

AFRICAN VIOLET CHIMERAS: A PRACTICAL USE OF MICROPROPAGATION

Roy A. Larson

"Tissue culture" are two prominent words in plant science, and "biotechnology" is even more popular. A tax-paying flower grower might wonder if anything worthwhile is coming out of such research. The development of "Pinwheel" African violet flowers would provide an affirmative answer to such a question.

I have seen the "Pinwheel" African violets studied by Dr. R. Daniel Lineberger and his colleagues in the Department of Horticulture at The Ohio State University, and I was very much impressed with them. I asked Dan if he had any pictures to put in the Bulletin and he responded very quickly and positively. (Dan is a graduate of our Department, and his brother Paul is our greenhouse superintendent, but he would have been very cooperative anyway).

Dan wrote an excellent article on "Micropropagation of Chimeral African Violets," published in Research Circular 284 of the Ohio Agricultural Research and Development Center, and the avid African violet enthusiast should refer to the original article for more information than I am reporting here. Most of my information comes from Dan's letter which accompanied his report and photographs.

First of all, "pinwheel flowering" means that the flowers are bicolored, with a banded arrangement of coloring. The "spokes" are one color, while the spaces between the spokes are of another color. This arrangement of coloring is lost with leaf cutting propagation (Figure 1). One can remove the terminal portion of the plant and root the "suckers" which develop but it is hard to obtain many new propagules with this procedure, and diseases can be a problem. Dan and his associates found that a high percentage of pinwheel flowers could be produced if inflorescence explants were used. Ninety-six percent of the plantlets produced from flower tissue will be pinwheels, while over 70% of the plantlets from leaf tissue will be dark purple.

A flower cluster of "Valencia" is shown in Figure 2, five weeks after it was placed in culture. The plantlets produced in the leaf axils are grown to flowering size. One can see how large numbers of plantlets can be produced with this technique.

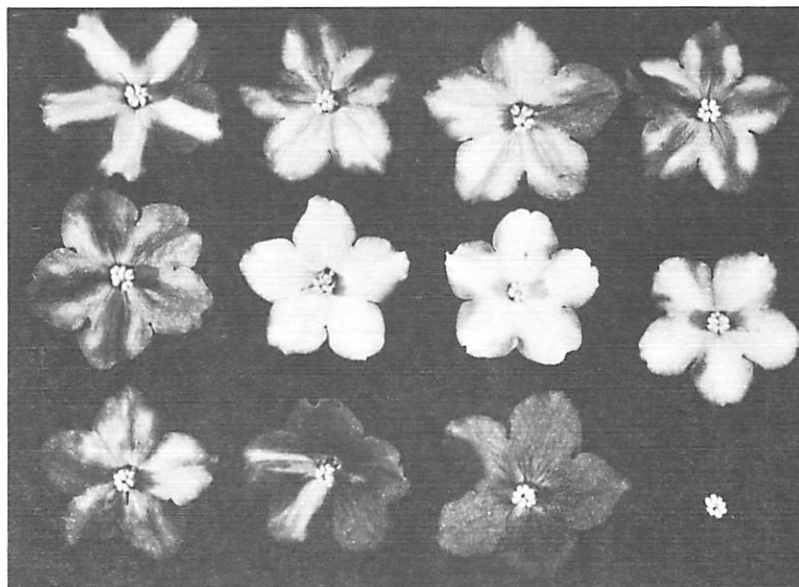


Figure 1. Variation in "Valencia" African violet flowers when leaf tissue is used in propagation. The true flower type is shown in the upper left-hand corner, but 70% of the plantlets will have purple flowers (bottom right).

continued on page 10

African Violet Chimeras—(continued from page 9)

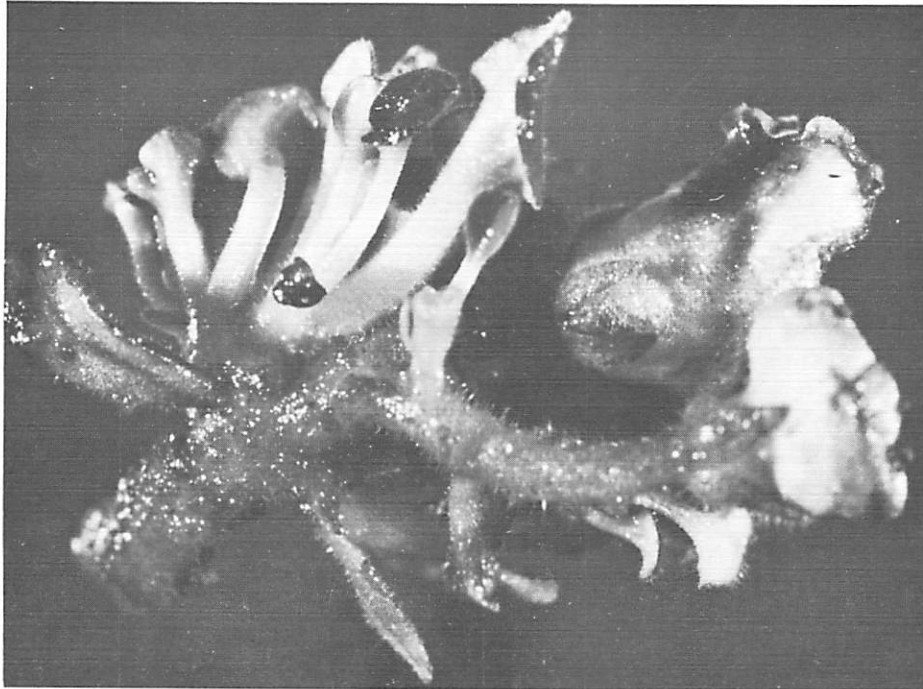


Figure 2. Plantlets of "Valencia", 5 weeks after placement of the flower cluster in tissue culture medium.

Some outstanding sports are shown in Figure 3. Dan hopes some of them will be registered and released early in 1986. "Valencia," incidentally, was developed by Hugh Eyerdom, Grainger Gardens, Medina, Ohio, and the Ohio State University personnel are using their tissue culture expertise in the further improvement of the plants. Some of the research is supported by a grant from the Fred C. Gloeckner Foundation.

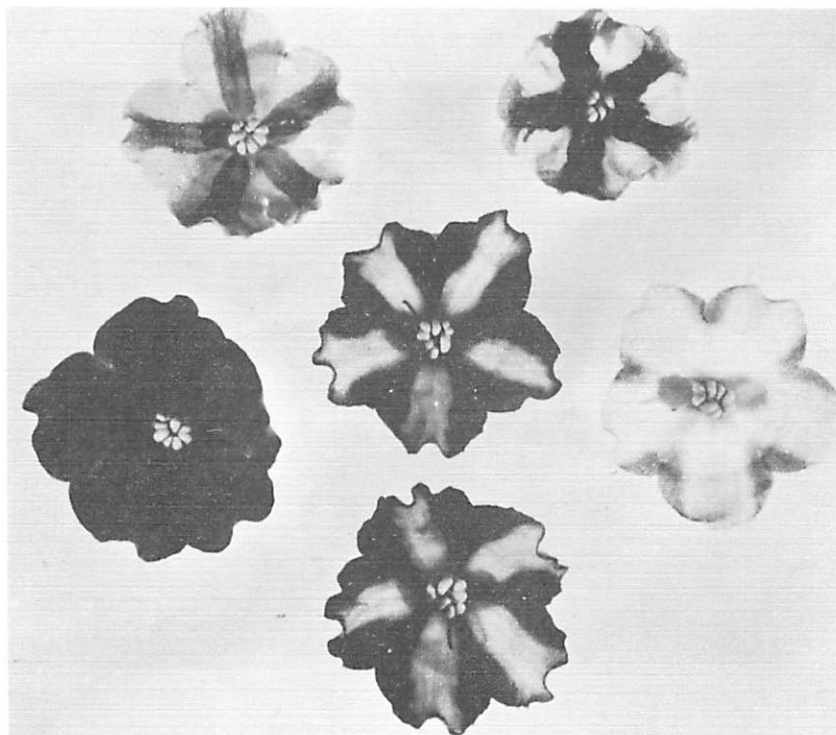


Figure 3. Some unusual and outstanding sports from the original "Valencia".

1986 AGRICULTURAL CHEMICALS SCHOOL - This meeting will be held January 13-14, 1986, at the Jane S. McKimmon Center in Raleigh. Recertification credits will vary according to the specialty areas offered. For more information, contact John Wilson, Department of Horticultural Science, 737-3113.

RECERTIFICATION OPPORTUNITIES - In addition to the above schools, the following meetings will be held. Anyone wishing to attend one or more of these meetings should call the corresponding telephone number to confirm the credits given, locations, dates, times, etc. Registration fees may be required at some meetings. The Extension Service recommends that reservations for classes be made 3-6 weeks in advance of the meeting. (Note: Additional recertification opportunities will also be offered; call your county extension agent for more information.)

SOME PESTICIDE RECERTIFICATION CREDIT MEETINGS
January 1986 - August 1986

<u>Date</u>	<u>Location</u>	<u>Name of Meeting</u>	<u>Credits Pending</u>	<u>Contact</u>
Jan 6	Raleigh	Pesticide Review	All categories	919-737-3113
Jan 8-10	Winston-Salem	Turfgrass Conference	Orn. & Turf	919-737-2751
Jan 21	Winston-Salem	Regional Dealer Pesticide Review	All categories	919-767-8213
Jan 31	Raleigh	Crop Improvement Assoc.	Seed	919-737-2851
Feb	Raleigh	Ag. Aviation Assoc.	Aerial	919-737-2703
Feb 11	Greenville	Regional Dealer Pesticide Review	All categories	919-752-2934
Feb 17	Shelby	Winter Fruit School	Ag. Pest-Plant	919-737-3283
Feb 18	Asheville	Winter Fruit School	Ag. Pest-Plant	919-737-3283
Feb 19	Hendersonville	Winter Fruit School	Ag. Pest-Plant	919-737-3283
Feb 20	Wilkesboro	Winter Fruit School	Ag. Pest-Plant	919-737-3283
Mar 6	Asheville	Dealer/Applicator Pesticide Review	All categories	704-255-5522
May 21	Raleigh	Turfgrass/Landscape Field Day	Orn. & Turf	919-737-2751
June	Mountains	Forest Pest Control	Forest	919-733-2162
June	Piedmont	Forest Pest Control	Forest	919-733-2162
June	Coastal Plains	Forest Pest Control	Forest	919-733-2162
Aug 6	Greensboro	Vo. Ag. Conference	All categories	919-733-3001

This schedule was taken from Pesticide Update, published by the Pesticide Section, North Carolina Department of Agriculture, Food and Drug Protection Division.