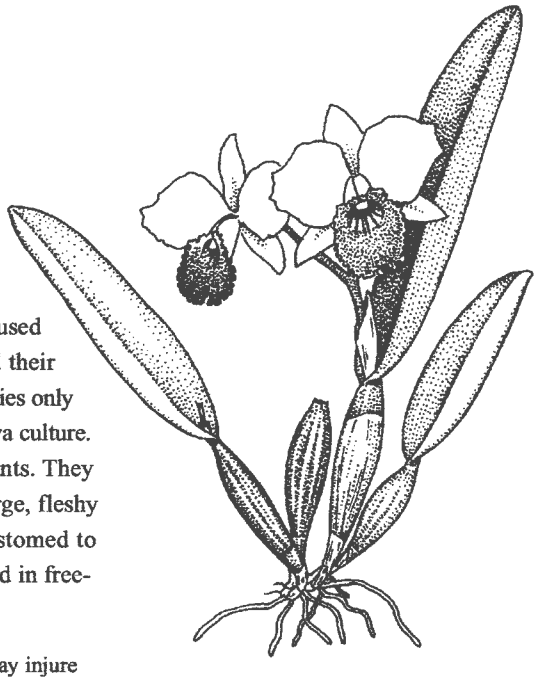
Drawing Marion Sheehan/Inking Stig Dalström

Cattleya

KAT-lee-ah



Cattleyas are among the most popular orchids. Their culture is often used as the basis for comparison with other types of orchids. Cattleyas and their related hybrids come in many colors, shapes, forms and sizes. Culture varies only slightly among most of these. This sheet is a general guide to basic cattleya culture. Like many other cultivated orchids, cattleyas are epiphytes, or air plants. They have developed water-storage organs, called pseudobulbs, and have large, fleshy roots covered with a spongy, water-retentive velamen. They are accustomed to being dry at the roots between waterings, and therefore should be potted in free-draining media.

LIGHT is the most important factor in growing and flowering cattleyas, whether in a greenhouse or in the home. Bright light to some sun should be given to the plants, with no direct sun in the middle of the day. This means an east, shaded-south (as with a sheer curtain) or west window in the home, and 50 to 70 percent full sun in a greenhouse (3,000 to 5,000 foot-candles). Leaves should be a medium-green color, pseudobulbs erect and requiring no staking.

TEMPERATURES should be 55 to 60 F at night and 70 to 85 F during the day. Seedlings should have night temperatures five to 10 degrees higher. A 15- to 20-degree differential between day and night is recommended, especially for mature plants. Higher day temperatures can be tolerated (up to 95 F), if humidity, air circulation and shading are increased.

WATER should be provided in two ways: in the pot by watering and in the air as humidity. Watering in the container is dictated by many criteria: size and type of the vessel, temperature, light, etc. Mature cattleyas need to dry out thoroughly before being watered again. Seedlings need more constant moisture. Compare the weight of a dry pot of the same size and type of mix; it can indicate if a plant needs water by the relative weight — light means dry, heavy means wet. If in doubt, it's best to wait a day or two until watering. Plants in active growth need more water than plants that are resting. Water below 50 F may injure plants, as will water softened by the addition of salts.

HUMIDITY should be 50 to 80 percent for cattleyas. 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 on a regular schedule. In fir bark, a high-nitrogen (such as 30-10-10) formulation, or a similar proportion, is used. Otherwise, use a balanced fertilizer. When in active growth, plants need fertilizer at least every two weeks, and when not actively growing, once a month. Fertilizer can also be applied with every watering at one-quarter the recommended dilution. Thorough flushing with clear water every month is recommended to prevent the buildup of fertilizer salts.

POTTING is necessary when the rhizome of the plants protrudes over the edge of the pot or the potting medium starts to break down and drain poorly (usually after two to three years). It is best to repot just before new roots sprout from the rhizome, after flowering or in the spring.

Mature cattleyas are usually potted in coarser potting material than are seedlings. Until a plant has at least six mature pseudobulbs, it generally should be put into a larger pot and not divided. If dividing a plant, three to five pseudobulbs per division are required. Select a pot that will allow for approximately two years of growth before crowding the pot. Pile mix against one side of the pot and cut off any dead roots. Spread the firm, live roots over the pile, with the cut rhizome against the side of the pot. Fill the pot with medium, working it around the roots. Pack firmly and stake if necessary. Keep the plant humid, shaded and dry at the roots until new root growth is seen.

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Oncidium

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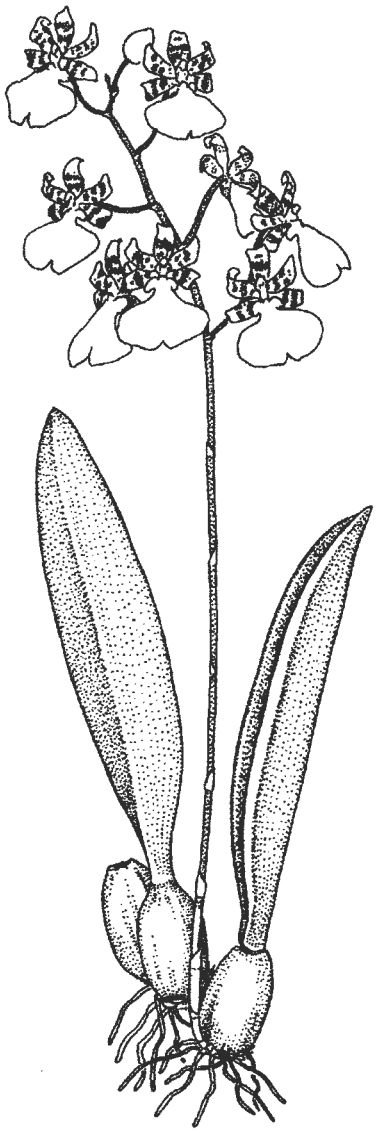

This is an extraordinarily large and diverse New World genus with an equally diverse number of habitats. Oncidiums may originate anywhere from sea level in the tropics to the high elevations of the Andes. This obviously makes cultural generalizations difficult. More specific instructions may be available 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.

Drawing Marion Sheehan/Inking Stig Dalström

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Dendrobium

den-DROH-bee-um

Dendrobium is a diverse genus of orchids with different cultural needs. Many go through a growth phase and then a rest phase during the course of one year, and must be given water and temperature to match these periods of growth and rest. Flowers can last one day to many weeks, depending on the type. Owing to the extreme diversity of the genus, we have categorized culture according to the following main types:

PHALAENANTHE

Evergreen for several years, with thin, tall pseudobulbs, terminal inflorescences, usually appearing in the autumn or twice a year (see culture).
Species such as *Den. affine, Den. bigibbum (phalaenopsis), Den. dicuphum* and *Den. williamsianum.*
Culture Grow warm year round (see below); 60 F nights; water and fertilize heavily when roots appear from new growth; medium light; reduce water and fertilizer after growth finishes. If a short (three- to four-week), cooler (55 F) dry rest is given, and then plants are warmed again (60 F mininum), another growth may mature during winter and flower in the spring. Treat this growth as a summer growth cycle. These grow well with phalaenopsis, except for the rest period. Plants will go deciduous if grown too cool and dry.

SPATULATA (Antelope Type)

Evergreen for several years. Most are large, vigorous plants with long-lasting flowers in summer to several times a year.
Species such as *Den. antennatum, Den. canaliculatum, Den. discolor, Den. gouldii, Den. johannis, Den. lineale (veratrifolium), Den. stratiotes, Den. strebloceras* and *Den. taurinum.*
Culture Warm all year (60 to 65 F nights, 75 to 90 F days); no rest period; can be kept cooler in winter if dry; medium to high light.

DENDROBIUM

Most of the plants are pendulous, with leaves all along the canes that most often drop with onset of cooler, drier weather. One to five flowers per node are borne from the nodes of the leafless canes in midwinter through early spring.

Group 1
Species such as *Den. chrysanthum, Den. friedricksianum, Den. nobile* and *Den. wardianum.*
Culture Growth period in summer; give warmth, water and fertilize heavily from when roots appear until top leaf appears on canes. Then give high light, little or no water, no fertilizer, cool nights (40 to 50 F). In other words, forget about them.

Group 2
Species such as *Den. anosmum (superbum), Den. crassinode, Den. falconeri, Den. fimbriatum, Den. findlayanum, Den. heterocarpum (aureum), Den. loddigesii, Den. moniliforme, Den. parishii, Den. primulinus* and *Den. transparens.*
Culture Same as Group 1, but winter nights 55 F. Deciduous species need virtually no water in winter.

CALLISTA

Most are pseudobulbous plants with pendent inflorescences.
Species such as *Den. aggregatum (*now properly *lindleyi), Den. chrysotoxum, Den. densiflorum, Den. farmeri* and *Den. thyrsiflorum.*
Culture Summer give warmth (60 to 90 F), medium light, medium quantities of water and fertilizer. Winter keep cool (50 F nights), medium light, just enough water to keep pseudobulbs from shriveling, no fertilizer.

LATOURIA

Leaves at top of pseudobulbs are large and leathery, inflorescence erect, flowers commonly yellow-green.
Species such as *Den. atroviolaceum, Den. macrophyllum* and *Den. spectabile.*
Culture Same as antelope types, but cooler and drier when resting in winter.

FORMOSAE (Nigrohirsutae Type)

Canelike pseudobulbs, with black hairs on leaf sheaths and pseudobulbs often apparent, leading to the popular name nigrohirsutae. Flowers usually white, up to 4 inches across, two to three together from near the end of the pseudobulb. Long lasting.
Species such as *Den. bellatulum, Den. dearii, Den. draconis, Den. formosum, Den. infundibulum, Den. lowii, Den. lyonii, Den. margaritaceum, Den. sanderae* and *Den. schuetzii.*
Culture Intermediate to cool year round, 50 to 60 F nights, maximum 85 F days. Water and fertilize when growing; give a slight short rest (dry) when growth is completed. Keep barely moist until growth starts again.

OTHER SPECIES

Among the popular types are *Den. linguiforme, Den. tetragonum, Den. gracillimum* and *Den. cuthbertsonii (sophronitis).*
Culture Depends on the plant's native environment. It is generally safe to grow them intermediate to warm (55 to 60 F at night), drying them out in winter (or as growth stops). Hybrids between sections vary in culture.

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Cymbidium

sym-BID-ee-um

These orchids are prized for their long-lasting sprays of flowers, used especially as cut flowers or for corsages in the spring. There are two main types of cymbidiums — standards and miniatures. Where summer nights are warm (above 70 F), only miniatures can be recommended, because many are more tolerant of heat and able to flower in warmer weather.

LIGHT is important for growing cymbidiums. Coming from cool and bright areas in Asia, they need high light but cool temperatures. In many southern climates, high summer temperatures, especially at night, may prevent the plants from blooming. The maximum amount of light possible, short of burning, should be given to the plants. This means only light shade during the middle of the day, or about 20 percent shade. In cool areas (such as coastal California), full sun is tolerated. Leaves should be a medium to golden green in color, not dark green.

TEMPERATURES are another critical factor in flowering standard and miniature cymbidiums. During the summer, standard cymbidiums are usually grown outside in semishade, where day temperatures should be 75 to 85 F (or more), but night temperatures in the late summer to autumn (August to October) must be 50 to 60 F to initiate flower spikes. Optimum temperatures in winter are 45 to 55 F at night and 65 to 75 F during the day. When plants are in bud, temperatures must be as constant as possible, between 55 and 75 F. Miniatures can stand temperatures five to 10 degrees higher than standards and still flower. Most cymbidiums can tolerate light frosts and survive, but this is not recommended. Bring them inside when temperatures dip to 40 F. In mild climates, they can be grown outside year round. A bright and cool location inside is best for winter months.

WATER to provide a constant supply of moisture to cymbidiums, which are semi-terrestrial plants. They generally produce all their vegetative growth during the spring and summer and need the most water during that period. Water heavily during the growth season, keeping the potting material evenly moist. Reduce water when the pseudobulbs complete growing in late summer. Keep barely moist during the winter.

HUMIDITY outdoors is usually sufficient during the summer, except in dry climates, where evaporative cooling in a greenhouse is necessary. Keep humidity at 40 to 60 percent during the winter, especially if plants are in bud. Keep the air moving to prevent fungus (*Botrytis*) from spotting the flowers.

FERTILIZE at the proper time to help cymbidiums flower. During the growth season (spring through late summer), high-nitrogen fertilizer (such as 30-10-10) is used. In late summer, use a high-phosphorus, blossom-booster fertilizer (such as 10-30-20), to help form bloom spikes. Fertilize at full strength every week to two weeks. In winter, fertilize once a month.

POTTING is usually done in the spring after flowering, usually every two years or when the potting medium decomposes. Shake all of the old potting mix off the roots, dividing the plant if desired. Pick a water-retentive potting mix; medium-grade fir bark with peat moss and perlite is a common mix. Select a pot that will allow for at least two to three years of pseudobulb growth before crowding the pot, while planning on placing the active growing pseudobulb(s) of the division farthest from the side of the pot. Spread the roots over a cone of the mix in the bottom of the pot and fill the container with medium, working it among the roots, tamping firmly. Single backbulbs need not even be placed in mix until new growth and roots are noted. Keep shaded and warm until new growth sprouts, and pot as above.

The American Orchid Society is the world's leading provider of information about and related to orchids. We invite you to join us and learn about the world's most fascinating flowers and plants. Your membership entitles you to our monthly award-winning magazine Orchids, a free copy of our cultural guide Your First Orchid and the AOS Orchid Source Directory, a 10 percent discount on items purchased through The AOS BookShop and Orchid Emporium, and free admission to the International Orchid Center in Delray Beach, Florida.

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Drawing Marion Sheehan/Inking Stig Dalström

CONSTITUTION OF ALASKA ORCHID SOCIETY
AS AMENDED 6/2000 AND APPROVED 6/2000

Article 1: NAME

Sec. 1: This organization shall be known as ALASKA ORCHID SOCIETY, a non-profit and non-political scientific and horticultural organization.

Sec. 2: Principal Office: The principal office of this organization shall be located in the City and Municipality of Anchorage, State of Alaska.

Sec. 3: INSIGNIA: The Organization shall have such official insignia as may be approved by its Board of Directors.

Article II: OBJECTIVES AND PURPOSES

A. To stimulate the study and culture of orchids.
To promote conservation of native orchids.
To maintain affiliation with American Orchid Society.

Article III: MEMBERSHIP

Sec. 1: General. Any person interested in the cultivation of orchids shall be eligible for membership, regardless of race, creed, color, sex, residence, age, handicap or national origin.

Sec. 2: MEMBERSHIP TYPES: There are three memberships types: Active, Active family, and honorary.

Active members: shall be persons who have paid their annual membership dues and have one (1) vote.
Active family: shall mean two (2) persons at the same address who have paid annual family membership dues. (2 votes)
Honorary members: An honorary member shall be one so elected by the members in recognition of their special service to the Society and shall not be required to pay dues, cannot vote and cannot hold office. The Board of Directors may cancel honorary membership.

Sec. 3: Annual dues for active and active family membership are established in the By-Laws.

Sec. 4: Termination of Membership: Membership may be terminated as follows:

By resignation in writing to the Board of Directors.
By lapsing. Membership will be considered lapsed and automatically terminated if active member's dues remain unpaid 90 days past due date.
By expulsion. After first being given written notice by the Board of the accusations against the member, any member that the membership finds has engaged in conduct that violates the purposes or violates the best interests for which the Society was formed may be removed from membership. At a properly called Regular Meeting and after the accused has been given an opportunity to be heard, a vote of a majority of the Members present may terminate membership. If the Member is terminated, the Treasurer shall make a pro-rated refund of dues.

ARTICLE IV: MEETINGS

Sec. 1: REGULAR: The frequency and time of Regular Meetings of the Society shall be established in the By-Laws.

Sec. 2: ANNUAL: The Annual Meeting shall always be in December. Elections shall be conducted at this Meeting.

Sec. 3: SPECIAL MEETING: The President, a majority of Directors, or by the petition of at least twenty-five percent (25%) of the membership may call for a Special Meeting at any time. Members shall be notified of a Special Meeting by (a) newsletter or (b) by mailing at least 10 days prior to the meeting.

ARTICLE V: GOVERNMENT

Sec. 1: GENERAL POWERS: The business of the Society shall be managed by the Board of Directors. No member of the Board of Directors shall delegate any of his authority, rights, or power conferred by the Constitution or By-Laws, unless such delegation is specifically prescribed or permitted. The duties of the Board of Directors of the Society shall be those usually incumbent upon such members and shall be further specified by the Board of Directors in the By-Laws.

Sec. 2: COMPOSITION: The Board of Directors shall consist of the officers of the Society who are the President, the First Vice President, the Second Vice President, Secretary, Treasurer, four directors elected at large from the membership, and the immediate Past President.

Sec 3: TERM: The term of the Officers shall commence at the close of the Annual Meeting and continue for one year until the close of the next annual meeting, not to exceed two (2) consecutive terms, except for the Treasurer. Two Directors shall be elected each year. A Director-at-Large term shall be for two (2) years, commencing at the close of the annual meeting, not to exceed two (2) consecutive terms. One (1) year must lapse before a member may run again for a seat on which the member has limited out. However, at the end of any term limit, a Board Member may be elected to a different position without an intervening year's wait. The outgoing President shall serve one year as immediate Past President on the Board

Sec. 4: FUNDS: The funds of the society shall only be expended for monthly usual and customary expenses. The Board shall not commit the financial resources of the Society on out of the ordinary expenditures without the approval of the majority of Members at a Regular Meeting.

Sec. 5: REMOVAL: Any member of the Board of Directors may be removed from office with cause, by the vote of a majority of the members present at a properly called Regular Meeting.

Sec. 6: VACANCY: Should the position of any Officer or Director–at-Large become vacant for any reason, the membership shall fill the vacancy by a vote of the majority of members present at next scheduled Regular Meeting of the Society. More than two (2) consecutive, unexcused absences may result in declaring an office vacant. Excused absences may be obtained from the President. The successor shall hold office for the remainder of the un-expired term of the vacancy.

Sec. 7: COMPENSATION: The officers and Directors-at-Large shall serve without compensation.

Sec. 8: QUORUM:

Board of Director's meetings, shall be one-half of the members of the Board plus one. The President shall vote only in cases of a tie vote.

Regular Meetings, six (6) Board members and four (4) of the membership must be present to transact Society business.

Annual Meetings, six (6) Board members and six (6) regular members must be present to hold elections.

Sec. 9: FISCAL YEAR: It shall begin on January 1 and end on December 31 of each year.

ARTICLE VI: NOMINATIONS, ELECTIONS AND VOTING

Sec. 1: NOMINATING COMMITTEE: In September or October, the President shall appoint up to four (4) members to the Committee.

The Nomination Committee shall present a slate of nominees for vacancies at the November meeting.

Nominations will open at the October Meeting and close at the November meeting. Nomination may be made from the floor at October or November Meetings.

Election of new officers and Directors-at-Large shall take place at the Society's Annual (December) Meeting.

Sec. 2: ELIGIBILITY: Any member, whose dues are current, shall be eligible for election to the Board of Directors. The office of President requires a minimum of one year's membership prior to nomination.

Sec. 3: VOTING: Each active member shall be entitled to one (1) vote. Any such member may vote by absentee ballot, mailed or delivered to the President or designee before the Annual Meeting. Honorary members are not entitled to vote.

Sec. 4: SPECIAL VOTE: The Board of Directors may authorize a mail ballot on any question. Consecutively numbered ballots shall be distributed not less than five (5) or more than ten (10) weeks before the closing date for voting. Ballots shall be signed by the voting member and shall be received and tabulated by a committee appointed by the Board of Directors. The results shall be announced at the next Regular Meeting following the closing date for voting.

ARTCLE VII: CHANGE OF CONSTITUTION AND BYLAWS

Sec. 1: The Constitution may be amended, altered or repealed at any Regular Meeting of the Society by an affirmative vote of two thirds (2/3's) of a quorum of the members present, provided
Changes have been discussed at a regular meeting of the Society during the current year, and
Written notice of such pending action has been sent to every active member of the Society prior to the meeting at which such action may be taken.

Sec. 2: The By-Laws may be amended, substituted or deleted by the Board of Directors at any meeting by an affirmative vote of a majority of the Board Members present.

ARTICLE VIII: DISSOLUTION

How to Dissolve the Corporation:

The Board of Directors shall give forty-five (45) days notice to all members in the event of a majority vote for the dissolution of this Society. All liabilities shall be paid and the disposal of the remaining assets will be by funding a special grant in support of the objectives and goals of the Society.

ARTICLE IX: DATA

Initial organization of the Society was September 27, 1989. The by-laws were approved and adopted by the following members of the Alaska Orchid Society: Jane Bibee, Linda Cunningham, Kris A. Snider, Lynn A. Stieglitz, and Becky Fryzek. Dates of succeeding revisions shall be noted here.

Constitution ratified by membership June, 2000. By-Laws ratified October, 2000. Constitution and By-Laws amended May, 2006

BY-LAWS OF THE ALASKA ORCHID SOCIETY
Adopted 10/24/00

1. MEETINGS

A. REGULAR MEETINGS: Meetings are open to the general public. Meetings of members shall be held the 4th Tuesday of each month. Each member shall be entitled to one (1) vote in person, or to one (1) vote by absentee in writing to the president for the purpose of electing officers when unable to attend the annual meeting. The agenda of a Regular meeting may be as follows:

Call to order, approval of minutes
Introduction of Guests and new members
President's report
Committee Reports
Judging
Show and Tell
Program
Adjournment and refreshments

B. ANNUAL MEETINGS: The Annual Meeting shall always be in December. The election of Officers and Directors-at-Large shall be at this meeting. Announcement of such meeting shall be made in the October and November Newsletters.

C. SPECIAL MEETINGS: A Special Meeting shall be held at such times and places as designated in the Newsletter's notice of meetings. These meetings may be informal in nature.

D. BOARD OF DIRECTORS MEETINGS: Meetings of the Board of Directors shall be held at such places and times as called by the President or by a majority of the Board.

E. ANNUAL DUES: The amount of active, and active family membership dues shall be reviewed and determined by the Board of Directors annually, and shall be recorded in the minutes of the meeting. Dues are payable on March 1st. Membership lapses after dues remain unpaid by May 30th. New members and previous members whose membership has lapsed a full year who join after August 31st shall pay only one-half (1/2) of the amount of annual dues.

1. The Alaska Orchid Society may publish a membership directory for the sole use and private information of its members. AKOS does not authorize or condone the use of this list or any part thereof, for commercial use or other public exploitation.

II. PRESIDENT. The President shall:
Preside at all functions of the Society.
Appoint Committees.
May be one of the signers of checks.
Perform such other duties, as the Board of Trustees shall direct.
President shall serve as a non-voting member of all Committees.
F. President or designee shall collect mail and bring to Regular Meetings and Annual Meeting.
G. President or designee shall collect absentee ballots by Annual Meeting.

III. FIRST VICE-PRESIDENT AND SECOND VICE PRESIDENT. They shall:
Perform any and all functions reserved to the President in his absence.
Assist the President in administration of Society and Board affairs.
Perform such other duties, as the Board of Trustees shall direct.

IV. SECRETARY. The Secretary shall:

Keep accurate and complete minutes of all motions made and send one copy to the President, send one copy to Newsletter for publication and keep one copy.
Conduct official correspondence of the Society.
Assist the News Editor to issue a full, accurate and informative publication.
Promptly send to AOS the roster of our new Officers.
Perform such other duties as the Board of Directors shall direct.
In the absence of the President and both Vice-Presidents - call the meeting to order and have selected a temporary chair.
Ensure that new members receive a copy of the current Constitution and By-Laws.
Record in the monthly minutes names of plant judges and names of 1st, 2nd and 3rd winning selections.

V. TREASURER. The Treasurer shall:

Be one of the signers of the checks.
The signature of the Treasurer, President, Vice-President or Secretary shall be authorized to sign checks.
The Treasurer and one of the above must sign the checks.
Collect and be responsible for the safe keeping of all funds of the Society.
Keep an accurate and up-to-date record of all monies due, collected and disbursed.
Pay all bills contracted and disbursed.
Furnish a written financial report to the Board of Directors at each meeting.
Furnish the Editor a monthly financial report for inclusion in each Society newsletter.
Perform such other duties, as the Board of Directors shall direct.
In the absence of the President, Vice-President's and Secretary to call the meeting to order and have elected a temporary chair.

VI. DIRECTORS –AT-LARGE AND IMMEDIATE PAST PRESIDENT. The Directors and the Immediate Past President shall:

Assist the officers in managing the business of the Society.

VII. COMMITTEES. The President shall:
Appoint a Newsletter Chairman, a Program Committee, a Library Committee and such other committees as are necessary. Appointment shall be subject to approval of the Board. Notwithstanding this provision, the Board shall be able to create such committees, as well as selecting the persons comprising such committees, for such activities, as the Board deems appropriate.

a. Newsletter Chair: Shall oversee the monthly assembling and distributing of the Society meeting minutes, articles of topical interest, the financial report and other such items of interest, a list of library books two times a year and keep track of mailing list for membership.

b. Program Committee: The Program Committee shall be responsible for long-range planning of Society programs.

c. Library Committee: Shall recommend new library purchases from time to time, keep track of books loaned, maintain current library list of books, videos and other materials.

(From Article VII Section 2, AkOS Constitution: The By-Laws may be amended, substituted or deleted by the Board of Directors at any meeting by an affirmative vote of a majority of the Board Members present.)