BROMELIANA

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IDENTIFICATION KEYS BASICS

by Herb Plever

A key is an artificial tool created by taxonomists to identify and distinguish species in a group or groups of plants with some similar leaf and flower parts characters. Every Bromeliad flower has six stamens, three floral bracts, three sepals and a three part ovary. You will have to familiarize yourself with the look and location of those parts, shown in the drawing on page 3.

The keys function in much the same way a computer does: with couplets of two opposing or at least dissimilar terms as shown in the key below. Note from the key below that there are many technical botanical terms used in the key, and you will need to use a glossary to understand their meanings. Such a glossary can be found on the website of www.bsi.org which you can access if you are a member. If you are not a member, please consider joining now; access to important data is available on our site. You can also access a glossary by Derek Butcher on Brom-L (http://botu07.bio.uu.nl/. This article will show how to use a sample key to identify your plants; this one was prepared by Eric Gouda and Derek Butcher,

Tillandsia Subkey VIII.

(extended from Smith & Downs 1974-1979, last update: 24 March 2017 16:33)

1a.	Sepals connate for more than half their length and forming a slender tube, ecarinate	Guzmania spp
1b.	Sepals not more than short-connate or only the adaxial ones high-connate and these then carinate	2
2a.	Leaf-blades tomentose-lepidote with narrowly lobed spreading scales, setaceous	3
2b.	Leaf-blades not tomentose, the scales suborbicular and slightly if at all lobed	5
3a.	Sepals less than 12 mm long; Peduncle well developed. Ecuador	T. rupicola
3b.	Sepals 15-18 mm long; Peduncle often very short or lacking	4
4a.	Floral bracts 14-17 mm long; petals yellowish green, 18 mm long; stamens included. Mexico	T. plumosa
4b.	Floral bracts 25-35 mm long; petals violet, 35-40 mm long; stamens exserted. Mexico to Honduras	T. magnusiana
5a.	Sepals maximally 25-35 mm long, lepidote	6
5b.	Sepals maximally 9-20 mm long	10
6a.	Sheaths dark castaneous, ample, contrasting with the blades. Mexico	T. oaxacana
6b.	Sheaths cinereous-lepidote, concolorous with the blades	7
7a.	Sepals broadly oblanceolate, densely cinereous-lepidote; bracts caudate or acute. Mexico	T. macdougallii
7b.	Sepals lanceolate, sparsely lepidote	8

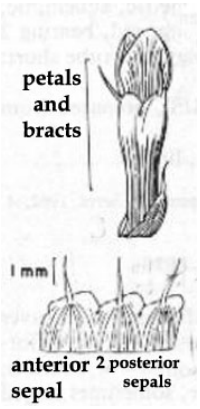
THERE WILL BE NO MEETING IN JANUARY.

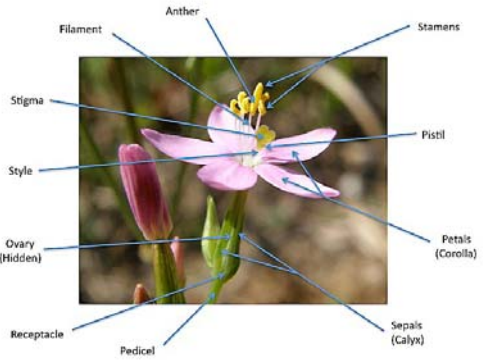
BEST WISHES FOR A Joyous holiday and a HAPPY NEW YEAR

8a.	Bracts acute	9
8b.	Bracts obtuse or apiculate; petals violet. Mexico	T. andrieuxii
9a.	Peduncle distinct; Peduncle-bracts longer than the floral bracts; flowers all polystichous; petals pale green. Mexico	T. erubescens
9b.	Peduncle very short; Peduncle-bracts shorter than the floral bracts; upper flowers distichous; petals white. Guatemala	T. velickiana
10a.	Sepals firm, coriaceous or subcoriaceous	11
10b.	Sepals membranaceous	13
11a.	Peduncle short or none; scales spreading especially along the leaf-margins (replacing T. "nana" but differing in its leaf-scales). Peru	T. edithae
11b.	Peduncle well developed	12
12a.	Posterior sepals carinate and much connate. West Indies and Mexico to Venezuela and Bolivia	T. juncea
12b.	Posterior and anterior sepals free, broadly convex, ecarinate. Peru, Bolivia, Brazil, Paraguay, Argentina	T. pohliana
13a.	Scales of the leaf-blades asymmetric with subspreading basal lobes, coarse, cinereous	14
13b.	Scales of the leaf-blades symmetric, closely appressed or with equally raised margins	17
14a.	Stamens exserted; petals over 40 mm long. North America, northern South America	15
14b.	Stamens included; petals 18-20 mm long. Southern South America	16
15a.	Leaf-sheaths suborbicular, contracted to the long blades; plant usually long-caulescent and often branched. Mexico and the West Indes to Venezuela and Colombia	T. schiedeana
15b.	Leaf-sheaths elliptic, merging with the short blades; plants stemless or rarely caulescent. Mexico to Nicaragua	T. ionantha
16a.	Sepals lepidote; leaves 9-12 cm long. Brazil, Paraguay, Argentina	T. meridionalis
16b.	Sepals glaborous; leaves 3-4 cm long. Brazil	T. sprengeliana
17a.	Leaf-blades thin, flaccid, green, 10-20 mm wide; sheaths conspicuous	18
17b.	Leaf-blades triangular or crescentiform in cross-section, mostly rigid, more or less cinereous, 5-13 mm wide; sheaths inconspicuous	19
18a.	Plant stemless or nearly so; adaxial sepals carinate. Mexico, Central America	T. brachycaulos
18b.	Plant caulescent; adaxial and anterior sepals convex, ecarinate. Nicaragua to Ecuador	Guzmania angustifolia
19a.	Lower floral bracts acute, not caudate; petals yellow. Argentina	20
19b.	Lower floral bracts rounded or attenuate, mostly setiform-caudate; petals white or blue	21
20a.	Floral bracts broadly ovate or elliptic, stramineous; sepals adaxially connate; flowers odorless	T. ixioides
20b.	Floral bracts ovate or lanceolate, roseate; sepals equally subfree; flowers fragrant	T. jucunda
21a.	Peduncle very short, hidden by the leaves; leaves rigid, curved and often secund, attenuate but subpungent. Brazil	T. rosea
21b.	Peduncle evident, well developed	22
22a.	Lower floral bracts attenuate, then caudate; leaf-scales cup-shaped with an erect free margin; plant stemless or nearly so. Trinidad and Venezuela to Brazil and Argentina	T. stricta
22b.	Lower floral bracts rounded and abruptly caudate; leaf-scales ap-pressed in most cases; plant distinctly caulescent	23
23a.	Leaf-blades slender (about 20 times as long as wide), or if robust then strongly secund	24
23b.	Leaf-blades stouter (about 10 times as long as wide), scarcely if at all secund	27
24a.	Peduncle exceeding the leaves; petals 28-30 mm long. Brazil	25
24b.	Peduncle usually shorter than the slender leaves; petals not over 20 mm long	26
25a.	Leaf-blades short, stout, strongly secund	T. araujei
25b.	Leaf-blades long, nearly straight, not notably secund	T. nuptialis

26a.	Sepals adaxially connate. West Indies to Argentina	T. tenuifolia
26b.	Sepals free. Brazil	T. montana
27a.	Floral bracts dark red; petals dark blue. Brazil, Paraguay, Uruguay, Argentina	T. aeranthos
27b.	Floral bracts pale rose to whitish; petals dull blue to white. Argentina	T. bergeri

Look at your plant and at Couplet 1 on page 1. If your plant fits 1a - the sepals are connate (connected) for more than half of their length and are ecarinate (they don't have a keel - a raised longitudinal ridge in the center) then your plant is a *Guzmania spp.* If not check if it fits 1b - adaxial sepals (2 in front of flower) are short-connate (less than half connected), or if only the 2 adaxial sepals are high-connate (connected) and these are carinate (keeled) in which case you are directed to 2 (the second couplet of 2a and 2b.)





In Couplet 2 you must choose between 2a - leaves are tomentose (hairy)-lepidote (covered with spreading trichome scales that make the leaf appear somewhat white or grey) and bristly, in which case you are directed to go to Couplet 3; **or** 2b - the leaves are not tomentose (hairy) and the scales are somewhat rounded, in which case you are directed to Couplet 5. In Couplet 3a, if your plant's sepals are less than 12 mm long and the peduncle (stem at the base of plant) is well developed, then your plant is *Tillandsia rupicola.* If not, check if it fits 3b - sepals are 15-18 mm long and the peduncle is short or absent, in which case you are directed to go to Couplet 4.

T. rupicola, A. Boeker

T. plumosa H. Plever

If your plant fits 4a - floral bracts 14-17 mm long, yellow-green petals 18 mm long and stamens included (lower than the tops of the petals), your plant is *Tillandsia plumosa.* The floral bracts cover the sepals which may be included (shorter than the bracts) or exserted (longer than the bracts). If your plant fits 4b - floral bracts 25-35 mm long; petals violet, 35-40 mm long; stamens exserted (longer than the petals), then your plant is *Tillandsia magnusiana.*

Tillansdsia magusiana P Hyatt

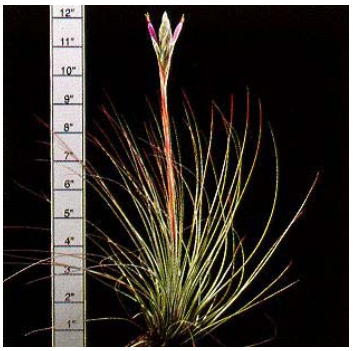
If your plant fit 2b because the leaf-blades are not tomentose, or the scales are not suborbicular (somewhat rounded) and slightly if at all lobed, you are directed to go to Couplet 5. If your plant's sepals are 25-35 mm long and are lepidote (coated with trichome scales) they fit Couplet 5a and you are directed to go to Couplet 6. If they fit 5b, sepals maximally 9-20 mm long, you are directed to go to Couplet 10. In Couplet 6a, if your plant's leaf sheaths are dark castaneous (chestnut colored) and ample, contrasting with the leaf-blades, your plant is *Tillandsia oaxacana.* If your plant fits 6b because its leaf-sheaths are cinereous-lepidote (coated with ash colored scales) and are concolorous (the same color as the blades, you are directed to go to Couplet 7.

Tillandsia oaxacana P. Tristram

If your plant fits 7a - its sepals are broadly oblanceolate (broad apex and thin base), and densely cinereous-lepidote (ash colored scales); and its bracts are caudate (tapered into a long tail-like tip) or acute (tapered to a sharp point), your plant is *Tillandsia macdougallii*. If not check 7b; if your plant's sepals are

lanceolate (Longer than wide with the widest point below the middle tapering to the apex) and they are sparcely lepidote, your plant is *Tillandsia macdougallii*. If your plant fit Couplet 5b you were directed to Couplet 10. 10a describes sepals as coriaceous (leathery or somewhat leathery) while 10b describes sepals as membranous (thin, pliable, sometimes transparent). If your plant's sepals are coriaceous you are directed to go to Couplet 11; if the sepals are membranous as in 10b, you are directed to go to Couplet 13. If your plant has a short or no peducle (stem) and spreading trichome scales especially along the margins as in Couplet 11a, your plant is *Tillandsia edithae*. If instead your plant has a well developed peduncle, you are directed to go to Couplet 12. 12a calls for posterior sepals carinate (keeled) and much connate (connected). If your plant's sepals fit this description, then your plant is *Tillandsia juncea*. If instead your plant's posterior and anterior sepals are free, broadly convex, ecarinate (not keeled) as in Couplet 12b, then your plant is *Tillandsia pohliana*. Now you've seen how it's done so there is no point in pursuing the rest of this key. Remember that a key is just a **guide** to help you identify your plant species.
In habitat a bromeliad species population is usually quite variable. There is both art and science in taxonomy.

Tillandsia macdougallii R. Ehlers


T. juncea Till. Int'l

Tillandsia edithae H Plever

NEWS and NOTES

CINNAMON POWDER FOR ROT -from the September, 2017 issue of the newsletter of the Far North Counties Bromeliad Study Group (Australia): John showed an *Orthophytum burle-marxii* which had flowered. He removed some pups from the mother plant which was not in very good conditionby this stage; it was showing some signs of rot. John put a spoonful of cinnamon powder in the centre of the plant which he reports helps dry out the rot. Due to this action the plant produced another four pups.

John highly recommends dusting with cinnamon powder when you cut off a pup or if you have centre rot, clean it out, dust with cinnamon and put it aside for a month.

2019 DUES - are now due and payable. Single and joint memberships are $25.00; the domestic subscription rate for BROMELIANA is $8.00 and an overseas subscription is $12.00. If you have not paid your dues, please mail your check payable to N.Y. Bromeliad Society to Barbara Lagow, 54 West 74th Street, #603, N.Y.C. 10023.

T. pohliana, D. Butcher

T. pohliana inflor D Butcher

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