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### G74-182 Caring for African Violets

Don Steinegger

*University of Nebraska--Lincoln*, [dsteinegger1@unl.edu](mailto:dsteinegger1@unl.edu)

John E. Watkins

*University of Nebraska--Lincoln*, [jwatkins1@unl.edu](mailto:jwatkins1@unl.edu)

Anne Vidaver

*University of Nebraska-Lincoln*, [avidaver1@unl.edu](mailto:avidaver1@unl.edu)

Frederick P. Baxendale

*University of Nebraska--Lincoln*, [fbaxendale1@unl.edu](mailto:fbaxendale1@unl.edu)

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## Caring for African Violets

African violets are low, compact plants with attractive dark green, thick, hairy leaves. This NebGuide covers various aspects of caring for them.

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*Donald H. Steinegger, Extension Horticulturist*  
*John Watkins, Extension Plant Pathologist*  
*Anne Vidaver, Head, Department of Plant Pathology*  
*Frederick P. Baxendale, Extension Entomologist*

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The African violet (*Saintpaulia ionantha*) is one of the most satisfactory flowering houseplants. It is a low, compact plant with attractive dark green, thick, hairy leaves. The violet-like flowers are borne in small panicles just above the foliage. Besides various shades of blue-violet, there are also pink, fuschia, and white cultivars (varieties). Newer violets include not only cultivars with single flowers, but also those with semi-double or double rows of petals. Bi-colored flowers and those with a contrasting border are popular. Trailing cultivars and miniatures are also available. Plants kept in good condition flower almost continuously.

### Potting and Propagation

A soil mixture composed of about 2 parts fertile loam, 1 part leaf mold or peat, and 1 part sand or perlite is recommended for growing African violets. The soil must be porous to allow surplus water to pass through readily. Most violets are now grown in a pasteurized soilless mix. A good soilless mix is made up of 3 parts sphagnum peat moss, 2 parts vermiculite, and 1 part perlite, with some lime added to balance the acidity of the peat moss. Compost, good garden soil, or loam can be used for up to half of the total mix, with the other half being vermiculite and/or perlite. Such a soil mix is very porous. A good growing medium should contain 50 percent matter, 25 percent air, and 25 percent water.



When potting African violets, take care to set the plant so that the crown is just above the surface and the soil is firmly pressed around it. Emphasis should be on good soil drainage because free water on the surface may cause decay at the crown or at the bases of the leaf stalks. A saturated soil mix also leads to

unthrifty top growth and root rots. A layer of coarse gravel at the bottom of the container will not improve drainage.

Soil mixes used to grow African violets and other houseplants should be pasteurized and the pots disinfected before planting. Place a 4-inch layer of the mix in a flat pan and wet it slightly. Cover the pan with aluminum foil and seal the edges. Preheat an oven to 180° to 200° F. Place the soil in the oven and hold it at that temperature for at least 30 minutes before removing it to cool. When reusing pots, wash them thoroughly and then soak them for 30 minutes in a solution of 1 part household chlorine bleach in 9 parts water. Rinse the pots until all traces of chlorine are gone.

Repot violets about once a year, or when the leafless portion of the stem is about 1 to 1 1/2 inches long. Gently remove the plant from the pot with a paring knife. Remove all lateral crowns, leaving only the center crown. Trim off one or two rows of leaves, leaving a wheel of leaves around the crown. With the paring knife, scrape the neck as you would a carrot until all the brown plant material is removed and the neck is firm and green. Break or cut off the bottom half of the root. Have a clean pot ready to pot up the pruned violet. Gently firm in new soil around the plant and water well. The pot should be one third the diameter of the plant; a 4-inch pot is usually adequate.



The usual method of propagation is by leaf cuttings during the spring. Cut off mature leaves with about an inch of their stalks. Firmly plant the stalks into sand or vermiculite with most of the leaf blades exposed. Then, thoroughly water the sand. In greenhouses, the benches of cuttings are usually covered with light muslin or glass to keep the air moist. In the window garden, a few cuttings can be covered with a glass jar or plastic. In two to six months young plants start from the bases of the stalks. After these have formed two or three small leaves, they are ready to be potted.

### **Growing Conditions**

African violets adjust well to the warm temperatures and dry air of homes. While they require good light, direct sunlight is not necessary. Windows facing north or east provide favorable light conditions and are preferable to those exposed to midday and afternoon sunshine during summer. The sunnier, warmer windows are better in the winter. In greenhouses, the glass is kept shaded even in the winter.

The best temperatures for African violets are about 60° F at night and up to 80° to 85° F during the day. The plants become stunted at cool temperatures and are slow to recover even when put into a warm place. In hot weather (over 85° F), plants are especially susceptible to rot.

### **Watering**

The soil must be kept moist at all times, but it is desirable to keep the foliage dry. Drops of water on the leaves cause disfiguring light-colored spots or rings. Water from either the top or bottom. Proper watering can be simplified by keeping the pots in watertight saucers or bowls into which a little water is poured every few days. Or, use a wick extending through the drainage hole into a saucer of water. Another effective method is to submerge the pots in peat or sphagnum moss held in a larger container and apply water to this material as needed to keep the soil moist within the pots. In either of these methods, water moves from the saucer or peat by diffusion through the hole in the bottom of the pot and into the soil ball.

### **Disease and Pest Problems**

One of the major problems associated with African violet care is excessive watering, which can lead to root or crown rot. Root and crown rot caused by the fungus *Pythium ultimum* may occur on overwatered plants. All ages of plants may be affected. The crown and roots of these infected plants turn dark and soft, and the leaves usually wilt. Infected plants can be lifted easily from the soil. This disease is not a problem when plants are grown in a pasteurized soil mixture in a container that allows for proper drainage. Destroy badly diseased plants, and thoroughly clean and disinfect their containers before reusing them. Highly prized plants can sometimes be saved if the crown is not badly decayed. Remove the rotted portion of the crown well above the line of decay and reroot the plant in sterile medium.



Petiole rot begins as an orange-brown or rust-colored lesion where the petiole touches the rim of the pot or where it contacts the soil. This is aggravated by the accumulation of fertilizer salts on the rim of the porous pot or on the soil surface. An aluminum foil collar on the rim of the pot and flushing the soil occasionally with heavy watering will prevent this problem.

The unsightly yellow or white ring and line patterns that occasionally appear on the leaves are thought to be caused by a sudden chilling of the leaves by cold water or by the sun shining on wet leaves. This condition is known as ring spot or chlorosis, and can be avoided by carefully watering the plants from below with water slightly warmer than air temperature.

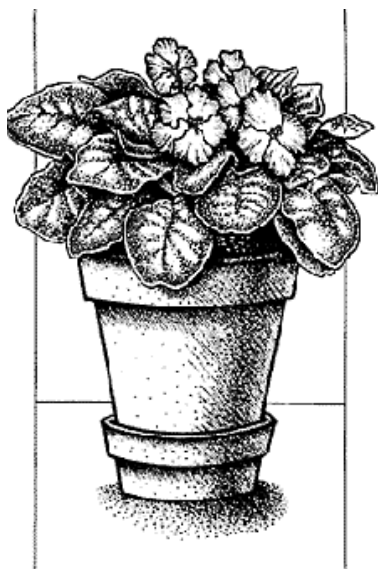
African violets infested with root-knot nematodes are stunted and weakened. Galls form on the roots, and the crown and leaves become thickened and distorted. Blisterlike galls also develop on the leaves. Destroy all infested plants, sterilize their containers, and propagate new plants only from nematode-free plants.

The leaves of plants grown under greenhouse conditions may become infected by the fungus *Botrytis cinerea*. Botrytis blight first appears as small water-soaked lesions on the underside of the leaf. These lesions enlarge until much of the leaf turns brown to black. Flowers may be similarly affected. High humidity, poor air circulation, and low light intensity contribute to the development of this disease. Spores of the pathogen are spread by direct contact of leaves. Spacing the plants so that the leaves of adjacent plants will not touch reduces spreading to healthy plants. Since infection by Botrytis often follows mite injury, controlling these pests aids in controlling the disease. The application of a foliar fungicide may be needed to control severe outbreaks.

Powdery mildew is a light grey, powdery substance on the stems and petioles. This shortens the life of blooms and makes the violet unthrifty. Mildew grows in cool, moist, stagnant air. The best cure is air circulation--a small fan moving the air in the room will keep it from developing. Karathane is a good control, as is dusting sulfur when a very small amount is blown lightly over the plants.

Insects and mites occasionally damage the foliage and flowers of African violets. Cyclamen mites feed in the plant crown, causing young leaves and new growth to be stunted, twisted, discolored, and brittle. When infestations are heavy, leaf hairs become matted and flower buds fail to open. Cyclamen mites can be controlled by treating infested plants at weekly intervals for three weeks with dienochlor (Pentac 50WP) at a rate of 1 teaspoon per gallon of water, or with 2 or 3 applications of dicofol (Kelthane) as directed on the label. Adding a few drops of liquid detergent to the spray will increase coverage and provide better control. Isolate infested plants and be careful while handling them so you do not accidentally transfer mites from one plant to another.

Mealybugs are small, soft-bodied insects that occur in white, cotton clusters on the surfaces of leaves, on leaf petioles, and near the bases of leaf stems. They injure plants by sucking plant juices, which causes stunting and distortion of the leaves. Mealybugs also excrete a shiny, sticky substance called honeydew that is highly attractive to ants and also supports unsightly growths of a dark sooty mold. Heavy mealybug infestations may cause leaves and plants to wither and die. Mealybugs can often be eliminated by spraying plants with a jet of lukewarm water or by removing them with a cotton swab dipped in alcohol. When infestations are heavy or when many plants are involved, the best approach is to make 2 to 3 weekly applications of 57% malathion at a rate of 2 teaspoons per gallon of water. Disulfoton (DiSyston), a systemic granular insecticide, will also provide satisfactory control if scratched into the soil and watered in. Hanging a Vapona pest strip in the vicinity of plants may help prevent reinfestation. Ground or root mealybugs are tiny, whitish insects that feed on African violet roots, causing poor plant growth and wilting of leaves between waterings. To control these pests, avoid overwatering and drench soils with an insecticide such as malathion or acephate (Orthene).



Stunted plants with curled or distorted leaves may be an indication of feeding by aphids. Both adults and nymphs are similar in appearance with soft, pear-shaped bodies, long legs, and antennae. Like mealybugs, aphids excrete honeydew which gives leaf surfaces a shiny appearance and supports the formation of sooty mold. Aphids can be washed from infested African violets with a spray of lukewarm water, or treated with an insecticide such as 57% malathion at a rate of 2 teaspoons per gallon of water plus a few drops of liquid detergent. Repeat this treatment after 7 to 10 days. When only a few plants are involved, consider using a premixed, commercial house plant spray that lists both aphids and African violets on the label.

Thrips are small, slender insects characterized by long, hair-fringed wings. They damage African violets by feeding on the leaves and flowers. Typical leaf injury appears as irregular or streaked silvered areas dotted with small, black drops of excrement. Flower feeding causes

distorted blooms, discoloration or streaking of petals, and shorter flower life. Thrips can be controlled with 1 or 2 applications of premixed, commercial house plant spray containing malathion or Orthene. Be sure that the product is specifically labeled for both thrips and African violets.

Some pesticides damage plants, so be certain the product you select is recommended for use on African violets. In many cases, the label provides a list of plants known to be sensitive to the pesticide, as well as those plants for which it is recommended. When possible, test-treat a few plants and look for signs of plant injury after 2 to 7 days before treating remaining plants.

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