PROPAGATION: An Introduction

Gesneriads can be propagated through several different procedures and processes. Every saintpaulia grower is familiar with starting new plants from leaves and offshoots, i.e., suckers, as well as dividing multiple crowned plants into single, more manageable crowns. Other members of the gesneriad family can also be propagated using these same techniques. In addition, they can be propagated vegetatively from tubers, propagules, rhizomes, and stolons as well as through seed and sophisticated techniques such as air layering and tissue culture. As this is an introduction into basic propagation techniques for gesneriads, only the simplest vegetative techniques relating to tubers, propagules, rhizomes and stolons will be discussed.

"Many gesneriads can be started by leaf cuttings."

Tubers are fleshy enlargements of specialized root parts. Gesneriads form tubers when their stem bases become enlarged and are converted to storage organs. Example genera of the gesneriad family which produce tubers are sinningia and chrysothemis. It is a simple procedure to take plant material from these genera and quickly increase your collection. This is accomplished by selecting a mature plant and carefully separating its crown or crowns from its tuber. The separated crowns should be reduced to tip cuttings, i.e., no more than 2 sets of the youngest leaves, then planted in starter mix, and kept in a moist environment or propagating box until rooted at which point they can be grown on under normal conditions. The separated tuber (or if you're lucky, tubers) should be planted in your potting mix, kept moist and in a warm well-lit spot until new crowns begin to sprout. These new crowns should be allowed to remain on the tuber until their leaf size reaches approximately 1 inch in diameter, at which point all but one of them can be removed from the tuber and planted as tip cuttings in the same manner as the previously separated crowns were. The remaining crown and tuber should be grown and potted on as a single crowned specimen.

"Genera which produce tubers include sinningia and chrysothemis."

Propagules are reproductive plant structures which are located above ground. Often times gesneriads form propagules as a result of stress. Example genera which produce these structures are gloxinia and achimenes. Propagules originate in a plant's leaf axils and can take many forms. These include small bulb-like growths, thickened stems or long thin waxy shoots (often referred to as waxy rhizomes). Each of these types of propagule contains dormant buds which under the right conditions, will sprout and grow. If you detect any of these on your plants, they can be removed, rooted in starter mix, and before long, the result is an additional plant or plants for your collection.

"Genera which produce propagules and rhizomes include gloxinia and achimenes."

Rhizomes are thickened stems normally growing horizontally about half an inch below a pot's soil line (often referred to as scaly rhizomes). Gesneriads form rhizomes when their underground stems and leaves become enlarged and are converted to storage organs. Example genera which produce rhizomes are achimenes, kohleria, smithiantha, and diastema. Rhizomes resemble small pine cones and can be very small or quite large. To propagate rhizomatous material you should collect rhizomes when your plant material is dormant. This is accomplished by separating the rhizomes from your potting mix when it's completely dried out. Collected rhizomes can be stored in a plastic bag or jar for several months before planting. Plant material producing rhizomes, like tuberous producing material, can be successfully propagated by tip cuttings. To restart growth in dormant rhizomes, take 3 to 6 short pieces (1 to 2 inches in length) and place in a 4" to 6" pot. Cover the rhizomes with approximately an inch of potting mixture, keep evenly moist and in a well-lit spot until new growth begins.

"Genera which produce stolons include episcia, saintpaulia and some species of chirita."

"Stolons are rooted when they resist a gentle tug."

"Most growers are familiar with starting new plants by dividing multiple crowned plants."

Propagating Box

Stolons are reproductive plant structures which are located above ground. Often times, these are referred to as runners. Stolons are botanically classified as modified stems. Example genera which produce these structures are chirita (some but not all species), episcia, and on rare occasions, saintpaulia. There are two techniques which you can use to propagate stolons. The first and safest way is to leave the stolons attached to the parent plant. There are two ways of doing this: the first is to pin the stolon base to the surface of the potting mixture in which the parent plant is growing; the second is to pin the stolen base to growing media contained in a pot separate from the parent plant. Either way, after numerous roots have developed from the stolon (i.e., it resists a gentle tug), it can be cut from the parent plant and individually potted and treated. The second method or technique is to simply cut a stolon from the mother plant, trim it off 2 inches from the leaf base and plant it directly into rooting mixture. A stolon potted using this method must be kept moist and preferably sealed in an enclosed environment, e.g., plastic bag or propagating box, until it's well established. In addition, material treated this way will require "hardening-off ", i.e., needs to be slowly acclimated from the high humidity in which it was rooted to the lower humidity of general growing conditions. This is accomplished by cutting several very small holes in the plastic bag then enlarging them over a period of two or three weeks until the bag eventually shows no condensation forming from within.

PROPAGATION: Common Genera

Achimenes	tip cuttings, rhizomes, propagules, divisions
Aeschynanthus	tip cuttings, divisions
Chirita	tip cuttings, divisions, stolons (some species)
Codonanthe	tip cuttings, propagules, divisions
Columnea	tip cuttings, divisions
Episcia	tip cuttings, stolons
Kohleria	tip cuttings, rhizomes, divisions
Saintpaulia	leaf cuttings, divisions, stolons (very rarely)
Sinningia	tip cuttings, tubers
Smithiantha	tip cuttings, rhizomes
Streptocarpus	leaf cuttings, divisions

STARTER MIX RECIPE

The following recipe is time-tested, reliable and suitable for propagating all gesneriads. Because all the ingredients are "sterile", pasteurization either by heat or microwave treatment is not necessary nor recommended.

1 cup each of perlite and vermiculite
1/2 cup of seedling mix or very fine milled peat moss
1/4 cup charcoal or activated carbon

REFERENCES

Gesneriads: The Miracle Houseplants, Viriginie and George Elbert

African Violets: Gifts from Nature, Melvin J. Robey