

BROMELIANA

PUBLISHED BY THE NEW YORK BROMELIAD SOCIETY

March, 2016

Vol. 52, No. 3

SOME SHORT ITEMS OF INTEREST

by Herb Plever

TILLANDSIA SELERIANA



Tillandsia seleriana

The Dec '15-Jan '16 issue of **Newslink**, newsletter of the Western Australia Bromeliad Society

reported on a *Tillandsia seleriana* that Margaret Walters had exhibited:

“...this plant has been featured before but never at peak flowering time and this plant is so well grown. Margaret grows many of her tillandsias in a clay pot using expanded clay as the medium.” (According to Wikipedia, lightweight expanded clay aggregate (LECA) or expanded clay (exclay) is made by heating clay to around 1,200 °C (2,190 °F) in a rotary kiln. The yielding gases expand the clay by thousands of small bubbles which form during heating and produce a honeycomb structure. I presume that the spaces in the honeycomb can retain moisture yet at the same time they can aerate the mix, unlike a plastic pot which can become too wet if the mix is dense and is watered too often. Ed.)

“Because *Tillandsia seleriana* has a bulbous base it can be difficult to mount and you don’t get the nice shape that is shown here. The bulbous base provides an excellent home for ants and they in turn provide the plant with some nutrients, protection from other insects and possibly pollinating the flowers.”

T. seleriana, *T. butzii* and *T. caput medusae* are some of the many myrmecophytic bromeliads that are colonized by ants. The bulbous base of *T. seleriana* is inflated by its very large, concave leaf-

NEXT MEETING - **Tuesday, March 1st**, 2016 promptly at 7:00 P.M. at the [Ripley-Grier Studios 520 8th Ave. \(between 36th & 37th St\) Room 16M](#)

RARELY GROWN BROMS FROM ACANTHOSTACHYS TO DEUTEROCOHNIA- a video review of 13 genera with spectacular photos of species in their natural habitats, in bloom and some cultivars. Please bring in plants for Show and Tell and for sale.

sheaths which allows for space between the outer and next inner sheaths and provides a home for the colony. As pointed out above there is a symbiotic relationship of mutual benefit between those plants and the ants.

The article further indicates that because of its bulbous base it is difficult to mount *Tillandsia seleriana*, so Margaret Walters grows it in a pot where its base is free to expand. Even if mounted as a young plant on a hanging cork log, once the base begins to expand the plant will be pushed to grow laterally rather than upright.

I have always grown this plant in a pot for that reason. In recent years I have grown *T. seleriana* mounted on a small flat piece of cork bark as shown in the photo below. The present diameter of this plant is 4.5 inches. I soak the plant in the bathtub with my other tillandsias, and it grows well that way.



Tillandsia seleriana mounted upright on flat piece of cork bark

Tillandsia seleriana is found in many Central American habitats from Honduras to southern Mexico. It grows epiphytically on Pine and Oak trees at low altitudes of about 700 ft. and ranging higher to altitudes of about 6,000 ft.

This indicates that it tolerates a wide range of light, humidity and temperatures, and it adapts well to different indoor or outdoor environments. With respect to ant colonies, if my wife ever found ants on it, that would be the end of that plant. □

A Query to the BSI Cultivar Registrar Geoff Lawn (Excerpted from Far North Coast Bromeliad Study Group, New South Wales, Newsletter, July, 2013)

Query: Shouldn't the BSI cultivar list be called the BSI hybrid list; it seems to be hybrids not cultivars?
Answer from Geoff: ...a hybrid by definition is a cultivar but a cultivar is not necessarily a hybrid...there are unusual forms of particular species (such as variegated forms found in the wild) which if distinctive enough can be given cultivar names and registered. Botanists ...ignore such forms as they are not a stable population which will reproduce true from seed -- which defines a species.

Natural hybrids...do not generally get described by botanists, so they are better treated as cultivars and given names and are registered, such as...*Tillandsia* 'Dura Flor'...By definition a hybrid is either: a species x a different species, OR species x hybrid, OR hybrid x hybrid. So cultivars do not fall into the category of hybrid.

It used to be that a cultivar was defined as having been man-made in cultivation only, but that definition now extends to include natural hybrids and distinctive species forms from the wild, such as *Quesnelia marmorata* 'Rafael Oliveira', so at least they get recorded in the Bromeliad Cultivar Register (BCR). To call it a Bromeliad Hybrid Register would be too restrictive as all the above examples prove. □



Quesnelia 'Rafael Oliveira' photo by Eloise Beach

Quesnelia 'Oliveira' is a variegated form of *Quesnelia marmorata*. It was found by Rafael Oliveira near Rio de Janeiro, Brazil in 1995. It was grown on by Chester Skotak in Costa Rica, and then it was registered in the Bromeliad Cultivar Register (BCR). The photo, taken from the BCR is by Eloise Beach. □

FEBRUARY ISSUE CORRECTION: On page 1, Colombia in the title was misspelled as Columbia, and the venue of the Victoria Bromeliad Society is Melbourne and not Sydney.

COLD WINDOW SILL TEMPERATURES

During the winter when the nighttime temperatures are generally 20° - 30° F. and frequently are in the teens or single digits, the temperature at the window sills at night will drop to 56° - 62° F. If the outside temperature is very cold during the day, the temperature in my apartment will range from 67°F. to 70°F., depending on whether or not there is sunshine. Our windows are new, very tight in their frames and have double paned glass, and we don't turn on the heating convector blowers - though we keep the valves open.

I always put some of my plants out on my terrace in May, and I don't take them back indoors until the first frost - usually sometime in November. The nighttime temperatures start dropping in the early fall and gradually get lower and lower. Those bromeliads out on the terrace adapt to the increasingly cold temperatures and become cold hardened. When I take them indoors and put them on my window sill trays, they have no problem with cold night temperatures at the the window sills.

But what about those plants that remain indoors during the spring and summer? As the night time temperatures outside and at the window sills gradually become colder, these broms also adapt and become somewhat cold hardened (though not as well as the plants that were out on the terrace).

But climate change from global warming exacerbated by El Nino has created changes of a few days very cold to suddenly unseasonably warm temperatures; last December was the warmest on record with the temperature on Christmas day reaching 72°F. and in January we had a record of 2.8 feet of snow for New York City. However, nighttime temperature last December averaged 28°F., so the pattern was not totally upset - but with lots of warm, clear, sunny days, dormancy was broken. Fortunately normal cold weather returned in January and my plants returned to being mostly dormant.

As my plants are all wick-watered, I can tell their state of activity by looking at the uptake of water from the reservoir containers. During the growing season the water in the containers is gone in 6-8 days, but during the winter the reservoirs are not dry until 10-14 days. The much slower rate that the roots are taking in water indicates semi-dormant inactivity, so

I water the plants less frequently. This year, my plants became subject to another cultural deficit when I stopped running my humidifiers. With them on, the relative humidity was 40-50% even on very cold days. When it was really cold the moisture in the apartment would condense onto the window panes; in the morning the panes were coated with a sheet of ice.

Now the relative humidity is 25-30%, so my bromeliads have had to adapt to that change. It is a testament to our bromeliads that my plants seem to have adapted to the change, and while mostly dormant they still have crisp leaves and look good. □

SESSILE ORTHOPHYTUMS (and other types of plants in genus *Orthophytum*)

In this short article I want to discuss some cultural issues for *Orthophytum navioides*, a plant that has a reputation that it is hard to grow. First,



Orthophytum navioides

however, I want to set some context of its place within the genus. Genus *Orthophytum* is saxicolous (growing among rocks), endemic to eastern Brazil and it is found in dry, xeric habitats of the Atlantic Rain Forest, Caatinga desert areas and rocky areas called Campos rupestres. Among the different *Orthophytums* we have been growing, some have an inflorescence that comes up on a long peduncle (a/k/a stem or scape) like *O. gurkenii*. Another group has inflorescences on a tiny, almost indiscernible peduncle - their blooms are said to be sessile. Within that latter group we can discern that some are long long caulescent and have leaves growing around a



O. gurkenii with bloom on a long peduncle



Sessile *Orthophytum amoenum* ph by Bromeliario Imperialis fcbs



Sessile *Orthophytum heleniceae* discovered by Oscar Ribeiro - fcbs



O. vagans, sessile bloom but long rhachis

long rhachis or axis, as *O. vagans*, whereas the leaves of other plants with sessile blooms are attached to a very low stem so the plants appear as flat rosettes - as *O. amoenum*. You can easily see the distinct physical (morphological) differences within the genus. Taxonomists have sorted them into three groups: a pedunculate group (molecular researchers say these plants all fit into a clade they call EuOrthophytum), and within the plants with sessile inflorescences an *Amoenum* group and a *Vagans* group. It now turns out that this morphological assessment is strongly supported by recent molecular DNA research. (See August, 2014 issue of the Journal of Molecular Phylogenetics and Evolution, p. 54-64.) Elton Leme treats genus *Orthophytum* as part of a Cryptanthoid Complex and the pedunculate, *Amoenum* and *Vagans* groups as sub-Complexes.

Back to *Orthophytum navioides* that I've grown in my apartment for many years. It blooms consistently and puts up 3 to 4 strong pups. As it is getting ready to bloom the leaves begin to redden strongly, and by the time flowers are up they turn a brilliant red as shown in the photo on page 3. People can be fooled by the fact *O. navioides* grows dry among rocks in habitat. *Orthophytum* leaves cannot hold water in their axils and are mostly glabrous without trichomes, so their roots are their only mechanism to take in water. In our fairly low relative humidity environments, if you plant one in a xeric type mix that is very friable with large pieces of bark and a lot of air space around the base of the plant, no new roots will develop and the plant will slowly die back.

To develop new roots these plants need to have their base closely wrapped in a denser, damp medium. I pack some chunky peat moss that has been

soaked in hot water for at least 20 minutes in the center of the mix. Damp sphagnum moss packed around the base works equally well. I sprinkle a little water around the base every 3 or 4 days to ensure that the medium there is kept damp and does not dry out. If you follow this procedure, your plant will develop a strong root system and the plant will take off. After it blooms, *Orthophytum navioides* will develop pups that grow on long stolons; when you remove the pup retain the stolon which can anchor and stabilize it in the mix.



Orthophytum navioides pup on a long stolon

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BROMELIANA is published 9 times a year by the New York Bromeliad Society, c/o Herb Plever, 172-34 133rd Avenue # 8A, Jamaica, NY 11434. email addr: hplever@verizon.net