daphne have not been tested for virus but they are probably free of it. It was emphasised that freedom from virus does not guarantee that they will not become infected. The aim is to inform growers of the ways that virus is spread so that they can then reduce this spread.

PROPAGATION AND CULTURE OF AFRICAN VIOLETS

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African violets are fast becoming a favourite house plant in Australia. I have been growing them at "Idaho" Nurseries since 1957. The only cultivars that were available at that time were a single blue named "Blue Boy," a single pink (unnamed) and a double pink called "Bud's Pink Waltz." I grew these cultivars until 1961. Then the late Dr. Sydney Crawcour went to America and contacted several growers. On his return I started to import named cultivars and over the next few years I imported some 300 cultivars.

Propagation. African violets can be propagated by three methods, i.e. seed, division, and leaf cuttings. The quickest and most successful way to reproduce named cultivars is by leaf cutting. If you are growing named cultivars much time can be saved when making up orders by arranging them in alphabetical order, starting with propagation and following on into potting. By this method several dozen plants can be picked out in a short time.

Leaf cuttings are taken all year round from stock plants that are healthy and flowering true-to-type. I strip the plant of all mature leaves. All petioles are cut at a 45^0 angle about 1" to 1¼" from the leaf. The end of the petiole is split for about ½"; this gives a greater rooting and shoot initiation area. All cuttings are then dipped in Mancozeb for protection against decay of the leaves; cuttings are planted in a mixture of 50% peat moss and 50% Styrene foam (or perlite); enough lime is added to bring the pH to 7. Trays are placed on the top bench of the glasshouse using natural light and a temperature of $65F^0$ to 70^0F. As soon as the cuttings are rooted, feeding is started with ¼ strength liquid fertiliser every watering.

Depending on the time of year, plantlets usually appear by 1 to 2 months and are usually ready to pot off singly into 2" pots in about 3 months. Never be in too much of a hurry to break up the clumps; let them grow to about 2" high before splitting into single plants. You should get between 4 and 8 plantlets from each leaf. I pot up all plantlets into 2" pots, irrespective of whether they have roots or not. It makes no difference for all young plantlets grow evenly.

Let the plantlets in the 2" pots grow to a good size, about 3" to 4" leaf span before potting on into 3¼" pots. This will save a lot of

bench space and time and, as these plants have a fine root system; they do best if slightly potbound.

Watering. Never water African violets by a time routine as too much water will cause decay of the tiny roots and also cause crown rot. Water only when the top soil feels dry to the touch. Always water with tepid water which is 10°fi. above glasshouse temperature. I water overhead but in doing it this way one must not have the plants exposed to sunlight; otherwise sun and wet foliage will result in a yellow mottling of the foliage and this will ruin the crop for market.

Fertilizing. Regular feeding in small amounts is far better than say once a month. I fertilize every watering with ¼ strength liquid feed.

Light. For successful growth and flowering, African violets require plenty of light. Avoid direct sunlight in the spring and summer months, either by whitewashing the glasshouse or by shading with curtains. A general guide is that the optimum natural daylight is such that one's hand just throws a shadow on the plants.

Humidity. African violets require high humidity. This is one of the essential conditions for successful blooming. Glasshouse humidity at approximately 75% is ideal.

Diseases and insect pests. African violets are not more susceptible to disease than any other plants, but like all plant life, they are subject to attack by insects and fungi. There are two cardinal rules in prevention of disease. Firstly, isolate all new stock brought into the nursery for 6 to 8 weeks to check for disease. Secondly, use preventive treatment by spraying regularly with the appropriate chemical.

Cyclamen mites. In the early stage of infestation, the new small leaves lose their green colour and become grey and stunted; the central leaves become bunched up and new leaves become brittle and hairy. Mites cannot be seen easily by the naked eye — a X20 magnifying glass is useful for detecting them. Mites are easily controlled by spraying weekly with one of the many miticides available.

Nematodes. These are deadly enemies to African violets, but don't be unduly worried for sterilization of the soil kills nematodes. Unless introduced by infected plants one never need see a case of nematode infection. An effective treatment is to water with a "Nemagon" preparation.

Aphis and Thrips. These can be seen with the naked eye as clusters of green or black slow-moving insects, the thrips being just visible. They attack the young leaves but can be eliminated by spraying with Meta-systox, pyrethrum, or with Malathion.

Mealy bugs. If you notice patches of "cotton wool"-like clusters, these are mealy bugs. They are sucking insects but are easily killed by spraying with Matacil.

Botrytis. This is a fungus disease resulting in a greyish mould developing in the centre of the plant; this will destroy the centre of the plant and ultimately kill it. Botrytis thrives under conditions of high humidity and temperature with inadequate ventilation. A fan running continually is a great help in preventing botrytis, but should it appear, a spray with Brassicol or Zineb will soon clear it up.

Crown rot. This is a fungus and is basically promoted by over-watering. If a previously healthy plant suddenly collapses, this is often caused by over-watering, or by fungus infection from pathogens in the soil.

Powdery mildew. This is also a fungus disease and is recognised by a powdery white growth on buds, flower stems and blossoms. Lack of ventilation and excessive humidity favours the development of this. As a precaution, remove all dead blossoms and leaves, avoid overcrowding of plants and provide fresh air in the glasshouse. This condition may be controlled by opening vents in the glasshouse or by the use of fans. A spray of Benlate will soon clear up powdery mildew.

Yellow spots and blotches on leaves. This is not a disease. It is usually caused by damage from cold water, or by leaving plants exposed to sunlight after overhead watering. Make sure that your glasshouses are whitewashed or protected by curtains.

Soil. Essentially, a good soil mixture for African violet culture must be light, porous, and easily-drained.

Soil has two functions:

(a) to support the roots and consequently the plant, and
(b) to absorb and translocate nutrients and water for the growth of the plant.

The soil must be sufficiently porous to provide aeration for the roots. Let it be emphasized that, in my opinion, it is essential to always sterilize your soil by steam or by methyl bromide. The pH of soil for African violets should be between 6.5 and 7. The most successful fertiliser I have used in soil mixing is John Innes base fertiliser. It has everything in it for good growth and flowering of African violets.

DISCUSSION

Items of interest from the discussion were that if the petioles are cut off at the leaf many sports develop. To retain the parent character cut the petiole 1 to 1¼ inches below the leaf. It is preferable to only grow those African violets which have flexible leaves to reduce damage in packaging and marketing. Plants with white at the base of the leaf tend to have very brittle leaves. Sideshoots must be removed or the plants become very straggly and few flowers are produced.