

# The Trillium



Piedmont Chapter  
North American Rock Garden Society  
Chapel Hill, Durham, Raleigh, NC

## Starting Hardy Cyclamen Seed with the Aid of the Capillary-Fed Bottle-Pot

By Maurice Farrier

### Introduction

The bottle-pot, made from 2-liter drink bottles, enables an amateur with limited resources and experience to germinate seeds that otherwise might not be attempted (Farrier, 2009). It was especially helpful for starting hardy species of cyclamen which have a 3-month germination period requiring darkness.

### Starting Fresh Seed from Stock Plants

Fresh seed of *Cyclamen hederifolium* was available in the garden here in the Piedmont of North Carolina in late May or early June. When the surface of the half-inch round capsules on the coiled stems over the tubers began to show impressions of the seeds within, the capsules were snipped and brought inside to dry further. To wait longer hazards the possibility that the capsules will rupture and that the ants will steal the seed! These capsules had been protected from rodent predation during the previous winter by placing circles of half-inch hardware cloth around the plants in October before leaf fall. The previous winter the seed had been decimated by rodents feeding under leaf litter and snow cover.

After the capsules dried indoors for about a week, the skin rolled back in a circle, revealing the darker-colored seeds. When fresh, they are coated with a sticky substance. If teased apart with the point of a wooded pencil, they adhered to it and thus were transferred to one of the twelve quarter-inch deep dibble holes (8 around the margin and 4 in the center of the growing mix). That spacing permitted growing until the tubers reached dime-size at which time they were transplanted. The dibbles were closed with a fine spray. If the germination was poor (as it usually was with dry-stored seed), they sometimes grew to quarter-size and a few of the more vigorous white one even bloomed under the hood. Larger tubers transplant more successfully than smaller ones. Four-inch (10cm) plastic labels were placed opposite the fill-holes face out so they were visible without removing the hood. Also, this enabled quick recognition of the position of the fill-holes.

The growing mix consisted of equal parts of Fafard 3B and perlite.

### Light Inhibits Cyclamen Seeds Germination

Darkness can be obtained in many ways: covering seeds well (Reilly, 1978); placing the seeded pots in a basement coal bin (Goodwin, 1984); or placing the seeded pot inside a closed plastic bag and then into a desk drawer (Alderton, 2010).

I am testing a half-gallon juice carton inverted over the hood to see if it is adequate or if a black plastic film inner-liner is also needed if pots are placed in a lighted area. Also, I have observed that several interruptions of the darkness of an hour or two over the 3-month germination period did not reduce germination. Oddly, the



**Maurice Farrier, Professor Emeritus, NCSU**

Photo by Bobby Ward

European literature I have seen so far does not recognize light inhibition of cyclamen seeds. Perhaps they plant deeper?

### Three-month Germination Period

The seeded pots with their hoods and caps in place were set on the heating ducts in a partially excavated basement with a seasonal temperature range of 65° to 70°F (17°–25° C). Optimum temperature would have been 60° F (16° C) (Grey-Wilson, 1988, p.43). This windowless space provided the darkness needed for good germination. The household heat provided warmth to encourage winter growth.

When the small circular leaves began to appear in late September, the two 40-watt fluorescent tubes (GE “Residential”) with 16-hour day were lighted. Four tubes and 17 hours would have been better (Grey-Wilson, 1988, p.40). The seedlings were grown there until after the deciduous leaves came out in the spring - about April 20. Trees provided shade for the outside frame.

### Fertilization

After most plantlets had one leaf on them, ¼ teaspoon of 20-20-20 soluble fertilizer with micronutrients was placed through the fill-hole into the water chamber and the water level adjusted. Subsequently, that amount of fertilizer was added at most refills.

### Hood removal

Removal of the hood must be gradual or seedling survival will be poor. The hood was removed after the leaves crowded against it.

With the plants still under the lights, first remove the cap for a week, and then lift the hood a quarter inch for a week. Subsequently, raise it a half inch for a week... Finally, remove the hood. Goodwin (Circa 1993) cautioned me about too rapid removal of the cover when I complained to her but losing them. With the hood removed, the water level needed more frequent adjustments.

Come summer they were set outside in a shaded frame sheltered from the rain in anticipation of planting in the Fall. Caution was taken during the summer that they were not over-exposed to the sun and that the water-level was checked weekly or more often during extreme heat.

### Planting Out

With the arrival of cooler weather the tubers were planted out under mixed hardwoods of oak and maple. The leaf litter was scratched aside. The top inch or so of mineral soil was loosened after a light application of rock phosphate. If bone meal or another organic fertilizer had been used as a phosphate source, it could have risked a raccoon rip-out! Deeper tree-root disturbance would not have weakened the trees. Leafed out trees tend to dry the soil during the summer season when the tubers are dormant. A mixture of equal parts of leaf mold and sharp gravel was mixed roughly with the loosened soil making a drainage-promoting mini-berm. When the little tubers were planted below the surface, both the sharp gravel as well as being out of sight helped deter the squirrels. As added protection, a piece of chicken wire was pinned down overall. Tuber spacing was 4 to 8 inches (10 to 20 cm). The screens of the pots were saved for re-use, the wicks discarded and the bottle-pots were set aside to be disassembled and washed with dish detergent.

### Seed Exchanges

To gain access seeds from other than one’s own stock plants, seeds may be obtained through seed exchanges or purchased from specialized sources. Two annual seed exchanges are available under the auspices of the



Photo by Bobby Ward

**Fresh seed planted just over a year ago produced more than thirty plants of Cyclamen coum by utilizing 2-liter bottle-pots under fluorescent lights.**

North American Rock Garden Society (NARGS), the Ephemeral Seed Exchange and the dry-stored Seed Exchange. Membership in NARGS – not just membership in a local chapter – is required. Though not onerous, the rules for the requests must be followed. Seed Requests are filled by volunteers and if the requests are disorderly or undecipherable, they are laid aside until after the easily filled requests are completed. (Been there and done that for days on end.)

Similar exchanges exist in other geographic, horticultural and botanical areas. I have found that “Horticultural indigestion” may be incurred by excessive requests from their tempting menus. Sometimes one will be lucky enough to get “pass-along” seed from friends.

### Starting Dry-Stored Seed

Although the best germination was obtained with fresh seed, dry-stored seed is more readily available in a larger assortment of leaf patterns, flower colors and species.

Schellinger (1995) suggests “soak the seed in hand-hot water with a little liquid soap for 24 hours. Drain off and repeat... and sow immediately after the second 24 hours.” That improved germination for me. Some advocate a 24 hour soak in warm water without the detergent (Goodwin 1989 and Grey-Wilson 1988).

### Some Species for the Piedmont of North Carolina

Of the two most widely adopted hardy species of cyclamen (Goodwin 1991), I have been more successful so far with *C. hederifolium* than *C. coum*. *C. hederifolium* is now “escaping” into the woods some distance from the original planting.

For a jump-start, tubers of both species are available for stock plants from some mail order flower bulb companies in the U.S. With 14 capsules of *C. hederifolium* averaging 21.6 seeds per capsule (range 5 to 25), a couple of stock plants would provide fresh seed for a nice drift. Six capsules of *C. coum* averaged 27.2 (range 24 to 33) seeds per capsule. Purchased tuber should not be wild-collected as some species are endangered.

All species of hardy cyclamen mature their seed during the same season, mid-May to mid-June in the Piedmont. They differ in their bloom times. *C. hederifolium* blooms August through November and *C. coum* flowers December to March, even in the snow (Goodwin 1991). Together these two species can lift the spirit during the most of the somber months. Both show an occasional flower a month before the ranges stated. *C. cilicium* blooms beginning in October and if added would provide continuous winter flowering. It is suggested for the Piedmont by Goodwin.

Other species of cyclamen that Goodwin (1991) suggested for the Piedmont (with flowering times) are: *C. graecum* (not specified), *C. intaminatum* (August to October), *C. repandum* (March to May), *C. pseudibericum* (March to unspecified) and *C. purpurascens* (summer).

### Conclusion

Cyclamen seeds moved across international borders more readily than tubers. Growing from seed provided more plants at less cost than purchasing tubers.

Continuous winter garden color in the North Carolina Piedmont may be achieved by growing three hardy species, *Cyclamen hederifolium*, *C. cilicium* and *C. coum*. Growing hardy cyclamen from seed to bloom with the bottle-pot under fluorescent light requires at least one and a half years or longer. With patience and moderate effort a display on a well drained slope under deciduous hardwoods can lift sagging winter spirits.

*The author thanks Janet, NARGS librarian, and Arthur Nicolls of the Cyclamen Society for aid in obtaining some of the literature. Paul V. Nelson, Department of Horticultural Science, NC State University, shared information on the principles and function of the capillary system.*

### CITATIONS

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## NARGS Seed Exchange

In order to make the NARGS Seed Exchange as full and exciting an offering as possible, we need the help of all NARGS members. First, we need your seed donations. As few as five packets of desirable seed will earn you Donor privileges: an extra ten packets of seed with your order and priority in having your order filled in January.

And what makes seed "desirable?" We are a society devoted to rock and alpine plants. However, that is not all that most of us grow in our gardens. So seed of a wide range of plants would be helpful: interesting perennials (not too terribly large or rampant), native plants (especially wild-collected seed), smaller shrubs, and even the occasional rare tree. We're not interested in receiving seed of common trees, fruits/vegetables, or large tender annuals and bulbs, which will not earn Donor status.

We also need help in packaging the donated seed - actually, re-packaging, and making lots of small packets out of the larger ones. This phase of the Seed-Ex is done in early December and can be completed at (or after) a Chapter meeting, in a separate group session, or on your own in the comfort of your home. Volunteer work for the Seed-Ex also earns you Donor Status, so that you can receive the extra ten packets of seed, as well as priority in having your order fulfilled.

So, round up some friends --and, especially, new chapter members, to give them an opportunity to feel a part of the group. Chapters who have done this work for years (like Rocky Mountain and Wisconsin-Illinois) thoroughly enjoy it and have made it a day of socializing and fun, prizes and food, readings and chatting - not to mention the production of thousands of seed packets. Contact Joyce Fingerut if you can help.

Look for the Seed List on our website on December 15. Go to: <http://www.nargs.org> (Click on Seedex)  
If you will need a print copy of the Seed List, contact by November 15: Joyce Fingerut, 537 Taugwonk Road, Stonington, CT 06378-1805 <[alpinegarden@comcast.net](mailto:alpinegarden@comcast.net)>

### LOST OBJECT FOUND

Did you lose a shirt at the May picnic - anywhere along the way?

A lovely shirt was turned in as we left Graham Ray's home and I still have it.

*It wants to come home.*

If you think it is yours, please email me and describe the shirt you lost and I'll bring it to you at the next meeting or arrange something.

[Marian42836@yahoo.com](mailto:Marian42836@yahoo.com)

### Announcement from Piedmont Chapter Member

Looking to purchase a mature garden, close to RTP.

Contact:  
[gardenfind@gmail.com](mailto:gardenfind@gmail.com)



### I'll Earn Your Trust

If you are looking for a home with a garden to enjoy, I can help. I have now worked with several members of our group to do this very thing. And I can help you.

I have over 30 years of selling homes and running plant businesses—I feel I am qualified to work with serious plant lovers who are finding the perfect new one. It may be stressful finding

**Patricia Scolnik, Broker**  
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## Piedmont Chapter Meeting

JC Raulston Arboretum  
RUBY McSWAIN Education Bldg

Sept. 25, 2010

9:30 am

“Managing Arthropod Pests & Conserv-  
ing Natural Enemies in Ornamental  
Landscapes”

**Steven Frank**

Department of Entomology, NCSU  
Raleigh, NC

**Fall Plant Sale Follows Meeting**

*The Trillium*, Newsletter of the Piedmont Chapter  
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104 Birklands Dr., Cary 27511

Elsa Liner elsa\_liner@hotmail.com

919-942-1766

331 Burlage Circle, Chapel hill 27514

Marlyn Miller marlynmiller@earthlink.net

919-467-3554

1107 Imperial Rd. Cary, NC 27511

Patricia Scolnik bzhh@aol.com

1627 St. Marys

Hillsborough, NC 27278

### TRILLIUM EDITORS:

Dave Duch and Marian Stephenson

marian42836@yahoo.com

919-918-3580.

750 Weaver Dairy Rd, #205, CHill 27514

### OTHER SIGNIFICANT POSITIONS:

Sept. Plant Sale Manager: Kirtley Cox

Refreshments: Gwen and Maurice Farrier

## Bring Goodies to Share

If your last name begins with the letters indicated below,  
please consider bringing something tasty to share.

Sept	A—C	Jan	L—N-
Oct	D—G	Feb	P—So
Nov	H—K	March	Sp— Z
		April	Any-All

### Your Attention, Please



The first two meetings of the Piedmont Chapter  
will be on the 4th Saturday of the month, not the  
usual 3rd Saturday. Please clip the meeting schedule  
and post in in your calendar or refrigerator!



## Chapter Annual Fall Plant Sale

Our September 25<sup>th</sup> meeting and plant sale will soon be upon  
us, so it's time to get your contributions divided and potted up. Good  
plants of all sizes, shapes and maturity are needed. We encourage you to  
pot up your contributions early, so they will have some time to establish,  
rather than waiting until the day before.

Bring plants in clean pots and label each pot; we don't have time  
to do it that morning. **Remember to have the labels complete, accu-  
rate and legible. Please print.**

We will start setting up at 9:00 am, and will be eagerly accepting  
plants at any time between then and the start of the sale. The program  
starts at 10am with the sale beginning immediately afterwards. Remember  
that contributors will have a few minutes head start at the beginning of  
the sale.

For more information, contact me at 919-489-7892 (H) or by  
email (kirtley@ncrrbiz.com).