

CULTIVATING THE ORCHID FLOWERED BUTTERWORTS

By Steve Smith Rd #1, Box 296 Kirkwood, NY 13795

Cultivating the orchid flowered butterworts can be a very rewarding experience. The rewards include delicately shimmering leaves, beautiful flowers in the spring and sometimes leaves on plants ranging in size from 4 cm (*P. cyclosecta*) to 20 cm (*P. moranensis*). The six species of *Pinguicula* that form the *Orcheosanthus* section are: *P. colimensis*, *P. cyclosecta*, *P. gypsicola*, *P. macrophylla*, *P. moranensis* and *P. oblongiloba*. I have grown all of them with the exception of *P. oblongiloba*, which should be added by the spring of 1982. My collection also includes other species that respond well to the same cultural conditions as do the orchid flowered butterworts. These include *P. lilacina* (whose leaf margins roll down instead of up), *P. parvifolia* and *P. hirtiflora*.

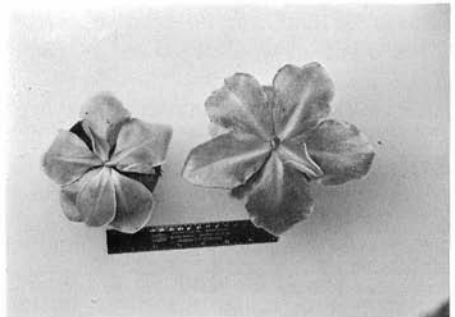
These plants respond exceptionally well to cool, damp conditions that can be provided in a building cellar. Ideal temperatures for good growth will be a maximum of 26°C (78°F) during the summer and down to 10°C (50°F) during the winter dormancy period. Do not expose to freezing temperatures as you will surely lose your plants. Day and night temperatures should vary only by a few degrees for best results. The humidity is generally between 60 and 90 percent during the summer months and drops between 40 and 50 percent during the winter months, and appears to be ideal for these plants.

Having experimented with natural and artificial lighting, best results were obtained using the latter. I use a four-tube fluorescent fixture consisting of two Verilux Tru-bloom bulbs, one cool white bulb, and one Sylvania Gro-lux bulb. Placing the plants from 30 to 38 cm below the lights will give good size and will enhance good coloration. Distance can be increased to 61 cm or more which will

result in larger plants, however, longer distances will cause loss of delicate coloration of the leaves.

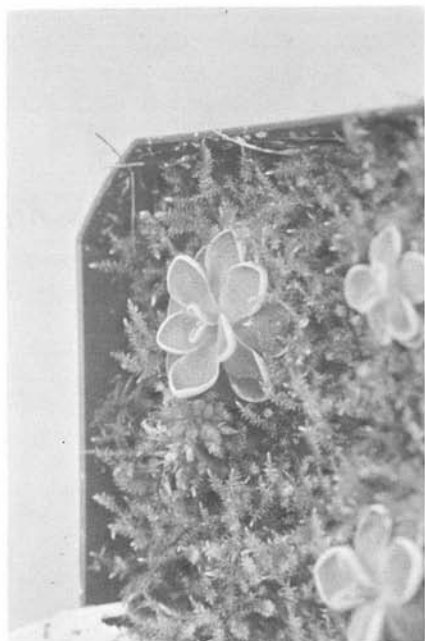
I have experimented with several growing mediums, and to date the best results have been obtained using chopped sphagnum moss. Plants grown in peat/vermiculite mix did reasonably well, as did plants grown in pure peat. The sphagnum is chopped into approximately 3 cm long pieces and lightly packed in the bottom of a 7.5 cm shallow pot to within 2 cm of the top. Then the pot is filled to the top with milled living sphagnum, which I chop in an ordinary food blender. The milled top layer prevents the larger pieces of sphagnum from overgrowing small plants and dormant buds. One plant is planted in each pot except for *P. gypsicola* (four per pot), *P. cyclosecta* (three or four per pot), and *P. parvifolia* (two or three per pot). At this point I would like to add that despite reading several articles written by other growers on adding limestone to their growing medium, my plants were grown without any lime whatsoever. Plants were extremely healthy and prolific, indicating lime is not a necessity for healthy growth.

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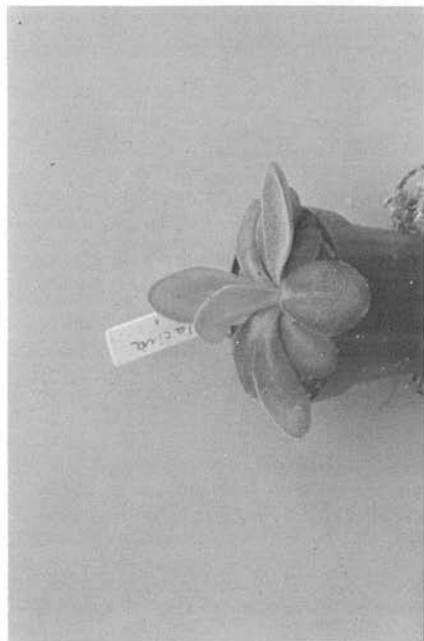


Two forms of *P. moranensis*:
P. moranensis Oaxaca (left)
P. × kewensis

Photo by S. Smith

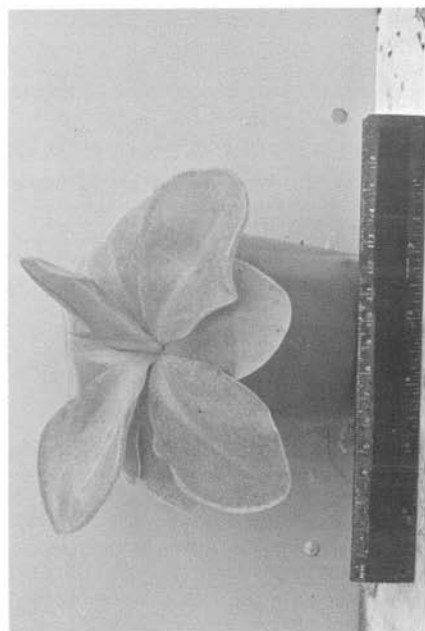


P. cyclosecta



P. lilacina

Photos by S. Smith



P. moranensis



P. parvifolia



Small *P. gypsicola* cutting

Photo by S. Smith

Orchid Butterworts (Continued from p. 46.)

With the exception of *P. hirtiflora* and *P. lilacina*, these *Pinguicula* form dormant buds during the winter months. Leaves become short, succulent and numerous. These succulent leaves are the best for propagation, and up to $\frac{2}{3}$ can be removed from the central bud with no ill effects on next spring's growth.

As with other CP, water must be pure for best results. When and where possible it is best to use rain water. When leaves overlap each other and drape over the side of the pot, care must be taken not to wet the leaves when watering. A large bulb syringe is excellent for watering as the leaves can be carefully lifted and the plant can be watered with a gentle stream.

During the active growing season plants may be fertilized by *lightly* misting with a $\frac{1}{8}$ to $\frac{1}{4}$ strength balanced fertilizer once every four to six weeks. Fish emulsion is not recommended as it entices fungus growth.

These plants can be propagated either sexually or asexually. Thick, succulent winter leaves are spread on milled sphagnum or peat or vermiculite. The medium is lightly moistened and pot placed in a plastic bag that is sealed and placed in a warm, well lit environment. Approximately four to six weeks later small plantlets will begin to grow from the leaf base. When these plants are large enough to work with they are removed and planted in individual pots. Flowers are not self pollinating and pollination must be done by hand. This procedure is the same as for *P. lutea* described in CPN Vol. 8, #2, page 58. Seed pods begin to swell about 10 days after fertilization and mature four to six weeks later. Seeds are spread on milled sphagnum or peat to germinate. Seeds take approximately three to four weeks to germinate.

Those who are interested in obtaining these species should contact W.I.P., P. O. Box 303, Grant, Florida 32949 during the active growing season.