Growing CP Under Lights

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A lot of enthusiasts seem to be growing carnivorous plants under artificial light these days, but surprisingly little has been written in these pages regarding this method of cultivation. Considering the nastiness of our Wisconsin winters, it seemed only logical to grow many of the tropical or subtropical species indoors where conditions may be more easily and less expensively controlled.

Prior to my move to these more northerly climes, I grew only two species indoors in Tallahassee, Florida year-round. These were Drosera schizandra and D. adelae. All other species seemed to prosper in culture outdoors in my greenhouse. But with the prospect of temperatures of twenty degrees below zero [F.] and possibly even lower, it seemed wise to gain as much knowledge as possible concerning artificial light cultivation. But, as mentioned, very little information was found on the subject. So it was mostly a matter of simple trial and error.

Now, after better than a year, I can certainly recommend this method of growing to others. Some of the plants growing in my indoor growing area are truly prospering, especially the Mexican Pinguicula species and Darlingtonia californica. For the most part, plants are from 25 to 40 cm away from the lights depending on the pot depths. My growing area is located in my basement and began with two simple shop lights hung over a table made of spare lumber. The lights were equipped with two Grow Lux and two cool white 4 foot fluorescent tubes. This set-up has evolved to a nearly room-sized area with six banks of lights and more to be added soon.

Temperatures reach an average of 50-55 during the winter months and typically are in the seventies during the summer. Humidity runs between 40 and 60% and this is supplemented where necessary with a light misting twice a day. In these conditions, most carnivorous plants may be grown in rather drier conditions than we usually associate with successful cultivation. The main problem lies in the area of fungus infections which seem to thrive in cool, overly-damp soils. Therefore care must be taken in maintaining a just-damp growing medium. I seem to have a bit of success in controlling the various fungus attacks by using vermiculite in my soil mixes as it tends to keep a more open, well-drained soil structure and is effectively a rather sterile medium in itself. It seems particularly suitable for Pinguicula species.

Generally, under my conditions, I need to water less than once a week. I use distilled water for this as it helps keep conditions more closely controlled and will not kill live sphagnum. Generally I use two gallons or less a week including the water used for misting. I pour a small amount of water into the trays the plants are growing in so that there is only a small amount around the base of each pot to be taken in by capillary action. This may be supplemented with some syringing of individual pots needing more water. I think most readers would be surprised at how dry most of the soils get between watering yet even such species as Darlingtonia, which in natural habitats thrives on water, seem to respond incredibly well to these decreased moisture levels.

The key seems to be the relatively cool temperatures and high humidity provided naturally in the basement and by misting. All Drosera species constantly display heavily dewed tentacles and while the leaves do not seem to be as large as on outdoor grown plants, the indoor plants seem to maintain a higher number of active leaves.

As for light levels, I do not supplement my lights with reflectors at all yet most plants color-up very well including Dionaea. My experience is that the cooler the tempera-

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tures are during the active growing season, the more light the plants seem to take in and subsequently traps assume the healthy-looking "natural" colors.

I am currently growing, and having success with the following species: Drosera alcaea, D. hamiltonii, D. spatulata, D. prolifera, D. capensis, D. binata [all forms], D. adelae, D. schizandra, Cephalotus, Darlingtonia, Pinguiicula caudata, P. x kewensis, P. gyposcola, P. iomantika and P. planifolia.

I maintain an eight to nine hour light cycle during the winter months and increase to sixteen hours during the summer.

monthly feedings of Miracid®, [1/4 teaspoon per gal], as do Sarracenia and several Drosera spp. However Miracid® has stunted growth and inhibited pitcher formation in Nepenthes.

Pests and problems have been few and for the most part easily handled. The worst problem was heater failure on a very cold night which burned the leaves off the lowland Nepenthes and cut the Droseras back to the soil. Pests have included thrips [which were easily controlled with a rose dust], caterpillars, and wasps which bite off developing pitchers. Much worse are the Maidenhair Ferns [Adiantum spp.] that pop up now and then. Their very vigorous root system is capable of choking out a weaker plant. I found this out by letting some grow in a pot with an Anthurium. They should be destroyed as they appear.

Lastly I would like to thank Dr. Kiat Tan of Marie Selby Gardens, Patrick Nuff of Longwood, Joe Mazrinas and CPN, anonymous friend, and all the others who have spurred my interest in one of God’s most unique creations, the Carnivorous Plants.

SPECIAL ANNOUNCEMENT

NEW WALL CHART AVAILABLE. Keith West, one of the foremost botanical artists of the world, is completing a series of 16 24"x31" full color wall charts depicting composite scenes from major US botanical regions, somewhat similar to the British Museum’s series for Britain. The first four are completed, and one is on Southern Pinelands, included in the paintings, four species of Sarracenia, two Droseras, one Pinguiicula and two Utricularias. Included in the scene are various pinelands orchids and other associated plants familiar to those who have botanized the eastern coastal plain. This chart is No. 306C, costs $8.00 (plus $1.50 postage) and is available from the New York Botanical Garden Shop, Bronx, NY 10458. The plants are all very well done as is the printing.