

January 2016 Newsletter



NEW ENGLAND CARNIVOROUS PLANT SOCIETY

(www.NECPS.org)

"The mission of the New England Carnivorous Plant Society shall be to share, to gain knowledge of, and to achieve expertise in all phases of growing, education, appreciation, and conservation of carnivorous plants in both culture and in native habitats."

This month's meeting will be held on
Saturday, January 9 at 12:30pm at:

[Roger Williams Park Botanical Center](#)

1000 Elmwood Avenue

Providence, RI 02907

(401) 785-9450

[Click Here For Directions](#)

New Members

Welcome Andrew Norris!



This Month's Meeting

This month's meeting will feature our annual and highly anticipated **Nepenthes Cutting Workshop** led by our president, Dave Sackett! Members will bring in their overgrown tropical pitcher plants and we will go through the procedure for propagating them into many smaller plants! If you have a large Nepenthes vine taking up space in your growing area, consider bringing it in for a pruning to benefit both you and other members. We anticipate that everyone will have a chance to take some extra cuttings home to "grow" their collection! **In addition** - We will be reviewing our contract with the new manager of the Roger Williams Park Botanical Center at the meeting. **members are encouraged to bring ideas to share to improve our contract; in addition to improving collaboration & future project ideas with the Botanical Center!**

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Announcements

- ❖ One of our members, **Natch**, has helped network the NECPS with www.world.org and there is a chance we could receive **many Sarracenia for conservation purposes**; including species with location data. See the NECPS forum for more details!
- ❖ **News Flash:** Animals Need Carnivorous Plants! - Interesting article [here](#)
- ❖ The **2016 ICPS Conference** will be held at the **Royal Botanical Gardens, Kew** in London on the 5th-7th of August. More details [here](#) & [here](#).
- ❖ **Volunteers** are needed for the [Rhode Island Flower Show in February](#), and the [Boston Flower Show in March](#). Members are encouraged to bring plants to display (as well as Venus Flytraps to do a live feeding, Sarracenia leaves filled with bugs, etc.) *See dates below.*
- ❖ **May 12, 2016** - "STEM day" at Wilton-Lyndeboro Middle/Senior High School from 6:00pm-8:00pm. Volunteers needed to setup carnivorous plant display (we also need plants to borrow for the display) from 3:00pm-6:00pm. Contact [Shaun](#) for more details.

NECPS 2016 Event Calendar (Tentative)

January	Annual nepenthes cutting & propagation workshop
February 13,	Introduction to the genus "Heliamphora" by Dave Sackett
February 18-21,	The Rhode Island Spring Flower & Garden Show
March 12,	Trip to Logee's Greenhouse
March 16-20,	The Boston Flower & Garden Show
April 9,	Carnivorous Plant Bog Building Workshop by John Twomey
May 12,	"STEM day" 6-8PM at Wilton-Lyndeboro Middle/Senior High School
May 14,	Trip to UConn Greenhouse
June 11,	Bog Walk (Location To Be Determined)
July 9,	Bog Walk (Location To Be Determined)
August 13,	Discussion regarding annual show, we will meet at Tower Hill
September 10-11,	13th Annual Carnivorous Plant Show at Tower Hill Botanic Garden
October	To Be Determined
December 10,	Annual Holiday Party & Yankee Swap

**Regular meetings may include: Bog Pruning & Maintenance, Guest Speakers, Workshops, Demonstrations, Silent/Live Auction, Plant Displays, Refreshments, and Informal Social Discussion. Unless otherwise noted, meetings are held at the following location:*

[Roger Williams Park Botanical Center](#)

1000 Elmwood Avenue

Providence, RI 02907

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NECPS Officers & Contact Information

President	Dave Sackett	bid2win1@yahoo.com
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Secretary	John Twomey	Jtooms60@verizon.net
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Webmaster	Ken Matteson	packrat@ratters.com
Newsletter Editor	Rich Yerry	NECPSNews@gmail.com

Additional NECPS Information

- ❖ A copy of our **membership application** can be found [here](#).
- ❖ The NECPS **Library Policy & Current Inventory** can be found [here](#).
- ❖ Carnivorous plant [Frequently Asked Questions](#).
- ❖ Check out our [Guides and Care Sheets!](#)


 A Proud Member of the [International Carnivorous Plant Society Web Ring](#)


Bog Update as of December 2015



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Member Submission

This month our newest member Andrew "Drew" Norris submitted an article he wished to share with all of us. Drew often participates in Tower Hill's Gesneriad & Begonia shows.

Growing High Elevation Tropicals: Building a chamber to accommodate cool growing Tropicals, Alpines, and species requiring cold dormancy

By: Andrew Norris

In addition to my love of Gesneriads, I've found myself intrigued by carnivorous plants, especially species that grow high up in SouthEast Asian cloud forest, where temperatures drop to from the low 60sF to experiencing brief frost. Not only does the temperature drop occur, but humidity simultaneously rises to nearly 100%. Carnivorous plants are not the only plants that require cool drops in temperature for health and blooming. Some plants require seasonal drops in temperatures for a winter rest, still others require the reduction in temperatures to induce blooming. Orchids, flytraps, alpine gesneriads, rarer species, such as Saintpaulia goetzeana, Sarmienta scandens, and even some Columnea are among the gesneriads that enjoy cooler nights than the typical household environment can provide.

I had always avoided obtaining any of the exotic and often pricey carnivorous plants I saw in books and online, because I was put off by the prospect of providing the humidity and temperature drops they require. Not provided with the nightly chill, some fail to thrive, at best, while many will actually perish, literally growing themselves to death. The plant is essentially kept at full metabolism, as if it were a human being, jogging perpetually on a treadmill. It's respiration is increased and it just exhaust itself. Since many of these species are over \$100, for a small start, they are not plants to experiment on.

I recently decided it simply couldn't be impossible to cool a small area and grow some of these lovelies. I knew there were all sorts of methods out there using water cooled radiators, adapted wine chillers, refrigerator innards, air conditioning units, and even the über simple replacing of frozen water bottles into a terrarium at night. I researched many options and met with frustration at their unsuitability for the average person, either being too hard to regulate, expensive, or otherwise not possible to use inside a home. It was actually months of research and participating in online discussions that finally gave me a viable idea.

Johnston Controls makes a digital thermostat, which is designed to turn a conventional chest freezer into a wine chiller, keeping the temperatures well above freezing. A chest freezer has the advantage of being easily lit, with traditional sized fixtures, being well insulated, and reasonably inexpensive (for those inclined to grow such pricey plants). The concerns with using a freezer were that it would be so well insulated that it would not sufficiently warm, during the day or that it may exhaust itself by cycling on and off, multiple times per day. Deciding to try the freezer, the Johnston Control, freezer, and 6 tube T5 fixture were purchased.

A lid was constructed from framed plexiglass and it was time to play!

First, I was disappointed that the thermostat gave one option for temperature setting and was not paired with a built in timer. This meant I would have to place the thermostat (the freezer plugs directly into the thermostat, which plugs into a power source) on a timer and manipulate the on/off periods to facilitate a nightly cooling and daily warming. Secondly, it became apparent that the freezer, being so well insulated would become an oven, under the intense lighting required by the plants. The lid of the freezer was easily removed and replaced with the plexiglass lid and the experimentation began. In my excitement, I plugged in the light, after setting the thermostat to cool the freezer to 55F, from 12 pm until 6am, with the intention that the light would allow for a gradual warming to the maximum day temperature. The maximum day temperature would ideally be between 75F-83F, with below 80F preferred. I started with the chamber/freezer at room temperature, plugged in the light and watched the temperature for an hour. The temperature only went up 3F, so I thought I was safe to put one of my beloved carnivorous plants inside, anxious to let it experience ideal conditions, with an appropriately cooled night. I placed the plant inside and went up for supper. About 3 hours passed and I went to check on the temperatures and noticed the plastic cup keeping the plant enclosed, for

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humidity appeared melted! My nightmare was confirmed when the internal temperatures read 150F and the once prized piece of my carnivorous menagerie, *Nepenthes hamata*, was reduced to brown mush. That's right, I steamed a \$150.00 plant! I was not pleased, but pressed on.

It was obvious that the lack of programming options in the thermostat would not allow me to set an ideal daytime temp, while achieving the ideal night temperature drop. I would have to have the freezer cycle on and off, while the light was on, in order to keep the growing chamber cool, but not too cool! It was a matter of a few days of tweaking and monitoring cycles of on time to keep the temperatures suitable. Of course, that wasn't made simple either, due to the fact that most timers run on 15 minute increments and these increments of time dropped the temps too low, creating undesirable temperature swings. Other timers that allow single minute increments of time only had 7 program cycles, so I had my work cut out for me. Using a digital timer, I perfected the on/off cycles to keep my daytime temps at no warmer than 83F and no lower than 73F, with a minimal amount of fluctuation.

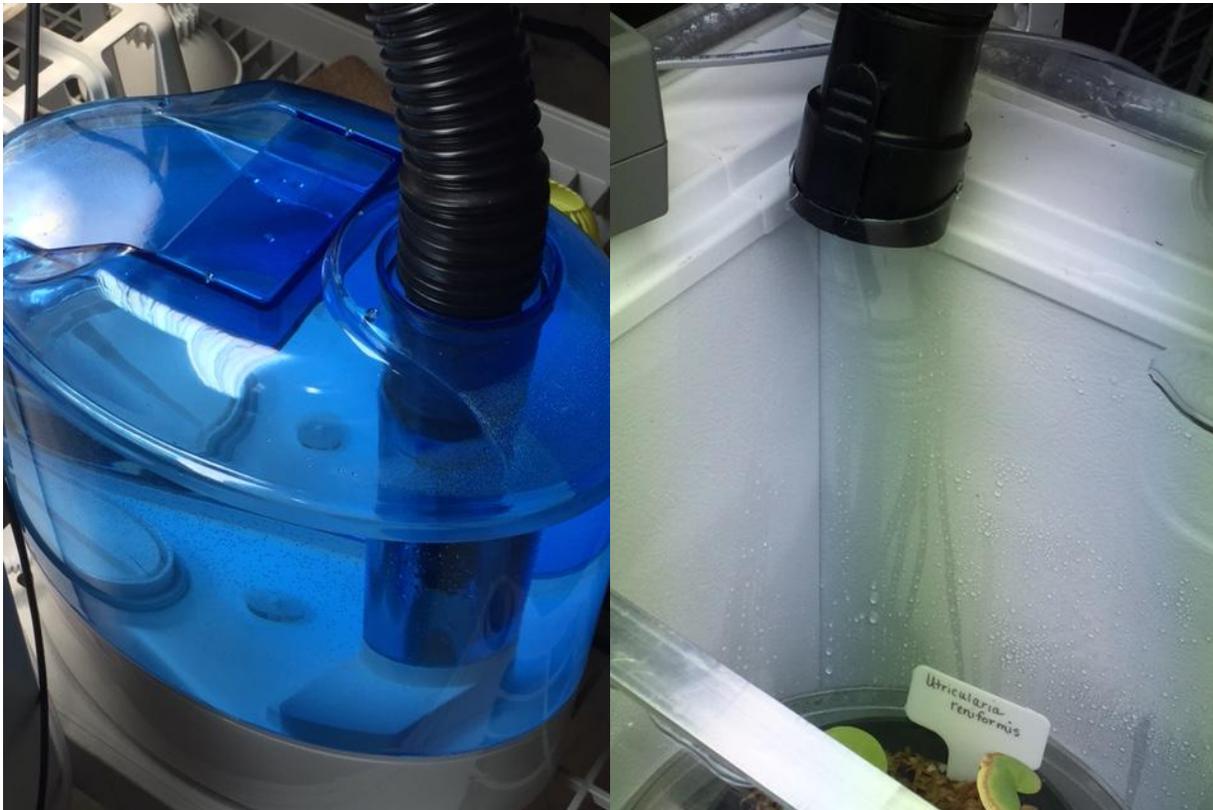
It was after further consideration, I decided to use the multiple on and off cycles as an advantage and time my lights and nightly cooling to allow for a gradual nightly cooling and gradual daily warming, with a stable day time high. I decided, since the freezer came with a built in shelf, I'd utilize a plastic tote filled with water to create a level surface and act as a stabilizer for the temperature. The temperatures were tweaked to utter perfection and even included the luxury of a very natural daily rise and nightly fall. Even if the engineers of the world weren't forward thinking enough to build timers and thermostats that met my need, I was most certainly a GENIUS!

Next, I noticed the humidity would need to be addressed. Unlike a refrigerator, a freezer of this type has no circulating fans and does not dry out the air significantly. The humidity still needed to be increased, because young plants, smaller than 6" in diameter require RH above 90% and the humidity naturally raises in tandem with the nightly temp drop, due to the descending clouds and fog of the cloud forest. This was worrisome, because small humidifiers generally only run for one full day, before needing to be refilled and I find that too much bother as well as an impossibility, when traveling. Nevertheless, I purchased a 2 gallon capacity, ultrasonic humidifier; having had experience with them for use with terrariums before. I purchased a vacuum cleaner hose, drilled a hole in the plexiglass freezer kid, placed the working end into the output of the humidifier and the end of the hose destined to fit onto the shop vacuum into the drilled hole and there it was.....the start of the solution to lower than desired humidity.

Some other small improvements and tweaks were made, including placing the humidifier on a timer to run every hour for 30 mins at night and for 15 minute increments during the day, every 2 hours. I only need to fill the humidifier weekly and humidity is maintained above 90% at all times, with the chamber being filled with a very naturalistic fog, overnight and into the morning. Weather stripping was used on the bottom edge of the lid to provide a seal and a small USB fan was added for circulation, which runs at all times. Finally, I cut down some lighting baffle to fit the internal dimensions of the chamber, ordered some plastic trays that fit, placed live sphagnum moss in the trays, placed the baffling over and then placed the individual plant reservoirs on top of the baffling. I utilize wick watering, where the plants are potted with a piece of acrylic yarn run through the pot and out the bottom. The dangling excess is placed in a container of water, usually a plastic food container with a hole cut in the lid. The reasoning for the moss under the baffling was to have place to grow the moss, promote humidity, and have a place, shaded by the plants above, to grower lower light plants. Currently in the chamber are several carnivorous plant species, ant plants, ant ferns (these are plants and ferns that have symbiotic relationships with ants.), *Saintpaulia goetzeana*, and soon to be some orchids and *Sarmienta scandens*. Among the carnivorous species are *Nepenthes edwardsiana*, *Nepenthes attenboroughii*, *Nepenthes hamata*, *Nepenthes inermis*, *Nepenthes mikei*, *Nepenthes ventricosa*, *Utricularia reniformis*, and *Heliophora pulchella*

This was an interesting project and can easily be adapted to keep plants that are warm temperate species chilled, but not frozen, for dormancy, force orchids and bulbs into bloom, grow alpine species in warm areas, create warmer environments for dessert plants, and even to augment husbandry of exotic reptile and amphibians. The downside to this project is that although my plants are slow growers, in 3-5 years, I'll either need a new set-up or several more freezers to accommodate their growth. By then, I hope to have a greenhouse with more cooling options available.

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Thanks for sharing Drew!

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