



*Selecting
and
growing*

HOUSE PLANTS

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Selecting and growing HOUSE PLANTS

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Success in growing decorative plants in the home probably depends as much on good judgment in selecting the plants as on skill in caring for them.

First, decide why you want house plants. Do you want them only for use as decorative accessories? Or are you interested in growing and

tending the plants as well as in displaying them?

If you want plants only as decorative accessories, buy them for their appearance. Get healthy, well-formed plants that are near the size that you need for decorative effect. Water the plants regularly until their appearance becomes

Terms Used in Descriptions of House-Plant Culture

Cool temperatures.—Temperature range during winter on a window sill in an unheated room—40° to 45° at night, 55° to 60° on sunny days, and 50° on cloudy days.

Dim light.—Lighting intensity of room interior away from windows.

Full sun.—Sunlight unbroken by curtains or frosted glass. South windows have full sun for the longest period during the day.

High humidity.—Atmosphere saturated with moisture. Attainable only in a greenhouse or terrarium (see p. 29).

Humus.—Pure sphagnum moss, firbark, or osmunda fiber.

Humus soil.—Mixture of 3 parts humus and 1 part coarse sand.

Indirect sunlight.—Sunlight diffused by a lightweight curtain placed between the sun and the plant.

Low humidity.—Normal humidity in a heated or air-conditioned

house—40 to 50 percent relative humidity.

Medium humidity.—Relative humidity of about 70 percent (see p. 22).

Moderate temperatures.—Winter range of temperatures on the window sill of a normally heated room—50° to 55° at night, 70° on sunny days, and 60° on cloudy days.

Potting mixture.—Equal parts of garden soil and organic matter—peat moss or shredded sphagnum moss—with 1 level teaspoon of 20-percent superphosphate added per quart of mixture.

Subdued daylight.—Daylight with no direct sun; light from a north window.

Warm temperatures.—65° at night and 80° to 85° during the day. Supplemental heaters usually are needed to provide warm temperatures.

unsatisfactory, then replace them with new plants.

If you are interested in growing house plants and keeping them in good condition year after year, you must next decide how much attention you can give them. Are you able, or willing, to adapt some part of your home to the needs of the house plants? Or would you rather restrict your choice of plants to those that tolerate an environment that is comfortable to human inhabitants? This last course of action is probably the wisest.

Many house plants will survive under adverse household conditions. For best results, however, supply the environment—light, temperature, and humidity—that is recommended for each plant.

FOLIAGE PLANTS

AGLAONEMA

Description.—Chinese evergreen, the commonest member of this group that is used as a house plant, has dark-green leaves growing at the end of canelike stems. This plant will flourish for years in the dark part of a room and requires a minimum of care.

Culture.—Grow in water (see "Water Culture," p. 26) or in humus soil. If grown in humus soil, keep the soil moist. Grow in warm atmosphere with low humidity and subdued daylight.

Special requirements.—When stems of Chinese evergreen become too long, cut off the tops and reroot them (see "Propagation," p. 28).

ANTHURIUM

Description.—Some anthuriums are grown for their long-lasting cut flowers, others for their foliage. *A.*



Anthuriums. Left, *A. andreanum*; right, *A. crystallinum*.

andreanum has brilliant red, white, coral, or pink flowers that look like patent leather. *A. crystallinum* has leaves that are velvety green with silver veins; its flowers are inconspicuous.

Culture.—Pot in humus soil; keep the soil moist. Keep the plant warm—60° minimum temperature at night. Grow in indirect sunlight or subdued daylight. Provide high humidity.

Special requirements.—Add fertilizer to water only once a month.

Anthuriums produce aerial roots below the base of each leaf. Wrap these aerial roots with sphagnum moss and keep the moss damp.

APHELANDRA

Description.—*Aphelandra squarrosa* is a small shrub with large, elliptic leaves. It tolerates dim light but grows best in indirect sunlight.

Culture.—Plant in humus soil; keep the soil moist. Grow in indirect sunlight, warm temperatures, and low humidity.

ARAUCARIA

Description.—Branches of the Norfolk Island Pine (*Araucaria excelsa*) are borne in symmetrical

tiers. This formal symmetry makes Norfolk Island pine valuable as a decorative plant.

Culture.—Plant in humus soil; keep the soil moist. Grow in indirect sunlight, moderate temperatures, and low humidity.

Special requirements.—This plant needs sufficient light to prevent irregular growth. If the plant grows too tall, air-layer the top (see p. 28).

ASPIDISTRA

Description.—Aspidistra will endure heat, dust, darkness, and lack of water better than most other house plants. When it is well cared for, it produces a mass of broad, glossy green leaves and bears flowers close to the ground.

Culture.—Plant in potting soil; keep the soil moist. Grow in shade or subdued daylight, moderate temperature, and medium humidity.

BEGONIA

Description.—*Begonia rex*, grown for its foliage, has large, thick leaves that are shaped and marked irregularly.

Culture.—Plant in humus soil; keep the soil moist. Grow in indirect sunlight, warm temperatures, and medium to high humidity.

Special requirements.—During the summer, grow begonia plants in a bright window out of direct sun, or on a shady porch, or bury the pots up to the rims in the ground in partial shade.

For information on flowering begonias, see p. 18.

BROMELIADS

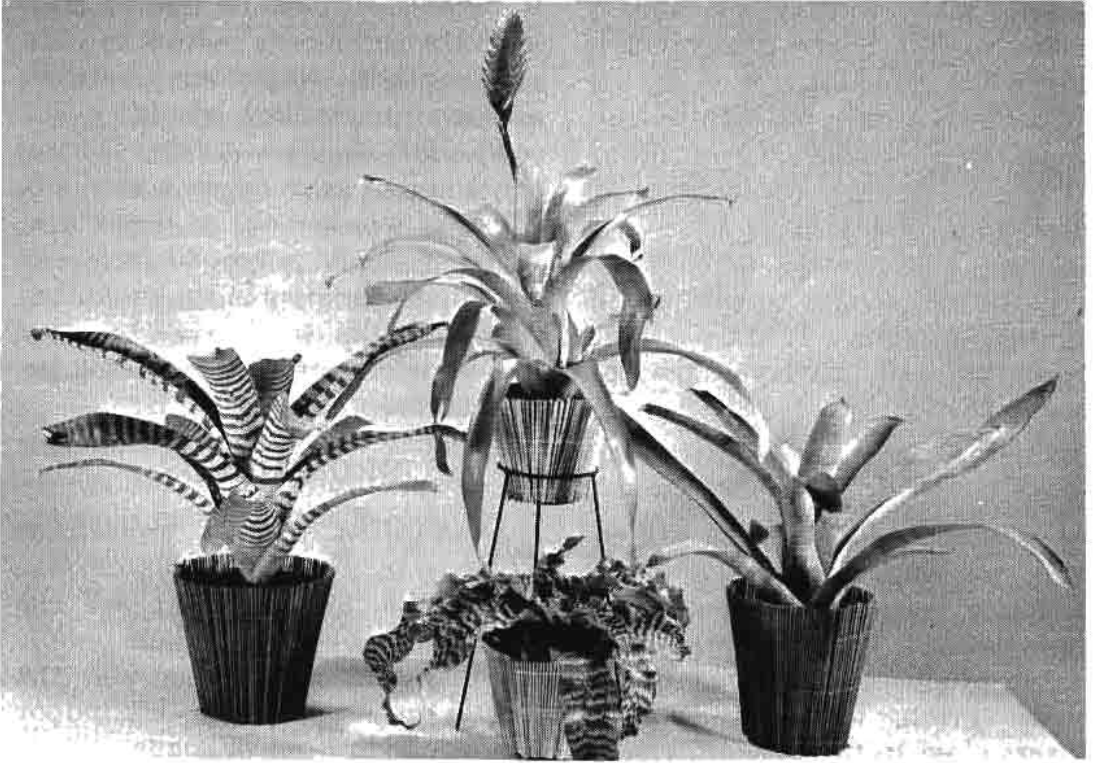
Description.—The bromeliads (*Bromelia*, *Aechmea*, *Cryptanthus*, *Neoregelia*, and *Vriesia*) are the most adaptable of all foliage plants. Their leaves hold water and the plants grow well under dry indoor conditions in light or shade.

When the plants are mature, a brilliantly colored flower spike grows from beneath the pool of water in the center of the plant. The flower spike lasts for several months.

Culture.—Plant in humus soil; keep the soil moist. Grow in full sun, warm temperatures, and medium humidity.



Begonias. Left to right: *B. semperflorens*, *B. rex*, and *B. metallica*.



Bromeliads. Left, *Aechmea chantinii*; center top, *Vriesia carinata*; center bottom, *Cryptanthus zonatus*; right, *Neoregelia* hybrid.



Left to right: Bromeliad (*Cryptanthus zonatus*), Peperomia (*P. floridii*), and Bromeliad (*Bromelia serra*).

Special requirements.—Keep the center of the plants filled with water. Occasionally spray the leaves with water to remove the dust. Propagate from lateral shoots that grow from the main plant after the flower withers.

CALADIUM

Description.—Caladiums grow during the spring and summer and are dormant during the winter. The leaves of caladium are large and arrow shaped. Some kinds have pink leaves, some have red leaves, some have variegated leaves.

Culture.—Plant in humus soil; keep the soil moist. Grow in indirect sunlight and normal summer temperatures and humidities.

Special requirements.—Pot tubers in the spring. At the end of summer, gradually prolong the periods between waterings until the plants become dormant. Then store the tubers, without removing them from the soil, in a cool place (about 60°). The next spring, repot the tubers and resume watering. Avoid overwatering; caladiums rot easily.

CALATHEA

Culture.—Pot in humus soil; keep the soil moist. Grow in indirect sunlight or shade, warm temperatures, and high humidity.

CHINESE EVERGREEN

See Aglaonema.

CODIAEUM (Croton)

Description.—Crotons are gaudy tropical shrubs with tough, ever-



Left to right: *Calathea ornata*, *Podocarpus macrophylla*, and *Aglaonema commutatus*.

green leaves. The leaves are variously shaped and marked with patterns of yellow, scarlet, green, white, and pink.

Culture.—Plant in potting soil; keep the soil moist. Grow in bright sun, warm temperatures, and medium humidity.

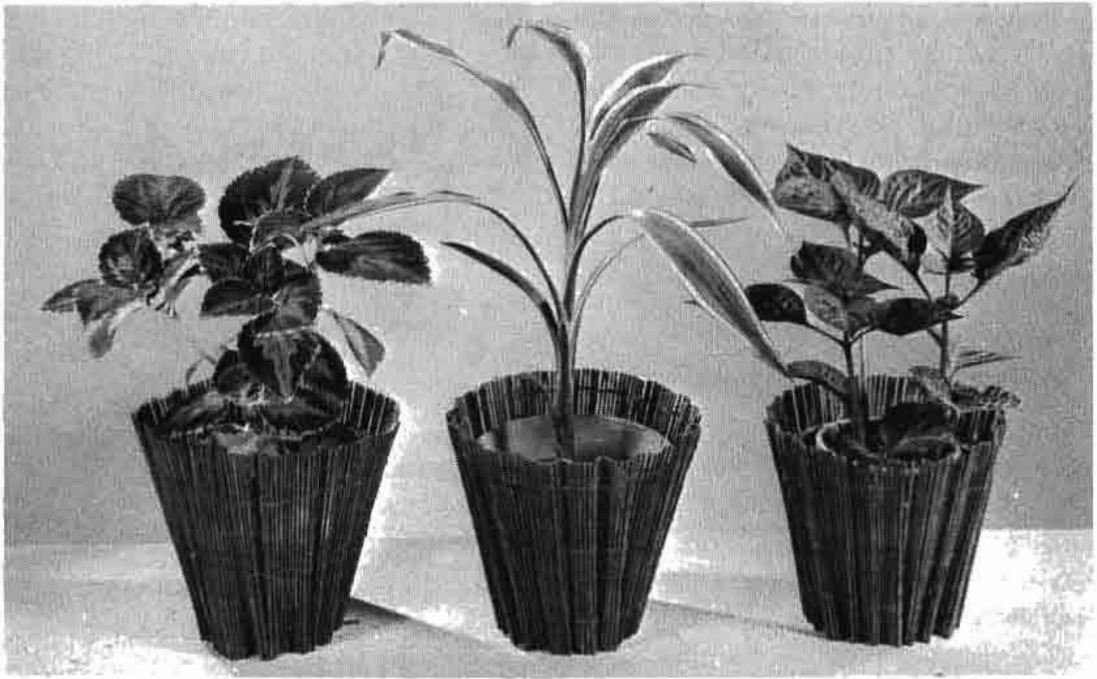
Special requirements.—As croton plants grow old, the lower leaves fall leaving the trunk bare. The top can be air layered to form new roots, then cut from the old trunk and potted as a new plant.

COLEUS

Description.—Coleus plants are available having a wide range of foliage colors and patterns. Coleus thrives in a warm atmosphere. It needs plenty of sunshine and moisture, but will survive chilling or overwatering.

Culture.—Plant in regular potting soil; keep the soil moist. Grow in full sun, warm temperatures, and medium humidity.

Special requirements.—Remove tips of the plants frequently to induce branching. Propagate from seeds or from cuttings rooted in water (see p. 28).



Left to right: *Coleus blumei*, *Dracaena sanderiana*, and *Iresine herbstii*.

DIEFFENBACHIA, (Dumb Cane)

Description.—Dieffenbachia, one of the most spectacular of the house plants, is grown for its large, variegated foliage. *Diffenbachia amoena* has dark green leaves with white markings along the veins. *D. picta* variety Rudolph Roehrs has yellow-green leaf blades that are blotched with ivory and edged in green. *D. amoena* withstands lower temperatures than *D. picta*.

Culture.—Plant in regular potting soil; allow the soil to dry moderately between waterings. Grow in indirect sunlight, warm temperatures, and low humidity.

Special requirements.—Though dieffenbachia tolerates dim light, it grows best in bright light. It often is overwatered; overwatering causes the roots and base of the canes to rot quickly. Keep the soil on the dry side.

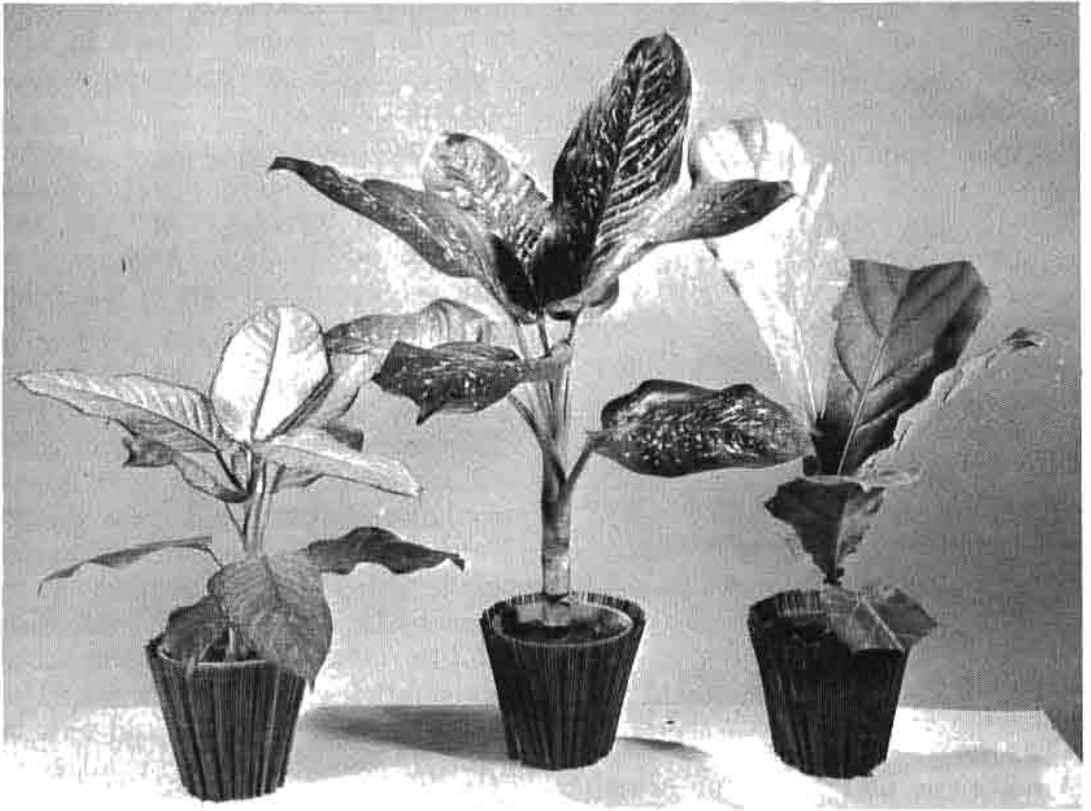
Eventually the lower leaves turn yellow. When this happens, remove

the yellowed leaves. If the stem becomes bare and objectionable, cut off the top of the plant and root it in sand or water. Keep the canes; they eventually grow lateral shoots. **Caution:** Dieffenbachia sap is toxic in open cuts. Be careful when removing leaves or cutting the cane.

DRACAENA

Description.—Dracaenas grow slowly and retain their foliage for long periods. *Dracaena godseffiana*, the most common and most rugged form, has dark-green leaves spotted with pale yellow. The leaves of *D. fragrans* are broad and strap shaped; they are green with a gold band down the middle. *D. sanderiana* is smaller than the other dracaenas; it has gray-green leaves that are bordered with a white band.

Culture.—Plant in regular potting soil; keep the soil wet. Grow in indirect sunlight, warm temperatures, and low humidity.



Left to right: *Dieffenbachia picta* "Rudolph Roehrs," *Dieffenbachia amoena*, and *Ficus pandurata*.



Left to right: *Dracaena sanderiana*, *Dracaena fragrans*, and *Aphelandra squarrosa*.

Special requirements.— Wash foliage once a month with soapy water. When the bare stem beneath the foliage gets too long, air-layer the top.

FATSHEDERA

Description.— Fatshederas are evergreen shrubs. They produce leathery five-lobed leaves that are lustrous dark green.

Culture.—Plant in regular potting soil; keep the soil moist. Grow on support in full sun, cool temperature, and low to medium humidity.

FERNS

Description.—Ferns are among the most satisfactory house plants. They have many forms of fronds. Among the best ferns for growing as pot plants are maidenhair fern (*Adiantum wrightii*), swordferns (*Nephrolepis*), birdsnest fern (*Asplenium nidus*), spider ferns (*Pteris*), and house hollyfern (*Cyrtomium falcatum*).

Culture.—Plant in humus soil; keep the soil moist. Grow in subdued daylight, warm temperatures, and high humidity.

Special requirements.— Protect ferns from extreme chilling. Watch for special seasons of growth and provide additional water at this time. During the rest of the year, give less water.

FICUS

Description.—Rubber plant (*Ficus elastica*) has large oval leaves that are leathery and dark green. Fiddleleaf (*F. pandurata*) has thick, shiny leaves shaped, as is described by its common name, like a fiddle. Creeping fig (*F. pumila*) has small leaves. It forms a close mat of clinging stems and can be used to cover a brick or masonry wall or the bottom of a planter.

These plants all are adaptable to a wide range of growing conditions. While they grow best in a warm, moist atmosphere, they do fairly well under normal household conditions of temperature and humidity.



Left to right: *Fatshedera japonica*, *Pandanus veitchii*, and palm (*Collinia elegans*).

They can be grown in full sun or shade.

Culture.—Plant in regular potting soil; keep the soil moist. Grow in diffused sun, warm temperatures, and medium humidity.

Special requirements. — When grown in pots, these plants tend to develop a single stem. The leaves drop if the plant is chilled or if it is moved from one place to another. If the leaves drop and leave a bare stem, the top can be air layered (see p. 28).

Wipe the leaves with wet cloth at frequent intervals.

GEORGENANTHUS (Seersucker Plant)

Description.—Georgenanthus is a low-growing, suckering plant. It has fleshy, quilted leaves that are dark, metallic green with several bands of pale gray. The underside of the leaf is red.

Culture.—Pot in regular soil; keep the soil moist. Grow in indirect sunlight, warm temperatures, and low humidity.

IREFINE (Blood Leaf)

Culture.—Plant in regular potting soil; keep the soil moist. Grow in full sun, moderate temperature, and medium humidity.

IVY

Description.—Even in its common form, ivy makes an excellent house plant. Some of the smaller-leaved forms of ivy make even better house plants than the common form. These plants have leaves that not only are smaller, but also are shaped differently than the common three-lobed variety.

Various other plants are called ivy though they are not related to the real ivy plant. They also make

good house plants and are grown in the same way that ivy is. German ivy, or ivy groundsel, is a trailing or climbing vine with maplelike leaves and dull, orange-yellow flowers. Kenilworth ivy is a trailing vine with flowers that look like tiny lavender snapdragons. Grape ivy is a climbing vine with coiling tendrils on its branches. Its leaves are composed of three sharp-toothed oval leaflets.

Culture.—Plant in regular potting soil; keep the soil moist. Grow in full sun, cool temperatures, and low to medium humidity.

Special requirements. — Begin training ivy when it is small. Pinch off the ends of the shoots frequently to produce a mass of laterals. Train the laterals against a trellis or bamboo rod placed in the pot.

MARANTA (Prayer Plant)

Description.—Prayer plant (*Maranta leuconeura kerchoviana*) folds up its leaves at night. The leaves are light green above and purple beneath; the leaf veins are fine and have a silken sheen.

Culture.—Plant in regular potting soil; keep the soil moist. Grow in diffused sun, warm temperatures, and high humidity.

Special requirements. — Do not allow water to stand on the crowns; the stems rot easily.

NEPHTHYTIS

See Syngonium.

PALMS

Description.—Most palms are too large for use as house plants. Two species — the pygmy Roebelin phoenix (*Phoenix roebelinii*) and parlor palm (*Collinia elegans*)—are small enough to use as pot plants. Roebelin phoenix eventually grows to a 12-foot tree, but it



Left to right: Palm (*Phoenix*), fern (*Nephrolepis*), and Scindapsus (*S. aureus*).

normally grows for a long time before it begins to form a trunk. The parlor palm grows rapidly to about 8 feet. It is very tolerant of dim light.

Culture.—Plant in regular potting mixture; keep the soil wet. Grow in diffused sun, warm temperature, and low to moderate humidity.

PANDANUS (Screwpine)

Description.—The screwpines develop fine clumps of leaves that are arranged spirally along the trunk. The long, arching leaves are shaped like sword blades.

Culture.—Plant in regular potting mixture; allow the soil to dry moderately between waterings. Grow in indirect sunlight and warm dry atmosphere.

PEPEROMIA

Description.—Peperomias will tolerate neglect but will rot if over-

watered. Though they tolerate dim light, they grow best in bright light.

Peperomia obtusifolia in its typical form has fleshy green leaves; the variegated form has leaves that are predominantly golden yellow with green markings. *Peperomia sandersi* (watermelon peperomia) bears leaves in rosettes. The leaf stems are deep red; the fleshy, heart-shaped leaves are deep green to bluish and have bands of silver radiating from their upper centers.

Culture.—Plant in regular potting soil mixture; allow the soil to dry moderately between waterings. Grow in indirect sunlight, warm temperatures, and low humidity.

PILEA

Description.—*Pilea carderii* (aluminum plant) has thin, fleshy, quilted foliage with unusual silver markings. The flowers of *P. micro-*

phylla (artillery plant) discharge a cloud of pollen when shaken.

Culture.—Plant in humus soil; keep the soil moist. Grow in indirect sunlight, warm temperatures, and low humidity.

Special requirements.—Artillery plant requires clipping to promote branching.

PHILODENDRON

Description.—Philodendrons grow better than most other house plants under the adverse conditions found inside modern houses. They do well as long as they are kept warm—65° minimum—moderately moist, and out of direct sunlight.

Many forms of philodendron are available. *Philodendron oxycardum*, the most commonly grown form, has heart-shaped leaves. It often is grown in water or moss.

Philodendron dubium, cut-leaf philodendron, is a slow grower; it seldom gets out of bounds. It has star-shaped leaves.

Philodendron panduræforme, fiddleleaf philodendron, has irregularly shaped, olive-green leaves.

Philodendron pertusum, which is really the juvenile form of *Monstera deliciosa*, has perforated leaves that are irregularly shaped. The adult form of *M. deliciosa* has broad, thick leaves that contain many perforations.

Philodendron squamiferum, anchorleaf philodendron, has leaves and petioles that are covered by red



Left, *Philodendron squamiferum*; right, *Schefflera actinophylla*.



Philodendrons. Left to right: *P. dubium*, *P. pertusum*, and *P. panduræforme*.

hairs. The leaves are shaped like daggers.

Philodendrons often are grown on trellises or moss-covered poles. When one of these plants grows to the end of the supporting pole, its stems sometimes begin to grow rapidly and the plant produces widely spaced small leaves.

Some forms of philodendron do not need support from a pole or trellis. These forms require a minimum of care. Among these forms are *Philodendron bipinnatifidum*, *P. selloum*, and *P. wendlandi*.

Philodendron bipinnatifidum, twice-cut philodendron, has leaves that resemble those of *P. dubium*, but are twice as large and more deeply notched.

P. selloum produces leaves that are almost solid when the plant is small. As the plant grows larger, it produces cut leaves. This species is resistant to cold; it can withstand temperatures down to freezing.

P. wendlandi has long, narrow leaves that can withstand extremes of temperatures and humidity.

Culture.—Plant in regular potting mixture; keep the soil moist. Grow in indirect sunlight, warm temperatures, and low humidity.

Special requirements.—Wash philodendron leaves once a month with soap and water. Do not get soapy water on the soil. If leaves are cleaned regularly this way, special foliage waxes are unnecessary.

When plants grow to the end of their supporting trellis or pole, cut back the stems to force new branches to develop. Pin the stem back to the support. Increase the light intensity on the plant and decrease the amount of water given it.

PODOCARPUS

Description.—Yew podocarpus (*Podocarpus macrophylla*) is an evergreen shrub that can grow to a height of 50 feet. It grows well as a pot plant under household conditions and can be kept small by shearing.

Culture.—Plant in regular potting soil; keep the soil moist. Grow in indirect sunlight, cool temperatures, and low humidity.

POTHOS

See Scindapsus.

MOSES IN THE CRADLE (*Rhoeo discolor*)

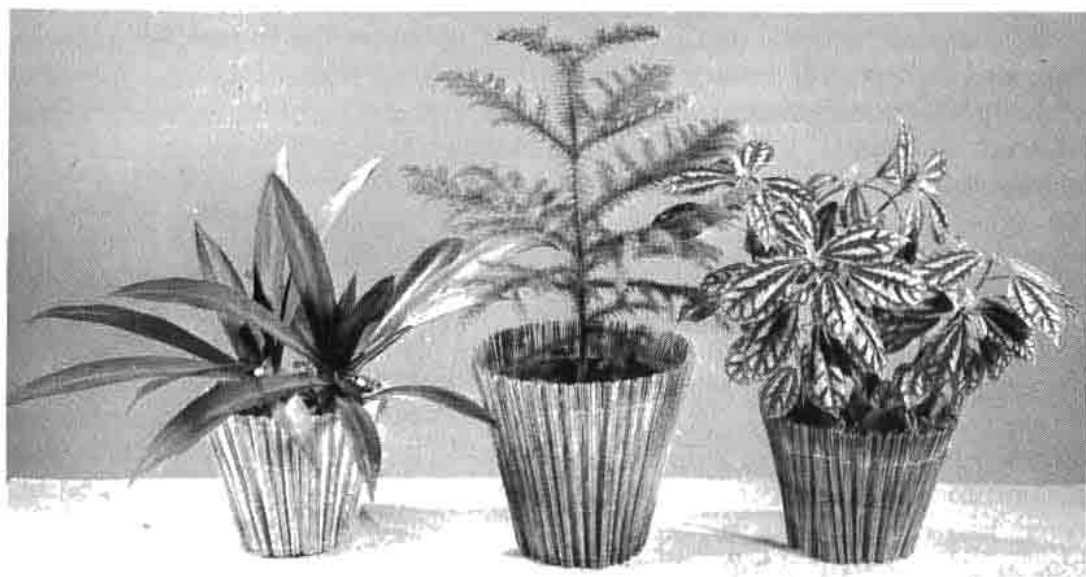
Description.—Moses in the cradle produces a cluster of stiff, lance-shaped leaves that are dark, metallic green on top and glossy purple on the lower surface. Small white flowers are borne in boat-shaped bracts.

Culture.—Pot in regular soil mixture; keep the soil moist. Grow in indirect sunlight, moderate temperatures, and medium humidity.

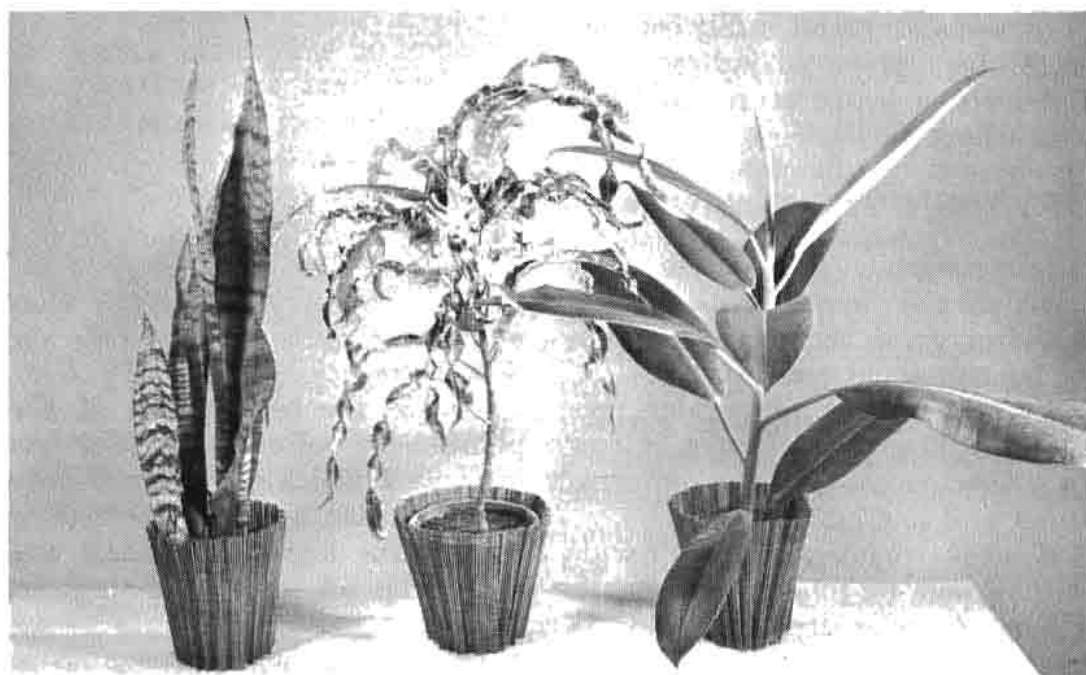
SANSEVIERIA (Snake Plant)

Description.—Snake plants develop clumps of erect, strap-shaped leaves. The leaves of *Sansevieria zeylanica* are dark green banded with lighter green. The leaves of *S. laurentii* normally are longitudinally striped with golden yellow. These plants grow in almost any environment.

Culture.—Plant in regular soil mixture; allow the soil to dry moderately between waterings. Grow in any light intensity from dim interior to full sunlight. Keep in moderate to warm atmosphere with low humidity.



Left to right: *Rhoecus discolor*, *Araucaria excelsa*, and *Pilea caderei*.



Left to right: *Sansevieria trifasciata*, *Codiaeum variegatum*, and *Ficus elastica*.

Special requirements.—Propagate by division or leaf cuttings. When propagated by division of the clump, *S. laurentii* continues to produce striped leaves. But when it is propagated by leaf cuttings, it produces plain-green leaves.

SCHEFFLERA (Umbrella Tree)

Description.—*Schefflera actinophylla* is a rapid grower. It produces large compound leaves. The leaflets are slender, fleshy, and glossy green.

Culture.—Plant in regular potting soil; allow soil to dry moderately between waterings. Grow in indirect sunlight, warm temperatures, and low to medium humidity.

SCINDAPSUS

Description.—*Scindapsus aureus* looks like a smooth-stemmed philodendron but can be distinguished from philodendron by its ridged stems. It can be grown and trained like philodendron but should be watered less frequently. Silver Marble, a variegated form, must be grown in temperatures above 70°; the green forms may be grown at 65°.

Culture.—Plant in humus soil; allow soil to dry moderately between waterings. Grow in indirect sunlight, warm temperatures, and low humidity.

SYNGONIUM (Nephtythis)

Description.—*Syngonium* has heart-shaped leaves with silver-white or green centers. It thrives under household conditions.

Culture.—Plant in regular potting soil; keep the soil moist. Grow in indirect sunlight, warm temperatures, and low humidity.

Special requirements.—Provide with a pole or totem for support. Prune occasionally to keep in bounds.

WANDERING-JEW

Description.—Three species of plants belonging to the spiderwort family are called wandering-jew—*Zebrina pendula*, *Tradescantia fluminensa*, and *Commelina nudiflora*. Their foliage is so similar that they cannot easily be distinguished from one another until they bloom. All of these plants are easy to grow.

Culture.—Pot in regular soil mixture; keep the soil moist. Grow in indirect sunlight, moderate temperatures, and medium humidity.

Special requirements.—Propagate wandering-jew from tip cuttings (see p. 28).

SUCCULENTS

Succulents are plants having thick, juicy stems or leaves. They are found in many plant families. Succulents are good house plants because they do not require much care and they grow well under household conditions.

Kinds of Succulents

Cactus is a favorite among the succulents that are used as house plants. Some of the kinds of cactus are *Echinocactus*, *Espositoa*, *Echinocereus*, *Opuntia*, *Ferocactus*, and *Trichocereus*.

Aloes also are available in many forms. Two of the favorite aloes are Barbados aloe, *A. vera*, and *Aloe variegata*.

One of the best species of Euphorbia for pot culture in *Euphorbia lactea*, which grows erect like a tree and has a spiny, three-sided trunk. Its leaves are small and they drop off soon after they are formed.

Haworthia, which come from South Africa, belong to the lily family. They are grown primarily for their foliage. One group of plants, of which *Haworthia fasciata* is an example, has leaves that are semitranslucent. Another group, of which *H. tessellata* is an example, has thick, leathery leaves.

Other well-known succulents are *Crassula*, *Sempervivum*, *Sedum*, *Bryophyllum*, and *Kalanchoe*.



Succulents. Left to right: *Crassula arborescens*, *Euphorbia echinus*, and *Kalanchoe tomentosa*.



Succulents. Left to right: *Echinocereus*, *Stapelia*, *Opuntia*, *Ferocactus*, and *Trichocereus*.

Culture

Culture of all of the succulents is similar: Plant in regular potting soil; allow the soil to dry moderately between waterings. Grow in full sun, moderate temperatures, and medium to low humidity.

FLOWERING PLANTS

ACHIMENES

Description.—Achimenes leaves are finely cut and are tinted red or

green. The flowers, shaped like those of petunias, may be red or blue. Achimenes plants are grown from rhizomes planted during March, April, or May and kept in a sunny window or in a hanging basket that is exposed to full or partial sun. The plant blooms during the summer.

Culture.—Plant in humus soil; keep the soil wet. Grow in indirect sunlight and normal summer temperatures and humidities.

Special requirements.—In late summer after the flowers have passed, allow the soil to dry gradually. When the plant withers, dig up the rhizome and store it through the winter in dry sand at a temperature of 45° to 50°.

AFRICAN VIOLETS

Description.—African violets are the most commonly grown house plants. They produce single or double flowers colored white, or blue, or a combination of red and blue.

Culture.—Pot in regular soil mixture; keep the soil moist. Grow in indirect sunlight and warm temperatures with high humidity, moderate temperatures with medium humidity, or cool temperatures with low humidity.

Special requirements.—Plant African violets in subirrigating pots (see p. 23), so the plants can be watered and fertilized from the bottom; if leaves are wetted with water that is cooler or warmer than the air, light-colored spots will develop on them.

If the petioles (leaf stems) lie across the wet clay rim of a flower pot, they may rot. To prevent this, cover the rim with parafilm or aluminum foil.

Wash the leaves regularly with



Left to right: African violet (*Saintpaulia ionantha*), Streptocarpus (*S. kewensis*), and Episcia (*E. coccinea*).

soapy water at room temperature. Allow the leaves to dry in a shady place before returning the plants to the growing area.

AMARYLLIS

Description.—Amaryllis are tropical bulbs that can be kept growing continuously. A flower stem with three to six flowers appears 6 to 8 weeks after the bulb is planted. After the plant flowers, its leaves appear.

Many other plants of the same type—*Nerine* and *Chlidathus*, for example—can be grown in the same way.

Culture.—Pot in humus soil; keep the soil moist. Grow in full sun or shade with moderate temperatures and medium humidity.

Special requirements.—Pot the bulbs with two-thirds of the bulb above soil level. Place in full sun

and keep the soil moist. After the flower has passed, let the leaves grow for good development of the bulb. As soon as the leaves begin to yellow, stop watering; the plant will become dormant. Store the dormant plant in a cool place—38° to 45°. You can keep the bulb dormant as long as you want. When you wish it to grow again, resume watering.

BEGONIA

Description.—Fibrous-rooted begonia has succulent stems and shiny leaves. It produces flowers continuously. The flowers may be white, pink, or scarlet.

Tuberous-rooted begonias bear large white, yellow, orange, or red flowers and have watery stems and brittle, pointed leaves. These plants may be grown in pots or may be used outdoors as bedding plants in partial shade.

The showiest of the begonias is the semituberous begonia (*B. socotrana*), which is available as a Christmas-gift plant. It also is the most difficult to grow. It is best to keep this plant in full sun until the flowers pass, then discard it.

Culture.—Plant in humus soil; keep the soil moist. Grow in full sun or bright, diffused sunlight, warm temperatures, and medium to high humidity.

Special requirements.—Plant tuberous-rooted begonia in March. Keep the soil moist. Grow it in full sun until May, then move it to bright, indirect sunlight. Using fluorescent tubes or a 75-watt incandescent bulb 3 feet above the plant, light the plant from 10 p.m. to 2 a.m. each night during the winter. With this supplementary illumination the plant will bloom throughout the year.

Fibrous-rooted begonia needs full sunlight during the winter. It can be propagated from seeds or terminal cuttings.

CALLA

Description.—Calla leaves are large and arrow shaped. The showy part of the plant is not a true flower, but an envelope surrounding the member on which the true flowers are borne. Callas will grow continuously when permitted to do so, but their flowers get smaller and smaller. This can be prevented if the plants are allowed to become dormant during the summer.

Culture.—Pot in regular soil mixture; keep the soil wet. Grow in full sun, cool temperatures, and medium humidity.

Special requirements.—Pot calla rhizomes in late summer or early fall. Start the plants at temperatures of 60° to 65°. When growth

starts, move the plants to an area where the temperature is 55° to 60° and the plants have full sunlight. Withhold water in summer to bring on dormancy. Repot the rhizomes after the summer-dormancy period.

CHRISTMAS CACTUS

Description.—Christmas cactus produces many flat-stemmed fleshy branches that serve as leaves. Brilliant pink pendant flowers grow from the edges of the younger parts of the plant. Christmas cactus often fails to bloom because of nighttime exposure to high temperatures or artificial light.

Culture.—Pot in humus soil. Keep the soil moist in winter, spring, and summer; allow it to dry moderately between waterings in fall. Grow in full sunlight, cool temperatures, and medium humidity.

Special requirements.—Beginning September 1, keep the plant in total darkness—with no artificial light—for at least 12 hours a night. Maintain a night temperature of no more than 70°. During summer, grow the plant in a cool, shaded area.

Propagate Christmas cactus from pieces of branches two or three segments long.

CITRUS

Description.—Otaheite orange, ponderosa lemon, and Meyer lemon are the kinds of citrus most likely to flower and fruit indoors. Grapefruit seeds, planted in a low bowl, form a mass of foliage from the crowded seedlings.

Culture.—Plant in regular potting soil; keep the soil moist. Grow in subdued daylight, cool temperatures, and medium humidity.

Special requirements.—Propagate flowering citrus plants from seeds or cuttings.

CROSSANDRA

Description.—Crossandra leaves are large and glossy with a waxy texture. The plant produces large, bright-salmon flowers through most of the year.

Culture.—Plant in humus soil; keep the soil moist. Grow in full sunlight, warm temperatures, and high humidity.

Special requirements.—Seed can be sown at any time. If the plant is grown at 65° to 70°, it will begin to bloom 6 to 7 months after planting.

DUTCH BULBS

Description.—Hyacinths, tulips, and various kinds of narcissus can be forced into flower for window-garden use. The Chinese sacred lily, paperwhite narcissus, and hyacinths can be forced in water.

Culture.—Store narcissus bulbs dry for 12 weeks at 50°, and tulip bulbs for the same period at 45°. Then pot the bulbs and place the pots in the light at 60°. The bulbs bloom in about 1 month.

Store hyacinths at 63° for 4 weeks. Then pot and keep the potted bulb at 55° until the tip of the shoot is 1½ inches above the bulb. Then place the pot in the light at 65°. The bulbs bloom in about 1 month.

Formerly it was recommended that bulbs be kept in a cool place until a root system developed. Growth of roots is not a reliable sign that the bulbs are ready for potting; irregular flowering often results from following the old recommendation.

To force bulbs in water, place the bulbs in a wide-mouth jar or shall-

low dish and support them with stones. Add charcoal to keep the water from souring. Keep the bulbs cool and dark until the tops begin to expand. Then move the containers to a cool, sunny room for forcing. Usually, bulbs are forced at too high a temperature and the leaves and flowers grow too long.

After bulbs have flowered, they may be planted in the garden when danger of frost is past. Few bulbs flower again the first year; some are so depleted from forcing that they never again flower well.

EPISCIA

Description.—Episcias are noted for their decorative foliage and vividly colored flowers. They often are potted in hanging baskets. They require care similar to that for African violets.

Culture.—Plant in humus soil; keep the soil moist. Grow in indirect sunlight, warm temperatures, and high humidity.

FUCHSIA

Descriptions.—Fuchsias, grown for their brilliantly colored flowers, need a well-drained soil and a night temperature of 60° to grow best. High night temperatures and low light intensities inhibit their flowering.

Culture.—Plant in regular potting soil; keep the soil moist. Grow in subdued daylight, moderate to warm temperatures, and medium humidity.

Special requirements.—Remove ends of stems frequently to promote branching. Propagate by cuttings or seeds.

GARDENIA

Description.—Gardenias seldom do well as house plants. They are exacting in their temperature re-

quirements; if night temperature is above 65°, the flower buds drop. If it is below 60° to 62°, the leaves turn yellow. In spite of these exacting requirements, many people grow gardenias as house plants, and occasionally a gardenia plant produces a few flowers in late spring.

Culture.—Pot in humus soil; keep the soil moist. Grow in full sun, warm temperatures, and medium humidity.

GERANIUM

Description.—The most commonly grown geranium, *Pelargonium hortorum*, produces single or double flowers throughout the year. It can be distinguished by the dark zone on its soft leaves.

Pelargonium domesticum produces flowers marked with blotches of contrasting colors. It usually flowers for 4 to 6 weeks in late spring or early summer. Its leaves are deep green.

Culture.—Pot in regular soil mixture; allow the soil to dry moderately between waterings. Grow in full sun, cool temperatures, and low to medium humidity.

Special requirements.—Geraniums need full sun and cool temperatures for best blooming. Ideal temperatures at night are 55° to 60°. Night temperatures above 60° inhibit flowering.

Do not let water stand on leaves or stems of geraniums; these parts rot easily.

Propagate by cuttings.

GLOXINIA

Description.—Gloxinias are grown from tubers. The plants, which are almost stemless, have broad velvety leaves and deep, bell-like flowers that are brilliantly colored.

Culture.—Pot in humus soil; keep the soil moist. Grow in indirect sunlight, moderate temperatures, and high humidity.

IMPATIENS

Description.—Impatiens grows easily from seed. It begins to bloom about 3 months after seed is planted and blooms continuously thereafter.

Culture.—Plant in regular potting soil; keep the soil moist. Grow in full sun, warm temperatures, and medium humidity.

Special requirements.—Pinch off the tips of the plants to make them branch. Keep the plants warm; leaf drop occurs at temperatures below 65°.

Grow the plants in a sunny window during the winter. Move them to a porch box during the summer.

JERUSALEM CHERRY

Description.—Jerusalem cherry (*Solanum pseudo-capsicum*) produces round orange or scarlet fruit the size of a cherry. The fruits persist for a long time. **Warning:** The fruits may cause a rash by coming in contact with the skin. Avoid handling them.

Culture.—Pot in regular soil mixture; allow the soil to dry moderately between waterings. Grow in direct sunlight, cool temperatures, and medium humidity.

Special requirements.—Grow plants for a year, then discard them. Plants more than a year old do not fruit well. Grow new plants from seed.

If growth of the plant is checked, it drops its leaves, develops bare stems, and becomes unsightly. This is a common problem; it usually is caused by low humidity.

KALANCHOE

Description.—*Kalanchoe blossfeldiana* bears clusters of scarlet flowers in late winter and early spring.

Culture.—Pot in regular soil mixture; keep the soil moist. Grow in full sun, moderate temperatures, and medium humidity.

Special requirements.—Kalanchoe needs at least 3 weeks of long nights to bloom successfully. Beginning in the middle of October, keep the plant in total darkness for 15 hours a night.

LANTANA

Description.—Lantana flowers continuously. It can be used as a bedding plant as well as a house plant.

Culture.—Pot in regular soil mixture; keep the soil moist. Grow in full sunlight, moderate to warm temperatures, and medium humidity.

Special requirements.—Sow seed in early spring or grow plants from cuttings.

OLEANDER

Description.—*Nerium oleander* bears upright clusters of pink or white flowers. It blooms in early summer and sometimes throughout the year. If oleander is kept fairly dry during the winter, it can withstand temperatures near freezing.

WARNING: All parts of this plant are poisonous when eaten; one leaf can kill a man. Avoid handling fresh or dry leaves or inhaling smoke from burning plants.

Culture.—Pot in regular soil mixture; keep the soil moist. Grow in full sun, moderate temperatures, and medium humidity.

ORCHIDS

Description.—Best orchids for home culture are *Cattleya bowringiana*, *Cattleya mossiae* (florist orchid), *Dendrobium nobile* (cane orchid), and *Paphiopedilum insigne* (lady slipper orchid).

Culture.—Plant in pure humus; water weekly. Grow in subdued daylight, moderate temperature, and high humidity.

Special requirements.—Orchids need humidity that is maintained between 40 and 80 percent with temperatures from 65° to 80°. They are often grown in glass cases over a moisture stage of wet gravel or sphagnum moss.

Moisten the leaves every day. Water the pots once a week.

STREPTOCARPUS

Description.—Streptocarpus produces trumpet-shaped flowers that are about 2 inches long and have expanded frilled edges.

Culture.—Plant in humus soil; keep the soil moist in summer, allow to dry moderately between waterings in winter. Grow in subdued daylight, cool temperatures, and high humidity.

INCREASING THE HUMIDITY

Plants that tolerate low humidity do well in the 40- to 50-percent relative humidity usually found in heated or air-conditioned homes. But this is too dry for many plants. Here are several ways in which you can raise the humidity for those plants needing medium humidity:

- Keep plants where the humidity is highest; the kitchen—particu-

larly above the sink—normally is more humid than the rest of the home.

- Group plants together. Air surrounding grouped plants usually is more humid than air around a single plant.

- Set plants above a tray of gravel, sand, or peat moss that is kept wet.

- Install supplemental humidifiers and humidistats in your heating or air-conditioning system.

Plants needing high humidity can be grown best in a greenhouse or terrarium. For more information, see "Constructing a Terrarium" (p. 29).

POTTING

When potting or repotting plants, use containers that have a drainage hole in the bottom. Watertight pots are difficult to care for properly; water tends to collect in the bottom of the pot and injure the plant roots.

When roots of a plant fill the container, the plant stops growing. For the plant to resume vigorous growth, it must be repotted in a larger container and fresh soil.

Often it is desirable for a house plant to stop growing. If the plant is as large as you want it to be, do not repot it. Instead, remove some of the soil at the top of the pot at least once a year. Replace it with fresh soil.

Newly purchased plants need not be repotted immediately; their containers usually are satisfactory.

You may wish to repot, however, to transfer the plant to a subirrigating pot or to double pot the plant to simplify watering.

Subirrigating

Subirrigation supplies water to the plant from the bottom. It maintains a desirable level of soil moisture and lessens the guesswork of when to water. You can buy containers that have a subirrigation system built in the base, or you can make a subirrigation system.

Make the subirrigation system from an ordinary flower pot and a wick. A glass fiber wick is best; it does not rot. However, a piece of coarse rope or a tight roll of burlap can be used for a wick.

Place the wick in the hole of the flower pot. Press the top 2 inches of wick against the bottom of the pot, pack fine soil over it, then fill the pot with soil.

For potting soil, mix equal parts garden soil, sand, and peat moss.

After the plant is potted, water it thoroughly from the top. Then place the pot on blocks or stones over a saucer filled with water. The lower end of the wick must lie in the water. The wick soaks up water as needed by the plant.

Double Potting

Double potting supplies water to the plant through the sides of the pot. Because the soil in double-potted containers dries slowly, time of watering is not as critical as it is when plants are grown in pots exposed to the air. Double potting is especially helpful when growing plants that require a low level of soil moisture, or when growing plants in dim light where normal levels of soil moisture cause spindling growth.

For double potting, repot the plant in a porous clay pot. Set this clay pot inside a larger watertight



MAKING A TOTEM

BN-14998-X

- A, Select a pole 3 to 5 times taller than the container in which the totem is to be used.**
- B, Wrap the pole with a layer of sphagnum moss 2 to 3 inches deep and bind the moss with string.**
- C, Push the pole into the soil.**
- D, Wind the vine around the totem.**
- E, Use hairpins to fasten the vine to the totem.**
- F, Keep the moss damp; roots will grow into the moss and the leaves will form a solid mass.**



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This plant is double potted, with sphagnum moss between the inside pot and the outside container. Soil in the pot dries more slowly and needs watering less frequently than soil in pots that are exposed to the air.

container and fill the space between the containers with peat moss or shredded sphagnum moss.

Water the soil and moss. The moss holds water and supplies it, through the porous clay pot, as needed by the plant.

Planters

Double potting is the best practice to follow when growing houseplants in a built-in planter.

The planter should have a petcock attached to the liner so excess water may be drained from the planter.

Fill the bottom 3 inches of the liner with coarse gravel. Place a layer of charcoal over the gravel; charcoal prevents excess water from stagnating. Fill the rest of the

planter with peat moss or sphagnum.

Set the plants, in porous clay pots, up to their rims in the moss. The plants can be watered individually from the top as often as required. They can be turned to allow for variations in lighting. And they can be shifted or substituted at will. These practices are not possible when plants are grown in soil-filled planters.

WATERING AND FERTILIZING

Water your house plants with a dilute fertilizer solution. Make this solution by mixing in 1 gallon of water $1\frac{1}{2}$ teaspoons of soluble fertilizer, analysis 20-20-20, or 1

tablespoon of liquid fertilizer, analysis 8-12-4.

Avoid overwatering. Overwatering is the commonest cause of trouble in growing house plants.

No other general rule applies to the watering of house plants. Some plants do best if the soil is kept moist; others do best if the soil is allowed to dry moderately between waterings.

For best results, use subirrigation or double potting. Overwatering is less likely with these methods than it is with watering from the top.

When plants are subirrigated with fertilizer solution, the fertilizer tends to accumulate on the soil surface and pot rim. Every 2 or 3 months, replace the white-crusting upper layer of soil and water the top of the pot with tap water to leach away the unused fertilizer. Discard the water that drains out of the bottom of the pot.

If plants are potted in containers that do not have drainage holes, water them from the top. If the containers have drainage holes but are neither subirrigated or double potted, water them from the top or immerse the pot in water to wet the soil.

When watering from the top, be careful not to wash soil away from the crown of the plant. Do not get water into the crown; water in the crown may cause the plant to decay.

To water by immersion, set the pot in a container of water. Do not let water flow over the edge of the pot. As soon as the soil appears saturated—in 15 to 20 minutes—remove the pot from the water and let the excess water drain away. Do not allow the pots to remain in the water after the soil is saturated.

SUMMER CARE

Plants that are grown in the house during the winter can be moved outdoors for the summer.

The best location outdoors for the plants depends on the amount of sunlight they can tolerate. If the plants do well in direct sunlight, they can be set in the open. If they need diffused sunlight, place them under trees or tall shrubs where they will get a mixture of sunshine and shade. If they need subdued daylight, keep the plants on a shady porch.

Plants that are kept in pots outdoors need more frequent watering than they do indoors.

To maintain plants through the summer with a minimum of care, sink the pots in the ground up to their rims. Lift or twist the pots once a month to prevent the roots from growing through the drainage hole in the pots.

Before the nights become uncomfortably cool in autumn, lift the plants and repot them if necessary. If they are diseased or infested with insects, do not return them to the house.

Geraniums, lantana, and fuchsias often are taken from their pots and planted in the open soil. In the fall these plants usually are difficult to lift and prepare for winter growth indoors. It is better to raise new plants from summer cuttings than to try to repot the old plants.

WATER CULTURE

Some plants can be grown in tap water with little trouble. Among these plants are coleus, aglaonema, ivy, philodendron, scindapsus, snake plant, wandering-jew, and syngonium.

Add a lump of charcoal to keep the water from souring.

To inhibit growth of algae in the water, use a container that does not transmit light. If algae forms, wipe it off of large roots with a sponge. Clean the container thoroughly and fill it with fresh water.

GROWING PLANTS IN DIM LIGHT

If house plants have the proper amount of water and heat for good growth but do not have enough light, they tend to grow long and spindling. Often, planters are used as decorating accessories in locations that are not lighted well enough for good growth of plants. However, foliage plants can be acclimated to low light intensities.

To grow house plants successfully where they get little or no daylight—

- Water the plants only often enough to prevent wilting.
- Reduce the amount of fertilizer that you apply to the plants.
- Keep the air temperature as cool as you can tolerate.
- Provide supplementary lighting with fluorescent tubes.

Double pot plants that are to be grown under artificial light. This makes soil-moisture control easier than leaving the pot exposed to the air.

Begin watering as frequently as you would if the plant had sufficient light. Then gradually lengthen the intervals between waterings.

A few of the oldest leaves may die while you are adapting the plant to dry-soil conditions; this is part of the readjustment to the new environment.

Do not let the plant wilt at any time.

Fertilize the plants more sparingly than normal. Use only about one-third as much fertilizer as is recommended for plants growing vigorously. Continue to fertilize frequently.

Maintain an air temperature that is as low as human occupants can comfortably tolerate. Most plants thrive at temperatures of 60° to 75°. In general, weakly lighted plants do best in the lower limits of this range, while brightly lighted plants do best in the upper limits.

If you can add moisture to the air, do so. Plants will grow under conditions of low humidity, but they need more attention to watering than they do under moderate humidity.

Fluorescent tubes are best for supplying supplementary lighting. Regular incandescent lights or reflector floods can be used for spot lighting, but they are too hot when used in numbers large enough to provide the relatively high lighting intensities required by the plants.

The required lighting intensity for a plant varies according to the time the plant is lighted; the dimmer the light, the longer the plant must be lighted.

If you use a fixture containing two 40-watt fluorescent tubes and light the plants for 16 hours a day, the minimum lighting intensity for growing foliage plants can be supplied by placing the fixture the following height above the plants:

54 to 66 inches:

Aglaonema commutatum

Dieffenbachia picta

Dracaena sanderiana

Philodendron cordatum

36 to 54 inches:

Anthurium hybrids

Bromeliads

Peperomia obtusifolia

Scindapsus aureus

Closer than 36 inches:

Fatshedera lizei

Ficus pandurata

Hedera helix

Ciccus rhombifolia

These are maximum distances for satisfactory plant growth. All the plants grow best if they are no farther than 36 inches from the lighting fixture.

PROPAGATION

Most house plants can be propagated by cuttings. Take the cutting, containing four or five leaves, from the growing points of the plant. Cut the stem just below a joint.

Root the cuttings in moist perlite, vermiculite, or sand. Pasteurize the rooting medium by heating the moist material in an oven for 45 to 60 minutes at 180° to 240°.

Put the rooting medium in a container—a clay pot is satisfactory, but a subirrigating pot is best.

Insert the cuttings in the moist rooting medium. If you cannot insert them as soon as they are cut, put them in water to keep them fresh.

Now place the cutting-filled pot in a polyethylene freezer bag and close the bag. Place the bag in diffused daylight where the temperature is about 65° to 70°.

Once a week, open the bag and test each cutting for rooting by pulling on it gently. When the cutting resists a gentle pull, it is rooted. It then may be potted as described in "Potting," page 23.

Geraniums, Impatiens, African violets, coleus, ivy, and philodendrons can be propagated from cuttings rooted in water.

If cane sections of dracaena or diffenbachia are pressed in damp moss, shoots will grow from the eyes in the sections. These shoots can be removed and used as cuttings. Cut the cane sections two or three joints long. Dust the ends with fungicide and press them into the damp sphagnum. The eyes continue to produce shoots as often as shoots are removed.

If plants have fleshy leaves or thick petioles (leaf stems), use the leaves as cuttings. Insert the petiole in the moist rooting medium and treat the cuttings as you would tip cuttings.

Leaves of *Begonia rex* and other fibrous begonias develop young plants from their primary veins. Insert the leaves in rooting medium or pin the leaves to the surface of the moist medium.

Some plants produce rhizomes—underground stems—and may be propagated by division of the rhizome. Cut the rhizome into sections, each of which contains a leaf bud. Pot the rhizome sections. New plants will grow from them.

If the plant produces tuber-like potatoes—cut the tuber into pieces that each contain an eye.

Episcia and the ferns produce runners. These runners will root easily if they are pegged to the soil.

Large or difficult-to-root plants can be propagated by air layering. To air-layer, make a cut into the stem and place a toothpick in the cut to keep it open. Wrap moist sphagnum moss around the cut stem and enclose the moss in a sheet of plastic. Tie the ends of the plastic to form a moistureproof package.

When roots have formed—you can see them through the plastic—cut off the top and pot it.

PLANT HEALTH

Poor appearance in house plants may be caused by improper watering, sudden change in environment, cold drafts, lack of fertilizer, gas injury, or insect attack.

For information regarding recognition and control of insect attacks, see Home and Garden Bulletin 67, "Insects and Related Pests of House Plants," available from the U.S. Department of Agriculture, Washington, D.C., 20250.

If a plant is damaged by causal agents other than insects, it usually is best to discard the plant and start over again. This time, avoid the condition that led to poor appearance of the old plant.

Table 1 lists some of the most common causes of unhealthy appearance.

CONSTRUCTING A TERRARIUM

Terrariums are gardens enclosed in glass. The glass enclosure may be any container that transmits light; globes, fish tanks, and large brandy snifters often are used as containers.

Many native and cultivated plants are suitable for growing in terrariums. African violet, maranta, begonia, coleus, croton, dracaena, ivy, peperomia, philodendron, pothos, and wandering-jew are commonly planted in terrariums. Some of the plants that need high humidity can be grown in a terrarium when high humidity cannot be supplied in the open air.

A terrarium is easy to construct and care for.

Place a 1-inch layer of gravel, pebbles, broken flower pots, or charcoal in the bottom of the container.

TABLE 1.—*Some causes of unhealthy appearance in house plants*

Symptom	Possible cause
General defoliation.....	Sudden change in temperature. Transplanting shock. Sudden change in lighting intensity— moved from strong sunlight to a dark location. Overwatering.
Leaves drop, shoots remain dwarfed and branch repeatedly. New leaves are small.	Manufactured-gas injury (unburned cooking gas in the atmosphere).
Browning of leaf tips.....	Improper watering. Exposure to cold drafts. Insect attack. Excess fertilizer.
Loss of normal foliage color.....	Overwatering. Lack of fertilizer. Insect attack.
Spotted foliage.....	Overwatering. Burning from direct sunlight.



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Any kind of transparent container can be used for making a terrarium. This one was made from a large brandy snifter. Terrariums require little care after they are planted.

Dig moss from the woods and line the sides of the container below soil level with the moss against the glass.

Now prepare a soil mixture of equal parts of garden soil, sand, and peat moss, enough for a layer $1\frac{1}{2}$ to 2 inches deep. Mound the soil to one side in the container to make a slope.

Use a long pair of tweezers—or sticks tied to tweezers—to put the plants in place. Try to avoid getting soil on the leaves. After the plants are in place, clean the leaves with a dry brush. Then spray the plants and soil lightly with water.

Cover the container with a sheet of glass or a piece of plastic film.

Place the terrarium in a location where it has bright light, but never any direct sunlight. Sunlight heats

the air inside the terrarium and kills the plants. Turn the terrarium occasionally so the plants in it grow uniformly.

Beware of overwatering. Water the terrarium only often enough to keep the soil moist. If the inside of the container becomes fogged, open the cover slightly to ventilate the terrarium and allow the excess water to evaporate.

CARE OF FLORIST'S PLANTS

Many of the flowering plants sold by florists should be considered as little more than long-lasting cut flowers. They should be cared for until the flowers pass, then should be discarded. Their whole plant life has been adjusted to greenhouse conditions. These growing conditions cannot be supplied in the home.

Nearly all of these plants can be grown in the home. However, they require much more attention during the winter than other types of house plants.

Listed below are some of the most popular of the florist's gift plants with descriptions of the conditions necessary for long-lasting display of flowers. Also listed are directions for handling the plants to keep them over another season.

AZALEAS

Azaleas will remain in bloom from midwinter until early spring if they are kept in a location where they have diffused sunlight and temperatures of 55° to 60° and if they are watered frequently. Grow them in this cool, bright location until May.

In May, plant azaleas in the garden in a mixture of 1 part acid soil and 1 part peat moss. Prune the plants lightly in late May or early June.

Repot azaleas before the first frost and set the potted plants in a frost-free coldframe. Unless the plants have a period of chilling, they bloom irregularly, if at all.

In November, bring the plants indoors. Keep them in moderate light and cool temperatures and water frequently. Keep dust off the leaves by syringing them with water.

Azalea plants should bloom 6 to 10 weeks after they are brought indoors.

CHRYSANTHEMUMS

Place potted chrysanthemums in full sunlight. Keep the temperature between 60° and 70°; water frequently.

Most potted chrysanthemums are not suitable for later planting in the garden. However, hardy varieties are increasingly available from florists during the spring. Ask the florist if the plant can be set out.

CINERARIAS

These plants are available from January to May. Place them in a sunny window. Keep the temperature from 50° to 60° and water frequently. After the flowers pass, discard the plant.

CYCLAMEN

Discard after flowers pass. Flowers last about 2 weeks if the temperature is kept at 70°. If it is kept between 50° and 55°, the flowers last much longer.

Do not let water stand in the crown of the plant; the flower shoots and bases of the leaves rot easily.

EASTER LILY

Easter lilies last several weeks, at best, in the home. Place them in moderate light, saturate the root ball each day, and provide a night temperature of 55° to 60°. Discard the plant after the flowers pass.

HYDRANGEAS

Provide hydrangeas with abundant water and moderate light. After the plant has bloomed, cut it back to several internodes and repot it in regular soil mixture.

In summer, place the plant outdoors in moderate shade. Water it frequently.

When the plant becomes dormant, move it to a frost-free cold frame. Vegetative shoots of most commercial varieties are hardy, but the flower buds are killed by frost.

In January, bring plant in from cold frame and repot it. Grow the plants for several weeks at 55°. Then raise the temperature to 60° to 65°. Hydrangeas bloom about 3 months after they are moved indoors.

If you want hydrangea flowers to be blue, water the plant with a solution of 1 pound of aluminum sulfate in 5 gallons of water. Drench the soil thoroughly, fertilize lightly. If you want the flowers to be pink, use a high phosphate fertilizer, such as 15-30-15, in the water.

POINSETTIA

Poinsettia needs a cool room, full sunlight, and moist soil. If the plant is in good condition when you

get it, it should keep its colored bracts for 3 weeks at a room temperature of 70°. If the temperature is kept between 55° and 60°, red poinsettias will stay colored for 4 to 6 weeks and white poinsettias for 2 months.

If you want to keep a plant after the bracts fall, place it in a cool, light location and water sparingly. The plant will become dormant.

In April or May, cut the plant back to within 6 inches of the pot. Repot the plant in regular soil mixture and resume watering often enough to keep the soil moist.

Take cuttings of the new vegetative growth. When the cuttings root, pot them in regular soil mixture.

Before the first frost, move the plants, both old and new, into a sunny window. Beginning about

October 1, keep the plants in a night temperature of 60° and protect them from artificial light at night. The plants should be well colored for Christmas.

PRIMULA

Most primulas (primroses) sold by florists are best discarded after bloom. One, *P. obconica*, can be kept another year.

After it flowers, reduce its supply of water and let it become dormant. In autumn, repot it in regular soil mixture, water it freely, and keep it in full sunlight with a cool night temperature.

CAUTION: Some people are allergic to primulas; they develop a rash similar to that from poison-ivy. Handle primulas with care.



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