

seed it also takes 3 -4 weeks with that type medium or you can put a clear plastic cup for high humidity which might speed up the germination process a week earlier. I don't fertilize the seedlings but I treat with Superthrive solution once every two weeks. After they reach one-year old I don't use this hormone anymore since by now the seedlings have good roots. When they are three years old, they are transferred to pure live spagnum moss or 50-50 peat/sand mix.

I feel the key to growing these plants is filtered sunlight, good low conductivity water and allowing them a dormancy period. I leave the pot of seedlings in water all year. I spray-mist the seedlings twice a day: in the morning and in the evening. If they get any insect pests on them, I spray with Orthene pesticide which is very good for CP and doesn't harm the most sensitive plants.

Followup on Tuberous Drosera Propagation

by

Bruce Pierson
P.O. Box 179
Albion Park, N.S.W. 2527
Australia

In CPN Vol 20, No 3, P. 68, I reported on my attempts at the propagation of tuberous droseras by detaching the newly emerging plant from the tuber at the start of the season.

It is now the end of the season, and my tuberous droseras have all been unpotted and stored in small plastic bags for the summer. Normally, I would leave the tubers in their pots over the dormant period, but as we will be moving before the next growing season, I have packed them ready to be moved.

On inspecting the pots, I found that I had varying results with my experiments. Some detached plants produced tubers, whereas others of the same species did not. I would suspect that it is necessary to detach the plants a little closer to the tuber, in order to remove more of the stolon connecting the plant to the tuber, but still leaving sufficient stolon with dormant buds on the tuber to allow a new plant to be produced by the tuber after disconnection of the previous one.

Another method that can also be successful is to detach the newly formed tuber from the plant just before the plant starts to die down. This method is probably most successful with noncolonising species, i.e. ones that form a single replacement tuber at the end of the season. Many colonising species die down before the new tuber is formed, relying on the succulent I underground rhizome to produce the tuber. The new tuber is removed from the plant as soon as it is of sufficient size, and treated as a dormant tuber. The plant is again repotted and kept growing with weekly foliar fertilizing, and a new but probably substantially smaller tuber should be produced.

As a result of my weekly fertilizing program, I found that I had a higher survival rate of tubers, a higher average multiplication rate, and a larger average size of tubers.

I would expect to have a higher percentage of plants flowering in the following growing season as a result of the increase in tuber sizes. I used an indoor plant food of the low nitrogen type. I mixed it at full strength as recommended for the watering of indoor plants, but applied the fertiliser as a foliar spray. The type of fertilizer (whether organic or chemical) does not seem critical, but a correct balance of major nutrients is important, and trace nutrients would be considered beneficial also. Be sure to use a low nitrogen type, not a high nitrogen type, which may not give such good results.

Something else that I discovered accidentally, was the ability of some species to produce additional tubers from a stolon. While I was aware that this often happens with growing plants, I was a little surprised at my findings when inspecting a tuber of *D. macrophylla*. I had packed the tuber with attached stolon before the stolon had died back, and when I next looked several weeks later, I found several small "seedling" tubers along the length of the stolon. Hopefully these will survive to produce new small plantlets in the new growing season.

CLODS, Collectors, and Pseudo-Environmentalists

by

Barry Allan Meyers-Rice
P. O. Box 43771, Tucson AZ 85733, USA
bazza@indirect.com

I hate broken crayons. I had my first set when I was a youngster. I cherished them. When not using them in my colouring books or on the dining room walls, I lovingly kept them stored in their carton, arranged by colour. I stewarded my later and larger sets even more carefully. Every crayon was in excellent shape; I was disgusted if any were broken, dull, or embarrassingly short. Complete sets were nearly mandatory. I had the mentality of a collector even as a child.

I am still a collector, but now of books, music, and gargoyles. But my collector's personality makes its most breathtaking appearance in my relationship with carnivorous plants. When my carnivorous plant menagerie was still in its adolescence, I was not a collector so much as an accumulator, a packrat. I wanted every plant I did not have and would never have dreamt of parting with a species (although I constantly exchanged propagules with my trading comrades). With time I became more discriminating, and now I only grow *Utricularia*, *Genlisea*, *Sarracenia*, and several other favorite plants. (All right, I admit that about 150 species are more than several, but I do grow fewer extras than I once did. Really!)

A ritual performed by most plant traders, and especially those haunted by the hobgoblin that turns them into collectors, is the design and creation of an inventory of the plants in the trader's possession. Yes, I have built such a list, and to see it is to glimpse the raw mania of a collector's mentality. For each plant I grow, my list tabulates its size, trading availability, a short description of the plant's characteristics, and any other minutiae I deem important. All these data are compulsively arranged in a strict format—an inconsistency in any parenthesis or comma used to delimit data fields would be intolerable. Spelling errors would be sacrilegious.

My *Sarracenia* collection, a modern day set of crayons, is complete, or so it was until a few years ago. Consider the genus—it is easy to have a complete collection of these plants. The usual laundry list of species and subspecies includes only a dozen or

so taxa; adding a few more entries for noteworthy giant or anthocyanin-free types brings the total to just under twenty plants. Some species contain races with differing pigmentation patterns, notably *S. flava* and *S. alata*. Collecting all these races, as well as the intermediate or “ancestral” specimens of *S. rubra* is more ambitious but the resulting ensemble of forty or more plants is more interesting—a complete collection is surely a worthy goal for the intrepid accumulator. But in the last few years I have watched these checklists become infinitely inflated by the arrival of a new face on the collecting scene—a quantum of trivia referred to as “location information”. With location-information a plant like *S. minor* which (except for a giant type) is remarkably constant throughout its range instantly has many new types, all now distinct (at least on paper) and collectible. Suddenly my *S. oreophila* seems less valuable when *S. oreophila* (Boaz County, Alabama) or *S. oreophila* (Gravel Mountain) is in collections. And also I must void those nasty *S. purpurea* var. *purpurea* from my collection, because *S. purpurea* var. *purpurea* (Cook County, Illinois) is on its way. And I am not alone! On the internet and in letters I constantly hear from other growers who want plants with location-information. Surely, Compulsive Location-information Obsessive Disorder (CLOD) is spreading, and the number of CLODS (CLOD Sufferers) is escalating.

Truly, location-information is useful when trying to identify difficult plants like *Utricularia* or *Drosera*. But I have observed that *Sarracenia* collectors are usually the CLODS with the most advanced cases. In the genus *Sarracenia*, location information is only important when trying to puzzle the subspecific identity of *S. rubra* plants or perhaps naturally occurring hybrids. So why is the disorder reaching epidemic proportions?

I have four theories.

1) It may be that CLODS have an organic disease, one apparently transmitted by *Sarracenia*. But our esteemed Carnivorous Plant Newsletter coeditor-emeritus Dr. Don Schnell is a pathologist by trade, and I think if CLODS were carrying a disease surely we would have heard from him, just as we have heard about sporotrichosis. Of course, the eminent Dr. Don may be holding his editorial tongue if CLODS have a problem best treated by psychotherapy. If there are other CLODS in the Tucson Arizona area, would you like to meet with me? Maybe we could form a confidential support group?

2) Location-information adds another flavour to the enjoyment people extract from their plants. Earlier this year a friend and I watched a documentary about the animals that live by the Okavango river delta in Ngamiland, Botswana. The Okavango delta! I have a *Drosera* from there! While my mate was mesmerized by the lion cubs, all I did was try to see if they were trodding and tumbling upon *Drosera*. But does this sort of thrill carry over to *Sarracenia*? If you have *S. flava* in your collection, you already know it originally came from the southeast U.S.A. So why are the county, town, and road details so seductive to CLODS? Is the lure of Gulf County, Florida, really different from Santa Rosa's?

3) Possibly more people than I ever suspected share my mania for collecting. In this theory, traders accumulate plants because they love them and the plants are collectible; the added datum of location-information for each plant stimulates the collector's salivary glands. While it is relatively easy to acquire the twenty plants needed to complete a *Sarracenia* species and subspecies collection, obtaining a huge catalogue of plants each with location information indicating a unique origin is far more involved—attempting to achieve this goal results in a larger, more satisfying collection.

4) Finally, there is one more explanation I am often told by other growers. They say they want to have location-information for their *Sarracenia* so that when the plant goes extinct at that site then “at-least the plant will be in collections.” When CLODS use this justification to explain their obsession with location information, it is very silly

on several counts. First, when a wetland community is destroyed, a few token plants from that site do not represent a viable form of damage control. A population of plants at a site consists of many individuals, each genetically distinct from the others. It is this seething mass of genetic diversity which enables plant populations to evolve over time; a few individuals extracted from a habitat do not possess this diversity. Furthermore, plants taken from the wild are usually ones deemed interesting by the collector. A plant hunter stumbling through a Savannah filled with green *S. flava* who finds a single plant with pitcher lids a lovely copper colour is going to dig up that plant—the very one most unrepresentative of the genetics of that population! Plant collecting is not an effective or even marginal form of conservation; if you want to save a bog you must save the bog itself, not just a few token plants. Very few individuals have the resources needed to grow a complete population of plants from each location and that is what would be necessary for this scheme to work. So really CLODS who claim to have conservation agenda are either misinformed or unwilling to face the reality of their collector's mentality. And consider this many times while admiring other growers' lists or collections, I have observed plants with location-information which unambiguously identifies that the plants have come from places protected by National Park status or affiliations with The Nature Conservancy. How does the conservation alibi explain the illegal collection of these plants? This explanation CLODS use simply does not hold water, so we are left with the previous three possibilities.

I have nothing against CLODS. My best friends are CLODS, I am one myself. But let us be realistic. If you have the mania then relish it for what it is—a simple obsession to collect, collect, collect. Adding a location-information tag as a new parameter gives you a reason to have a new item in your plant inventory—six different variants of *S. oreophila* are more fun than just one. Perhaps having a larger collection enhances your status among other growers, perhaps it makes you feel proud. Perfectly fine motivations. But please, I am tired of the worn old story that you have a valid conservation agenda—that CLODS are acting upon sincere and valid concerns for the plants. Are you interested in protecting these plants and wetlands? Write your politicians, donate time or money to conservation groups, be an activist. But if you have the compulsion, do not package it in green wrapping: no one is fooled and it is irritating in its duplicity.

The use of Tannic Teas in Carnivorous Plant Culture

by

Rob Sacilotto, co-owner/manager Botanique Nursery, Rt. 1 Box 183
Stanardsville, VA 22973

I must admit, when I first heard about the use of tannins at the 1994 Atlanta ICPS meeting, I was skeptical. Larry Mellichamp mentioned it as a key in getting the dark red forms of *Sarracenia alata* to get their characteristic black-red color. Since our clones always turned dark after the hot days of full summer sun, I assumed the pigment was related primarily to heat and sun levels. It wasn't until much later that I realized that the three factors were probably related.

My experiments began as an attempt to reverse possible calcium build up in *Nepenthes* growing media. After returning from a trip to Florida in Dec.-Jan. of 1996, I was alarmed at the yellow, weak condition of the plants and the higher than normal death rate of some rather hard to get seedlings. I sent numerous dying plants to the Plant Pathology lab at Virginia Polytechnic Institute; a puzzle faced us with their report of "no pathogens were found". My next guess was that the well had been slightly