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A SIMPLE KEY TO POPULAR GENERA

by Herb Plever

(This article is based on an article written by Derek Butcher and Dean Fairchild in 2005 called "A Bromeliad Key For Dummies". I have modified the introduction. With minor changes I have kept the key intact except to eliminate *Puya* and add *Orthophytum* and I have added photos and a postscript.)

If you buy a plant or are given a plant without a label, you certainly would like to know its name. But how can you identify it? The first thing to do is to bring it to a meeting; perhaps someone will recognize it. The identification problem is complicated by the fact that if you bought the plant from a florist or supermarket chain, it will likely be a cultivar (hybrid) and not a species. You can check all the species photos on file on http://fcbs.org and check all the cultivar (hybrid) photographs on the cultivar register: http://botu07.bio.uu.nl/bcg/bcr/index.php. BUT there are over 15,000 photos - too much work for a small problem. However, you could narrow down the search if you knew the genus of the plant, whether it is a species or cultivar. So here is a do-it-yourself identification key for the most popular bromeliad genera for you to try.

Botanical names are usually stated as two words. First is the **genus** name and next the **species** or **cultivar** name. Very much like you are identified by a surname and a given name. If you can answer a few simple questions your search will be made easier by pointing to a probable genus. You then have to try to find the species name or cultivar name by searching the photos in the appropriate sections of the Photo data base.

The most common bromeliads are *Aechmea fasciata, Billbergia nutans, Billbergia pyramidalis. Guzmania* cultivars are commonly sold by florists or super-store chains. *Aechmea* is the genus name and f*asciata* is the name of one of the species within the genus. A taxonomic key is set up in couplets of alternative "a" and "b" descriptive sentences. Choose the sentence of the couplets that best describes your plant.

1a. Are the leaves with prickles (spines) on the edges?

Go to Step 2

1b. Are the leaves without prickles (no spines) on the edges? Go to Step 6

2a. Are the leaves very succulent and taper to a point? Think *Dyckia* or *Hechtia*. (In nature *Hechtia* are found above the equator and *Dyckia* below)

Dyckia fosteriana

Hechtia glabra

NEXT MEETING - Tuesday, **November 9th**, 2010 promptly at 7:00 P.M. at the Ripley-Grier Studios 520 8th Ave. (between 36th & 37th St) Room 16N - 16th floor (The usual 1st Tuesday of the month meeting date was changed because it falls on Election Day)

ACANTHOSTACHYS TO RACINAEA - A video and information survey of some rarely grown genera. We'll present broad coverage but will especially concentrate on culture and size suitable for indoor growers and availability to be purchased. Please bring in plant(s) for sale and for Show and Tell.

2b. Are the leaves in a stiff, loose, star-shaped arrangement ? Think *Cryptanthus*

Cryptanthus 'Circuit Breaker'

2c. Are the leaves in a stiff, tight, many-leaved symmetrical arrangement? Think *Orthophytum* - or, if the leaves are in a stiff, fewer-leaved, symmetrical rosette, and have a prominent inflorescence stem (scape), again, think *Orthophytum*

Orthophytum navioides

Orthophytum gurkenii

3. Are the leaves green looking? Go to Step 3

3a. Are the leaves like grass? Think *Pitcairnia*

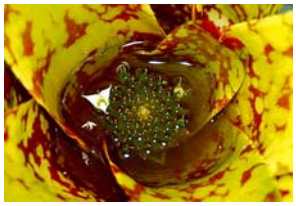
Pitcairnia smithiorum

3b. Are the leaves strap-like? Go to Step 4

4. Are the flowers on a stalk (scape)? Go to Step 5

4a. Are the flowers low down in a rosette of leaves? Think *Neoregelia*

Neoregelia 'Flandria'



Neorgelia marmorata

4b. Are the flowers on a short pedestal with a star shape? Think *Nidularium*

Nidularium rutilans

5a. Is the inflorescence erect? Think *Aechmea*

Aechmea chantinii

Aechmea nudicaulis

5b. Is the inflorescence nodding with few leaves in a tube shape? Think *Billbergia*. There are a few exceptions - ex. *B. amoena, B. horrida, B. lietzei, B. pyramidalis, B.* 'Fantasia' have upright inflorescences.

B. 'Muriel Waterman'

Billbergia 'Fantasia'

6a. Are the leaves grey? Think *Tillandsia*

Tillandsia atroviridipetala

6b. Are the leaves green? Go to step 7

7a. Do the leaves have longitudinal red lines? Think *Guzmania*

Guzmania lingulata v. minor

7b. Are the leaves totally green or with patterns?

Think *Vriesea*

Vriesea lubbersii

Vriesea fenestralis

A key, especially a simple one, is only a guide to identification. This is also true of professional taxonomic keys that contain much information and include the species for each genus. Still they cannot cover all major variations within each species population that are characteristic of the *Bromeliaceae.* A key contains generalizations which apply to most plants, but there are many exceptions to the rule and your plant may not neatly fit the key.

For example, Line 3a identifies genus *Pitcairnia* as having grass-like leaves. But many Pitcairnias such as *P. tabuliformis* have broad leaves that do not fit the grassy description.

Pitcairnia tabuliformis

For example, Line 4a identifies genus *Aechmea* as having an upright inflorescence. But a few Aechmeas such as *A. racinaea* and *A. lasseri* have fully pendant blooms.

Aechmea racinae

A. lasseri - photo by Ken Wood fcbs

For example, Line 6a identifies genus *Tillandsia* as having grey leaves. But a few Tillandsias such as *T. wagneriana* and *T. amicorum* (see below) have green leaves with no obvious grey trichomes. After more DNA sequencing tests are made, these plants may pan out to be Vrieseas, just as former *T. fraseri* became *Racinaea fraseri.* (Genus *Racinaea* was formerly subkey 12 of *Tillandsia* in Lyman Smith's 1977 Monograph; Dr. Smith differentiated subkey 12 plants because they had asymmetric sepals, but subkey 12 subsequently received completely separate genus status as *Racinaea.*)

Tillandsia amicorum
photo by A. Amuss fcbs

Tillandsia wagneriana

For example, Line7b identifies genus *Vriesea* as having leaves totally green or with patterns. But until recently there were many Vrieseas with greyish and/or scurfy leaves. However, over the past 17 years Jason Grant of Switzerland has been working on those plants that don't fit the genus type and he has proposed moving 42 "Vrieseas" to genus *Tillandsia.*

Some of the Vrieseas on this list I can recall

Tillandsia (Vriesea) espinosae

having grown in the past are: *Vriesea barclayana, V. barclayana v. minor, V. cereicola, V. patula, V. tequendamae* (Grant proposes that these be placed in subgenus *Tillandsia)* and *V. espinosae* (shown on p. 3) proposed to be placed in *Tillandsia* subgenus *Allardtia.*

These proposals, some of which date back to 1993, do not seem to have been accepted by Harry Luther. The recently published Alphabetical List of Bromeliad Binomials for 2010 still lists those 42 plants as Vrieseas. In his 1977 Monograph for subfamily *Tillandsioideae,* Dr. Smith distinguished *Vriesea* from *Tillandsia* primarily because *Vriesea* petals have two petal appendages (nectar scales) on the inside of the claw of each petal, whereas *Tillandsia* petals are naked (without appendages). See photo below. Since then it has been generally accepted that petal appendages are not a wholly reliable character for identification. I suppose we shall have to await DNA sequencing data for those plants before taxonomists agree on whether they are Vrieseas or Tillandsias.

On the first reading, some members may find this botanical material difficult and daunting to understand. Reread the article again and it will start to make sense. ❑

Vriesea petal appendages

NEWS and NOTES

HOLIDAY PARTY - This year our traditional end of year party will be held on Tuesday, December 14th. At 6:00 pm. Michael Riley has generously offered to host the event at his home at 101 West 104th Street in Manhattan. The party is open only to members and their spouses or significant others. Michael will provide the main courses; please rsvp him at 212-666-2395 if you plan to attend, AND let him know what side dishes, salads, fruit or desserts you will bring.

If you haven't seen Michael's fabulous collection of bromeliads, orchids, aroids, gesneriads, ferns, etc. growing epiphytically on his living room walls, you are in for a treat.

GRACE LAWRENCE had major abdominal surgery and is now at home recuperating. She hopes to be well enough to attend our Holiday Party. Spur her recovery with a get-well card. Grace's address is: 34-22 98th Street, Corona, N.Y. 11368.

TISSUE CULTURES - The threat of yet another heavy rain forecast for the evening of our October meeting seems to have discouraged members from attending. Of course it didn't rain, and we had a very interesting meeting discussing the basics of tissue cultures and our positive and negative experiences in growing them.

The consensus was that they grow much faster when given an regular regimen of fertilizer. Some tissue cultures tend to produce multiple offsets around the base of the parent, while the parent does not appear to grow much. For such plants I think it is a good idea to immediately remove any plantlets that appear so that the parent can use all of its nutrient intake for its own growth.

In May, my mini *Guzmania* 'Lydia' bloomed, and kept its color for 4 months. It is reasonably small but certainly not a "mini", as it had a diameter of 14½". It was purchased as a tissue culture in May, 2008. The hybridizer was Chester Skotak and it was tissue cultured by Reginald Deroose. HP

mini *Guzmania* 'Lydia'

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