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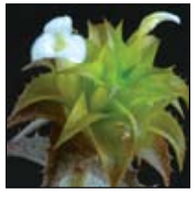

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Covers

Front—Puya berteroniana in the Wellington Botanic Garden (New Zealand) February 26, 2007. Visiting birds are 12 cm long *Zosterops lateralis* ("wax-eye" or "silvereye"). *Puya berteroniana* is sometimes confused with the smaller *P. alpestris*. Photo by Andrew Flower.

Back—Aechmea pseudonudicaulis Leme. Photo by Vern Sawyer.

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Editorial

In this Issue

Scientific

Starting off, Elton Leme continues his studies of Brazilian orthophytums, introducing three new species from Espirito Santo. On page 158 are details of two research articles, kindly sent in by Gary Gallick. One, a 2006 study from Switzerland, concludes that low phosphorus is a limiting factor factor in growth and reproduction of epiphytic bromeliads[1]. They acknowledge the proposal that phosphorus, not nitrogen, limits reproduction was made by David Benzing in his 2000 book *Bromeliaceae—profile of an adaptive radiation.*

On page 159 Tânia Wendt argues that the name "*Aechmea guarapariensis*" is a synonym for *Ae. roberto-seidelii* E. Pereira, suggesting the non-use of the latter name was due to its having been incorrectly treated as a synonym of *Ae. pineliana* var *minuta* by Smith & Downs. Finally, Gilberto Morillo and Francisco Oliva-Esteve describe a large new tillandsia from the Venezuelan Andes, *Tillandsia santieusebii.*

Cultivation

Our cultivation section returns, spearheaded by Uncle Derek's growers guide to the correct terms to use for different types of cultivated bromeliads such as "sport" and "clone". Another Australian, Geoff Lawn, discusses the behavior of *Neoregelia bahiana* forms in cultivation, and reports on the acceptance of a cultivar name for one that holds its purplish-red leaf coloration: *Neoregelia bahiana* Pabst. On page 172 Derek Butcher is back, investigating an ancient mystery involving *Vriesea* Sceptr d'or. Following this is a pretty picture and brief discussion of an orphan *Tillandsia* Little Orphan Annie grown from seed by your editor.

General Interest

On page 178 BSI member Heinz Schwendener from Madeira shows us some of his colorful neoregelia hybrids and describes the beautiful atlantic island he calls home. Next, Carol Wolfe brings us a stirring story of survival post-Katrina by Greater New Orleans Bromeliad Society member Mal Mele and his prize-winning plant of *Alcantarea* Black Cinder.

Ed Prince's untimely death was a shock to many of us, and Lynne Fieber has written an obituary for Ed, see page 184.

President Brehm brings you another helpful column on page 185, followed by a list of donors to our society over the past eighteen months. We all owe these people a huge vote of thanks. Finally we welcome on board a host of new members - we hope you enjoy your membership, and please do not hesitate to tell us if there is anything you think we should be doing better.

1 The full article is available at http://aob.oxfordjournals.org/cgi/reprint/97/5/745 If you have no internet access, write to me and I'll send you a copy—Ed.

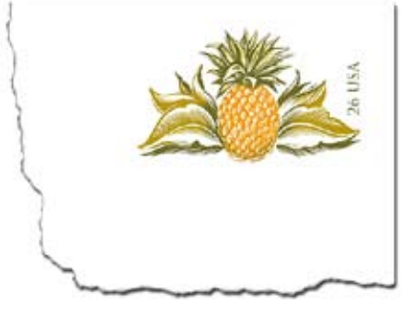
2010 World Conference goes to New Orleans

As we go to press, news has come in that President Joyce Brehm has signed the contract for the 2010 World Conference to be held at the Astor Crowne Plaza in New Orleans July 26 to August 1, 2010. Start planning folks, but don't forget WBC 2008 in wonderful Cairns first!

Bromeliads feature in *Science*

Science, which is one of the two most prestigous scientific journals (along with *Nature*) recently featured bromeliads in an article "*Predators Accelerate Nutrient Cycling in a Bromeliad Ecosystem*" by Jacqueline T. Ngai and Diane S. Srivastava from the University of British Columbia Zoology Department. Vol. 314, 963 (2006) p. 963.[1] The article is a study of how the activity of predators on the ecosystems living in bromeliad tanks affect the nutrient availabilty. Incidently, they found that nitrogen, rather than phosphorus, limits the productivity of the bromeliad plants. Those of you interested may like to compare this to the University of Basil study we mention on page 158 of this issue. Thanks to Gary Gallick for bring this article to our attention.

US Postal Service issues Pineapple Stamp



In May this year US Post was due to release a postal card featuring a pineapple. A postal card is not a postcard.... BSI member Jere Rhine, from Cazadero CA, explains: "... A postal card is a card with an imprinted stamp. It is part of the USPS stamp program [whereas] a postcard is a card with a picture on one side and a place for a note and the address and a place for you to put your own stamp on the 'address' side. These can be put out by anyone. The USPS makes a BIG deal out of which is which and for some reason is touchy about the two being used interchangeably...." Jere points out that the study of postal cards, as well as stamps, fall under philately but postcards have their own field of study named "deltiology." See also BSi Journal 47(3) p. 135.

Correction

In "Erratum for a variety of *Vriesea splendens*" Francisco Oliva-Esteve (2006) *J. Bromeliad Soc* **56**(5) p. 200, the varietal name of *Vriesea splendens* var *oinochroma* Steyerm. was mis-spelled "*ionochroma.*"

1 http:/www.sciencemag.org/cgi/content/full/314/5801/963

Studies on Orthophytum - Part VI

Three New Species from Espírito Santo, Brazil

Elton M. C. Leme and Ludovic J. C. Kollmann

Figure 1. *Orthophytum boudetianum* Leme & L. Kollmann flowering in cultivation. Photo by E. Leme.

A systematic survey was conducted by the staff of researchers of the Museu de Biologia Prof. Mello Leitão at the mountainous habitats composed of Atlantic Forest and magnificent rocky scarps, in the central-north region of Espírito Santo State. The work revealed a quite unusual bromeliad flora, including the three new orthophytum species described here.

Orthophytum boudetianum Leme & L. Kollmann, sp. nov. Type: Brazil, State of Espírito Santo, Afonso Cláudio, Alto Três Pontões (pico da antena de radio amador), 20° 04' S, 41° 02' W, ca. 1,050 m elev., 16 Aug. 1990, H. Q. Boudet Fernandes 3002, Tabacow, Chamas et al., cult. E. Leme 6528 (Holotype, MBML. Isotypes, HB, RB).

Ab *O. sucrei* H. Luther, cui affinis, plantis floriferis minoribus, laminis foliorum distincte angustioribus, subtus dense albo-lepidotis, marginibus spinis subdense dispositis, scapo dense et conspicue albo-lanato, bracteis floriferis distincte minoribus et petalis apice leviter emarginatis, base appendicibus cupulatis differt.

Plant saxicolous, stemless, 8-14 cm tall, propagating by short basal shoots, presence of shoots originating from the inflorescence base and apex not detected at anthesis. ***Leaves*** 8 to13, rosulate, subdensely arranged and forming a distinct rosette before anthesis and afterwards; ***sheaths*** inconspicuous; ***blades*** narrowly-triangular, 6-9 cm long, 0.9-1.2 cm wide at the base, 1-2 mm thick near the base, coriaceous, arcuate, without a distinct channel to channeled with a semicircular curve in cross-section under water stress, green to reddish, abaxially densely and coarsely white-lepidote, with trichomes partially obscuring the leaf color, distinctly nerved, adaxially glabrous except for the inconspicuously white lepidote base and basal margins, apex long attenuate-caudate, margins subdensely spinose, spines narrowly triangular, reddish, ca. 1 mm long, ca. 0.5 mm wide at the base, 4-9 mm apart, the basal ones nearly straight, the upper ones distinctly uncinate, antrorse. ***Scape*** erect, 3-9 cm long, ca. 0.4 cm in diameter, densely white-lanate, green; ***scape bracts*** foliaceous and similar to the leaves, abaxially densely white-lepidote, distinctly nerved, abaxially glabrous, exposing the scape, subspreading to suberect-arcuate, the upper ones reduced in size and massed below the inflorescence. ***Inflorescence*** simple, densely capitate-rosulate, 5- to 8-flowered, erect, 2.5-3 cm long, 3.5-4 cm in diameter; ***floral bracts*** narrowly ovate, apex acuminate, distinctly canaliculate, navicular, ecarinate to obtusely carinate, strongly recurved, exceeding the sepals, dark red to wine colored toward the apex, thin in texture to thinly coriaceous, abaxially sparsely white-lepidote near the apex to glabrous, distinctly nerved, adaxially glabrous, 18-30 x 9-13 mm, densely spinose, spines narrowly triangular, retrorse to antrorse, straight to strongly recurved-uncinate, dark red, ca. 1 mm long, 1-2 mm apart; ***flowers*** 29-30 mm long (including the petals), sessile, densely arranged, odorless; ***sepals*** symmetrical, narrowly triangular, attenuate toward the apex, apex slenderly acuminate-caudate, 16-20 x 3-3.5 mm, free, entire, dark red to wine colored, distinctly nerved, thin in texture to submembranaceous, glabrous, the adaxial ones alate-carinate with keels decurrent on the ovary, the abaxial ecarinate; ***petals*** sublinear-spathulate, apex obtuse and slightly emarginate, remotely apiculate, 23-25 x 4 mm, free, erect at anthesis except for the suberect apex, green toward the apex (including the margins), bearing 2 densely fimbriate, upwardly to downwardly oriented, cupulate appendages 4-5 mm above the base, as well as 2 conspicuous longitudinal callosities equaling to slightly exceeding the anthers; ***filaments*** green, the antepetalous ones 15-18 mm long, adnate to the petals for 10-12 mm, the antesepalous ones 17-22 mm long, free; ***anthers*** 2-3 mm long, base obtuse, apex obtuse and minutely apiculate, compressed laterally, dorsifixed slightly below the middle, pale green; ***pollen*** sulcate, narrowly ellipsoid, exine reticulate with irregularly polygonal lumina; ***stigma*** simple-erect, ca. 2 mm in diameter, blades recurved, green with paler margins, margins fimbriate; ***ovary*** 4-5 mm long, ca. 5 mm wide at the apex, subtrigonous; ***epigynous tube*** ca. 1 mm long; placentation apical; ***ovules*** obtuse to subacute, greenish-white. ***Fruits*** unknown.

This new species belongs to the species complex with scapose inflorescences, and more specifically to the "subcomplex disjunctum" due to its distinct rosette before and at anthesis, and the petals with non-cucullate, suberect apex (Leme 2004). The

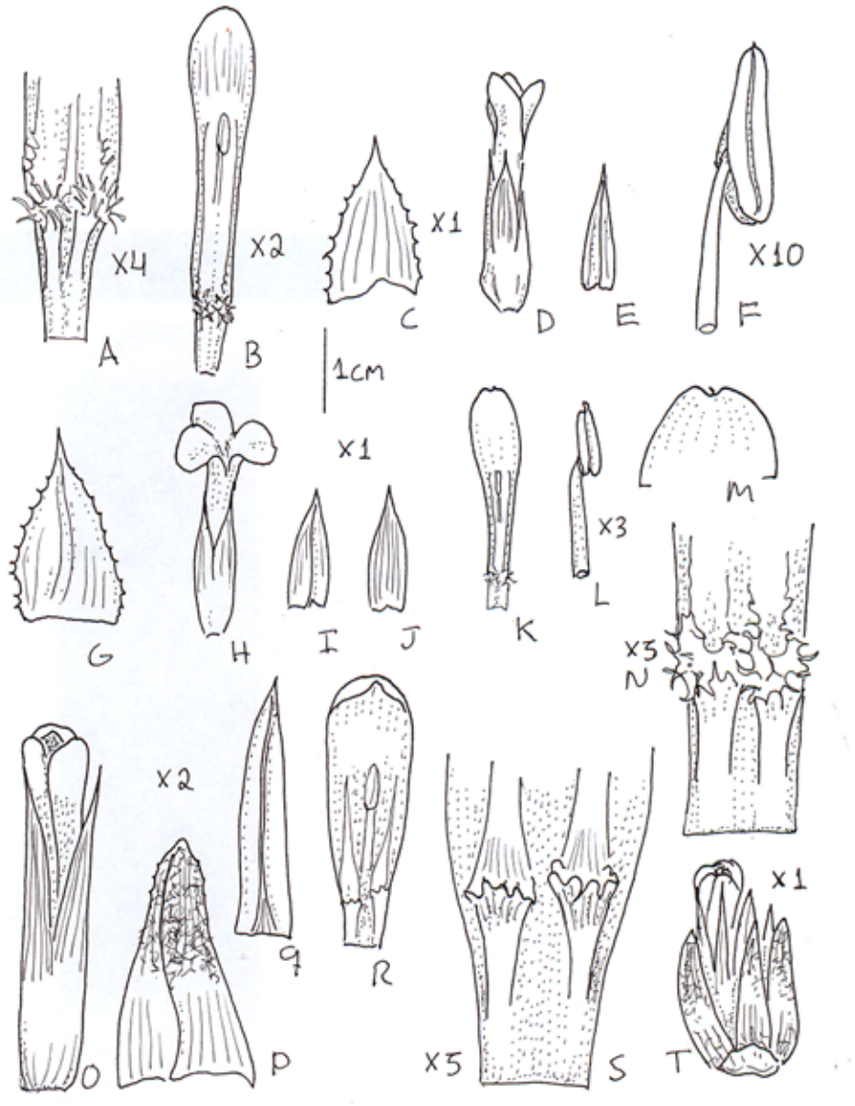


Figure 2. (A-F) *Orthophytum boudetianum* Leme & L. Kollmann: A) details of the petal appendages; B) petal with stamen; C) floral bract; D) flower; E) adaxial sepal; F) stamen. (G-N) *Orthophytum striatifolium* Leme & L. Kollmann: G) floral bract; H) flower; I) adaxial sepal; J) abaxial sepal; K) petal with stamen; L) stamen; M) petal apex; N) details of the petal appendages. (O-T) *Orthophytum pseudovagans* Leme & L. Kollmann: O) flower; P) floral bract; Q) adaxial sepal; R) petal with stamen; S) detail of the petal appendages; T) basal flower fascicle (drawing E. Leme).

closest relative is *Orthophytum sucrei*, but this new species differs from it by its smaller size when in flower (8-14 cm vs. 12-38 cm tall), leaf blades distinctly narrower (0.9-1.2 cm vs. 1.5-2.4 cm wide at the base), densely and coarsely white-lepidote abaxially (vs. glabrous), margins with spines subdensely arranged (vs. densely arranged; 4-9 mm vs.

2-4 mm apart), scape densely and conspicuously white-lanate (vs. subdensely white-lanate), floral bracts smaller (18-30 x 9-13 mm vs. 25-45 x 12-20 mm), and by the petals with slightly emarginated apex (vs. rounded), bearing at the base cupulate appendages (vs. non cupulate).

Orthophytum boudetianum also resembles *O. estevesii* (Rauh) Leme, but it can be distinguished from it by its smaller size when in flower (8-14 cm vs. 12-30 cm tall), leaf blades shorter and narrower at the base (6-9 x 0.9-1.2 cm vs. 9-20 x 1.5-2.2 cm), densely and coarsely white-lepidote abaxially (vs. glabrous), margins with smaller spines (ca. 1 mm vs. 2-4 mm long), floral bracts smaller (18-24 x 9-12 mm vs. 30-42 x 10-18 mm), sepals dark red to wine colored (vs. light green), and by the green petals (vs. white).

Orthophytum boudetianum is named after one of its collectors, Helio de Queiroz Boudet Fernandes, the Director of the Museu de Biologia Prof. Mello Leitão and Curator of the Herbarium MBML. Prof. Boudet Fernandes has contributed greatly to the botanical knowledge of Espírito Santo State, and so found this new species together with other researchers of the Museum, in a high-elevated area in the domain of the Atlantic Forest, on shallow organic soil accumulated on granitic outcrops. The new taxon was growing fully exposed to sunlight, forming small groups of plants.

Paratypes: Brazil, State of Espírito Santo, Afonso Cláudio, Alto Três Pontões, ca. 1,050 m elev., 16 Aug. 2005, *R. Teixeira & W. Pentel* s. n. (MBML); ibidem, ca. 1,050 m elev., 12 Oct. 2005, *C. Esguario 15, R. Texeira & W. Pentel* (MBML); Espírito Santo, Afonso Claudio, Serra Pelada, Três Pontões, 1,100 m elev., 20°05'30.2"S 41° 01'07.3"W, Jun. 2007, A. P. Fontana 3386 et al., fl. cult. E. Leme 7087 (HB).

Orthophytum striatifolium Leme & L. Kollmann, sp. nov. **Type:** Brazil, State of Espírito Santo, São Roque do Canaã, São Bento, propriedade de Danilo Pionte, Pedra do Pionte, 16 Oct. 2004, *L. Kollmann 7085, A. P. Fontana, C. N. Fraga & R. C. Britto*, cult. *E. Leme* 6530 (Holotype, MBML. Isotype, HB).

Ab *O. estevesii* (Rauh) Leme, cui affinis, plantis graciliter rhizomatosis, laminis foliorum praesertim subtus distincte albo-lepidotis sed supra lepidoto-striatis lepidibus longitudinaliter dispositis, sepalis brevioribus et petalis apice obtuso-emarginatis, per anthesin apicem versus recurvato-patentibus differt.

Plant saxicolous, stemless, 10-13 cm tall, propagating by slender rhizomes ca. 5 cm long, ca. 0.5 cm in diameter, shoots originating from the inflorescence base and apex not detected at anthesis. ***Leaves*** 10 to 14, rosulate, subdensely arranged and forming a distinct rosette before anthesis and afterwards; ***sheaths*** inconspicuous; ***blades*** narrowly triangular-lanceolate, 8-11 cm long, 1.4-1.5 cm wide at the base, ca. 2 mm thick near the base, thick-coriaceous mainly toward the base, arcuate to nearly spreading, channeled mainly toward the apex with a semicircular curve in cross-section, pale red-

Figure 3. *Orthophytum striatifolium* Leme & L. Kollmann flowering in cultivation. Photo by E. Leme.

dish-brown, abaxially densely and coarsely white-lepidote, with trichomes completely obscuring the leaf color, distinctly nerved, adaxially subdensely white lepidote with trichomes arranged in rows along the nerves, apex long attenuate-caudate, margins subdensely spinose, spines narrowly triangular, acicular and pale brown toward the

apex, 1.5-2 mm long, 0.5-1 mm wide at the base, 4-7 mm apart, the basal ones nearly straight, the upper ones distinctly antrorse-uncinate. ***Scape*** erect, 4-8 cm long, ca. 0.5-0.7 cm in diameter, densely white-lanate, green with the color obscured by the trichomes; *scape bracts* foliaceous and similar to the leaves, subspreading-arcuate to reflexed, the upper ones slightly reduced in size and massed below the inflorescence. ***Inflorescence*** simple, densely capitate-rosulate, 6- to 9-flowered, erect, ca. 2.5 cm long, 3-3.5 cm in diameter; ***floral bracts*** triangular-ovate, apex acuminate, distinctly canaliculate, navicular, ecarinate to obtusely carinate, strongly recurved, exceeding the sepals, yellowish-green to orange (when fully exposed), thinly coriaceous, glabrous or nearly so, nerved, adaxially glabrous, 17-23 x 10-13 mm, subdensely spinose, spines narrowly triangular, retrorse to antrorse, uncinate, greenish toward the base and pale orange-brown toward the apex, 1-1.5 mm long, ca. 2 mm apart; ***flowers*** 32-34 mm long (including the petals), sessile, densely arranged, odorless; ***sepals*** symmetrical or nearly so, narrowly lanceolate, attenuate toward the acuminate-caudate apex, 15-16 x 4-5 mm, free, entire, greenish-yellow, nerved, thin in texture, glabrous, the adaxial ones carinate with keels decurrent on the ovary, the abaxial one ecarinate; ***petals*** sublinear-spathulate, apex obtuse-emarginate, very minutely apiculate-caudate, 27-28 x 5-6 mm, free, erect at anthesis except for the spreading-recurved apex, white except for the pale greenish central portion, bearing 2 densely and irregularly fimbriate-scalloped appendages ca. 3.5 mm above the base, as well as 2 conspicuous longitudinal callosities equaling the anthers; ***filaments***, the antepetalous ones ca. 17 mm long, adnate to the petals for 11-12 mm, the antesepalous ones ca. 18 mm long, free; ***anthers*** 2.5-3 mm long, green, base obtuse, apex obtuse and minutely apiculate, compressed laterally, dorsifixed at 1/3 of their length above the base; ***pollen*** sulcate, subellipsoid to trapeziform, exine microreticulate with irregularly polygonal lumina, muri thickened; ***stigma*** simple-erect, ca. 2 mm in diameter, blades spreading-recurved, white, margins laciniate-papillose; ***ovary*** ca. 5 mm long, 4.5-5 mm wide at the apex, greenish-white, trigonous; ***epigynous tube*** inconspicuous; placentation apical; ovules obtuse, green. ***Fruits*** unknown.

Orthophytum striatifolium is another member of the "subcomplex disjunctum". It is very closely related to *O. estevesii*, differing from it by the propagation by means of slender rhizomes (vs. basal short shoots and by shoots originating from the inflorescence), leaf blades densely (abaxially) to subdensely (adaxially) white lepidote with the trichomes arranged in rows along the nerves on the adaxial surface, shorter sepals (15-16 mm vs. 18-22 mm long), and by the petals with the apex obtuse-emarginate (vs. rounded, not emarginate), and spreading-recurved at anthesis (vs. suberect).

This new species grows in very similar ecological conditions to *Orthophytum boudetianum*, in the rocky outcrops in the Atlantic Forest of Espírito Santo State. *O. striatifolium*, however, was observed forming large populations on the shallow organic soils in its fully sun-exposed rupicolous habitat.

Orthophytum pseudovagans Leme & L. Kollmann, sp. nov. Type: Brazil, State of Espírito Santo, Águia Branca, Santa Luzia, propriedade de Ciro Ferreira, 18° 58´ 40,5´´S, 40° 39´ 56,1´´W, 250 m elev., 27 Apr. 2006, *V. Demuner 2270, L. F. S. Magnago, T. Cruz & E. Bausen*, cult. *E. Leme* 6821 (Holotype, MBML. Isotype, HB).

Ab *O. vagans* M. B. Foster, cui affinis, foliis distincte longioribus, inflorescentia manifeste bipinnata, floribus minoribus, sepalis longioribus apice acuminatis, petalis brevioribus et stigmatibus quam antheras distincte brevioribus differt.

Plant terrestrial or saxicolous, caulescent, stems 12-15 cm long, ca. 1.8 cm in diameter. ***Leaves*** densely and equally arranged along the stem, spreading, distinctly longer than the stem; ***sheaths*** oblong-ovate, 3-6 x 2-2.5 cm, green colored, densely and coarsely white-lepidote and densely spinose near the apex with membranaceous and retrorse-uncinate to irregularly curved spines ca. 3 mm long, glabrous toward the base, completely covering the stem, coarsely nerved; ***blades*** sublinear-attenuate, 30-55 cm long, 1.5-1.7 cm wide at the base, coriaceous and distinctly channeled toward the base, green except for the upper ones reddish near the base, abaxially densely white-lepidote with the trichomes not obscuring the leaf color, adaxially densely and coarsely white-lepidote at the base and glabrous and lustrous towards the apex, apex long caudate, margins laxly to subdensely spinose, spines narrowly subtriangular, acicular toward the apex, straight to retrorse-uncinate, green except for the castaneous apex tip, 2-3.5 mm long, ca. 1 mm wide at the base, 5-10 mm apart. ***Scape*** not distinguishable from the stem. ***Inflorescence*** sessile, corymbose, densely bipinnate, ellipsoid, 3.5-4 cm long, 2.5 cm in diameter (excluding the primary bracts); ***primary bracts*** foliaceous, gradually reduced in length toward the inflorescence apex but many times as longer as the fascicles, turning bright red near the base and forming a ring around the inflorescence at anthesis; ***fascicles*** ca. 10, polystichously and densely disposed, nearly sessile, flabellate, complanate, ca. 23 mm long (excluding the petals), ca. 1.4 cm wide, 2- to 3-flowered; ***floral bracts*** narrowly triangular, strongly carinate, slightly shorter than the sepals, pale colored, nerved, densely white-lanate toward the apex, ca. 16 x 8 mm, membranaceous, apex subacute, margins spinulose at the apex; ***Flowers*** ca. 22 mm long (including the petals), sessile, densely arranged, odorless; ***sepals*** subsymmetrical, narrowly subtriangular-lanceolate, apex acuminate, 16-18 x 4 mm, free, entire, pale colored, densely and coarsely white-lepidote toward the apex with fimbriate trichomes, the adaxial ones alate-carinate with keels decurrent on the ovary, the abaxial one carinate or nearly so;

Figure 4. Population of *Orthophytum pseudovagans* Leme & L. Kollmann at the type locality. Photo by Luiz Magnago.

petals spathulate, obtuse-cucullate, emarginate, 17-18 x 5-6 mm, erect except for the suberect apex at anthesis, greenish at the basal 2/3 and white at the apical 1/3, bearing 2 upwardly to downwardly oriented, cupulate, crenulate-scalloped, basally thicker, apically membranaceous-laminate appendages ca. 3 mm above the base, as well as 2 conspicuous longitudinal callosities about equaling the anthers; ***anthers*** ca. 2.5 mm long, base and apex obtuse, fixed at 2/5 of its length above the base, strongly compressed laterally at anthesis; ***pollen*** broadly ellipsoid, sulcate, exine reticulate, lumina subrounded, muri slightly thickened; ***stigma*** conduplicate, blades suberect, papillose, white, shorter than the anthers; ***ovary*** ca. 4 mm long, ca. 3.5 mm wide at the apex, slightly complanate, trigonous; ***epigynous tube*** lacking; ***placentation*** central; ***ovules*** narrowly apiculate. ***Fruits*** unknown.

Figure 5. Flower details of *Orthophytum pseudovagans* Leme & L. Kollmann. Photo by E. Leme.

Orthophytum pseudovagans is the third known taxon of the "subcomplex vagans" which belongs to the complex of species with sessile inflorescence and includes *O. vagans* and *O. zanonii* Leme. This subcomplex is characterized by long-caulescent plants with green petals except for their white margins and sometimes the apex, apex obtuse-cucullate, forming a clavate corolla (Leme 2004a).

According to the identification key provided by Smith and Downs (1979) *Orthophytum pseudovagans* is the closest relative of *O. vagans* M. B. Foster, but this new species

Figure 6. Comparatively shorter stem of *Orthophytum pseudovagans* Leme & L. Kollmann Photo by E. Leme.

Figure 7. The distinctly caulescent habit of *Orthophytum vagans* M. B. Foster. Photo by E. Leme.

differs from it by its shorter stem (12-15 cm vs. 18-45 cm long), leaf blades distinctly longer (30-55 cm vs. 9-20 long) and exceeding the length of the stem (vs. shorter than the stem), inflorescence distinctly bipinnate (vs. simple), flowers shorter (ca. 22 cm vs. ca. 28 cm long), sepals longer (16-18 mm vs. ca. 13 mm long) and acuminate (vs. the adaxial ones with apex acute, somewhat cucullate and apiculate), petals shorter (17-18 mm vs. 22 mm), and the stigma distinctly shorter than the anthers (vs. distinctly exceeding the anthers).

The morphological differences when compared to *Orthophytum zanonii* (Leme 2004b) are the shorter stem (12-15 cm long vs. 20-50 cm long), leaf blades less coriaceous and longer (30-55 cm vs. 10-25 cm long), exceeding the length of the stem (shorter than the stem), and glabrous towards the apex and adaxially (vs. densely white-lepidote throughout), primary bracts turning bright red near the base and forming a ring around the inflorescence at anthesis (vs. concolor or reddish and not at all forming a distinct ring), sepals longer (16-18 mm vs. 13-14 mm long), and by the petals broader (5-6 mm vs. 3.5-4 mm wide) and green except for the white 1/3 apical portion (vs. green with white apical margins).

This new species was found in lower altitudinal habitat (ca. 250 m elev.) in a somewhat open forest composed by trees of 5 to 6 m tall. It was growing in shade, as a saxicole, or on the seasonally humid forest floor, where it forms dense and large populations.

Paratype: Brazil, State of Espírito Santo, Águia Branca, Santa Luzia, propriedade de Ciro Ferreira, 18° 58´ 40,5´´S, 40° 39´ 56,1´´W, ca. 250 m elev., 26 July 2006, *L. F. S. Magnago 1136, V. Demuner, T. Cruz & E. Bausen* (MBML).

Acknowledgments

We would like to thank the Museu de Biologia Prof. Mello Leitão for its logistical support, as well as its Director and the Curator of the Herbarium MBML, Helio de Queiroz Boudet Fernandes, for all his support and encouragement; to Valdir Demuner, Luiz Fernando Silva Magnago, Clara Esgario, and Rogerio L. Texeira, who kindly provided part of the botanical material used in this study.

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Articles of Interest

Brazilian researchers have found that arbuscular mycorrhizal fungi are not associated with most epiphytic bromeliad species of aechmea, billbergia, nidularium, tillandsia and vriesea they tested. They attribute this to the exposed bare roots of the plants. Grippa C.R., Hoeltgebaum M.P., Sturmer S.L., *Mycorrhiza* 2006, Dec. 7

A study from the University of Basel researched the reproductive cycle of *Werauhia sanguinolenta*. Their results add to an increasing body of evidence that phosphorus rather than nitrogen is limiting growth and reproduction in vascular epiphytes. Zotz G, Richter A, *Ann. Bot.* (*Lond.*) 2006 97(5) pages 745-754.

Aechmea roberto-seidelii: the Correct Name for *Aechmea guarapariensis*

Tânia Wendt. Photographs by the author.

In herbaria and living collection, the name *Aechmea guarapariensis* E. Pereira & Leme is frequently used to identify plants such as those illustrated in Figures 1,2,7. However, based on the principle of priority of the Botanical Nomenclature Code, the appropriate name must be *Aechmea roberto-seidelii* E. Pereira.

The difficulties in the application of the correct name are associated to the complex taxonomic history involving *Aechmea roberto-seidelii* with *Aechmea guarapariensis*, *Aechmea triticina* Mez and *Aechmea pineliana* (Brong. ex Planch.) Baker.

During my revision of the subgenus Pothuava (Wendt 1997), which includes these species, I considered *Aechmea guarapariensis* and *Aechmea roberto-seidelii* as synonyms of *Aechmea triticina*. My interpretation was based on the similarity among type collections (Figures 3,4,5) and also on the information of the original description that mentioned white or greenish floral coloration for all three taxa.

Aechmea triticina was described by Mez in 1896, but since its discovery it has been

Figure 1. *Aechmea roberto-seidelii*, two plants in cultivation at Universidade Federal do Rio de Janiero showing the variation in size.

Figure 2. *Aechmea roberto-seidelii*. Inflorescence detail.

Figure 3. *Aechmea roberto-seidelii*, type specimen.

Figure 4. *Aechmea guarapariensis*, type specimen.

Figure 5. *Aechmea triticina*, type specimen.

poorly understood due to the absence of original drawings and insufficient herbarium material. In 1999, Silva & Leme collected a plant that they considered to be the true *Aechmea triticina*, which exhibits flowers vividly rose to lilac. They considered that the characteristic of greenish flowers attributed to Glaziou (the collector of type specimens of *Aechmea triticina*) by Mez (1892) in the protologue is certainly a mistake. Whoever is right or wrong about the color of the flower of the type specimens we will never know. Silva & Leme (1999) have in favor of their argument that probably both collections are from the same region at Rio de Janeiro State, Brazil. Specimens under the names *Aechmea guarapariensis* and *Aechmea roberto-seidelii* occur in Espírito Santo State, with no recorded occurrence in Rio de Janeiro. Flower color and geographic distribution have often been helpful for species delimitation in Bromeliaceae (Faria 2006). The list of synonyms related to *Aechmea triticina* was not discussed by Silva and Leme (1999), and the name *Aechmea guarapariensis* came back to be used to designated the specimens with white flowers, which is not related to the current concept of *Aechmea triticina* with rose flowers, as proposed by Silva & Leme (1999).

Aechmea guarapariensis was described by Pereira & Leme (1984) based on cultivated material previously collected at Guarapari in Espírito Santo State, and *Aechmea roberto-seidelii* was described by Pereira (1972) based on a plant also collected at Guarapari. Since: a) the type specimens (Figures 3,4) are very similar; b) both original descriptions mentioned white color for their petals; and c) both were collected at the same locality; I confirm my first assessment (Wendt 1997) that they are the same species. Based on the priority of publication the name *Aechmea roberto-seidelii*, this is the correct name. Probably, the name *Aechmea roberto-seidelii* has been out of use because it was treated as a synonym of *Ae. pineliana* var *minuta* by Smith & Downs (1979). *Ae. pineliana* has yellow petals and floral bracts with long terminal spines (figure 6) that are not observed in *Ae. roberto-seidelii* (Figure 7).

Acknowledgements

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Figure 6. *Aechmea pineliana*. Inflorescence details showing the yellow petals and floral bracts with long terminal spines exceeding the calyx length - important identification characters.

Figure 7. *Aechmea roberto-seidelii* inflorescence showing the white petals and floral bracts with terminal spines almost equalling calyx length.

Tillandsia santieusebii Morillo & Oliva-Esteve, a new species from the Venezuelan Andes

Gilberto Morillo[1] & Francisco Oliva-Esteve[2]

Abstract

Fieldwork conducted in the Venezuelan Andes during the last 10 years, in order to complete a taxonomic revision of the Bromeliaceae for the area, has revealed a number of new records and some new species. One of them, a spectacular tillandsia from the lower mountain cloud forest of Mérida and Táchira, is described and illustrated here.

Tillandsia santieusebii Morillo & Oliva-Esteva, sp. Nov.

Type: Venezuela; Edo. Mérida: San Eusebio (La Carbonera)18-22 km W-NW of Jají, in low mountain cloud forest, alt. 2200-2400 msnm, April 30, 2006, Gilberto Morillo 13576 (Holotype MER, Isotype VEN).

Herba epiphytica, erecta, 2.2-3.2 m alta, acaulis. Folia lingulato-triangularia, 42-75 cm longa, 7.0-9.5 cm lata, supra leviter longitudinaliterque sulcata, apice acuminata, leviter aculeata, aculeo pungente; scapo 115-125 cm longo, bracteato, bracteis erectis, acuminatis; inflorescencia pinnata, 65-115 cm longa, spicis pedunculo ut videtur glabro, 15-24 cm longis, 4-5.5 cm latis, 14-17-floris; bracteis florigeris viridibus, 4.3-5 cm longis, 1-1.2 cm latis, apice incurvatis, sepalis viridibus, suboblongis, 3.4-3.5 cm longis, 0.3-0.4 cm latis, apice apiculatis, incurvis; petalis 4-4.7cm longis, lilacinis vel leviter purpureis; ovarium triloculare, trilobatum, 10 mm longum, stylo 21-22 mm longo, stigmatibus 3-3.2 mm longis, papillosis, staminibus petala non superantibus, inclusis, antheris linearibus, 11-12 mm longis, 0.7-0.8 mm latis; capsulis viridibus, immaturis, 4.5-5 cm longis, 1.4-1.5 cm latis, seminibus 0.45-0.5 cm longis, pappo 1.5-1.7 cm longo.

Plant epiphytic, flowering 2.2-3.2 m tall, acaulescent. ***Leaves*** forming a broad tank rosette, the rosette about 0.4-0.8 m high and 1.2 to 1.6 m in diameter; ***sheaths*** large, light brown below, 13-16 cm long; ***blades*** firm, triangular-ligulate, light green to yellowish green, 42-75 cm long, 7.0 a 9.5 cm wide in the lower half, the surface longitudinally sulcate, with conspicuous parallel veins, the apex often reddish, shortly acuminate or attenuate, slightly pungent. ***Scape*** with inflorescence 1.8 to 2.4 m long (between 4/5 and ¾ the length of the whole plant), subterete, red and light orange, 115-125 cm long, 2-3.5 cm wide, covered by imbricate bracts; ***scape bracts*** erect, acute to acuminate, pungent, the lower half light yellow and pink, apical half green, the lower scape bracts 18 to 21 cm long, gradually reduced in size upwards the inflorescence. ***Inflorescence*** terminal, polystic, once-branched, with 22 to 47 spikes; lower primary bract 5-7,5 cm long, red or greenish yellow with reddish edges, long acuminate, shorter than half of the spike; ***spikes*** distichous-flowered, oblong-elliptic, frequently spreading or somewhat erect, usually 22-24 cm long (the lower one 15-16 x 4 cm), 4.2 to 5.5 cm wide, or wider when in fruit, 1.8-2 cm thick, with 14 to 17 flowers, one in anthesis at a time, bearing 3-4 basal sterile bracts; ***floral bracts*** 4.3-5 x 1-1.2 cm, red to light green, elliptic-navicular, 3.9-4.8 cm long and slightly to moderately carinate when dry, apex curved; flowers subsessile; ***sepals*** shortly connate at base, light green, 3.4-3.5 x 0.3-0.4 cm, unequally oblong-lanceolate, externally convex, apex apiculate, curved, suffused with pink, the posterior ones carinate; ***petals*** slightly twisted, 4-4.7 cm long, white below the claw, claw 1-1.2 cm long, curved outward, obtuse and slightly retuse at apex, light purple to lilac; ***ovary*** light green, 3-chambered, broadly 3-lobed, 10 mm long, 3.4-3.6 mm wide at base; ***style*** 21-22 mm long; ***stigmas*** 3-3,2 mm long, papillose; ***stamens*** somewhat shorter than the petals; ***filaments*** translucent, 1,5-1,8 mm wide, flat lenghtwise except somewhat twisted close to the anthers; ***anthers*** linear, 11-12 mm long, 0,7-0,8 mm wide. ***Capsules*** immature, green, 4,5-5 cm long, 1,4-1,5 cm wide; ***seeds*** oblong, 0,45-0,5 cm long, tuff of hairs (pappus-like process) 1,5-1,7 cm long, whitish.

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Figure 1. *Tillandsia santieusebii.*

Paratype: Venezuela: Edo. Mérida: San Eusebio, selva montano baja, a unos 20 kms de Jají, alt. 2300 msnm, 30 April 2006, G. Morillo & F. Oliva-Esteve 13573 (MER, COL); same locality, 27 Dec. 1994, F. Oliva-Esteve, G.Morillo & B. Manara 246 (VEN?).

This beautifull plant is a large epiphyte, relatively rare in the misty humid highly diverse cloud forest of the Venezuelan Andes in the state of Mérida (San Eusebio) and Táchira (headwaters of Quinimarí River), at altitudes ranging from 2100 to 2400 m above sea level.

The cloud forest Selva Nublada Montano baja, where our species was first found (San Eusebio), has been partly cut, and many of the plant species originally frequent there are now in critical danger. This forest is characterized by having at least three stories, with an irregular canopy which varies between 20 and 35m high. Mean annual temperatures vary between 14° and 18°C, annual rainfall varies between 1500 and 2500 mm, and the cloud rate is high during the whole year (Ataroff 2003). There

Scientific *Tillandsia santieusbii* Morillo & Oliva-Esteve

Character/ species	Plant height when in flower (m)	Leaf sheath (cm)	Leaves (size, shape, color)	Scape, scape bracts	Inflorescence		Spikes	Primary bracts	Flower bracts (cm)	Sepals (cm)	Petals
T. santieusebii (Venezuela)	2.2-3.2	13-16 x 12-15, light brown beneath, dark brown above	55-91 cm long. Blade 42-75 x 7-9.5, triangular-ligulate, acuminate to attenuate, pungent, green with reddish apex	Erect, 1.15 -1.25 m long, 2-3.5 cm diam. Lower bracts 18-20 cm long, upper bracts 5-7.5 cm long, yellow-pink and green	Bipinnate, lax, raquis 0.65-1.15 m long, with 22 to 47 spikes		Frequently spreading or erect, 22-24 x 4.2-5.5 cm, with 14-17 flowers, 3-4 sterile bracts at base	Erect, ovate- lanceolate, 5-7.5 cm long, acuminate to caudate, shorter than half of the spike, red or greenish-yellow with red.	4.3-5 (3.9-4.8 when dry) elliptic-navicular, apex curved, carinate, red to light green	3.4-3.5, oblong-lanceolate, apiculate, shortly connate, posterior carinate, green suffused with pink	4.0-4.7 cm long, blades lilac to purple
T. oerstediana (Costa Rica & Panamá)	0.6- 1-2	Width 7-11, light brown, paler beneath	40-80 cm long, Blade narrowly triangular-ligulate, attenuate, 3-6.5 cm wide, medium green above, light grayish-green beneath.	Erect, 0.30-0.50 m long, shorter than leaves, Bracts subfoliaceous, green	Bipinnate, lax, raquis 0.5-1.10 m long, light green, with 32 to 35 spikes		Spreading, oblong-lanceolate, 10-20 x 3 cm, with 9 to 17 flowers	Broadly ovate, 10-20 cm long, acuminate to attenuate, shorter or as long as the spike, light green	3-3.5, carinate, light green o yellowish-green	2.5-3.2, lanceolate, posterior shortly connate, strongly carinate	Much longer than floral bracts, blades lilac
T. pallescens (Colombia)	1.1-1.7	18-23.5 x 8.3-11.4, purple	47-71 cm long. Blade narrowly-triangular, acuminate, 27.5-47 x 5-8, green.	Erect, 0.59-0.73 m long, 1.1-1.4 cm in diameter. Bracts foliaceus, 8-24 cm long, triangular, attenuate, green	Bipinnate, lax or subdense, 45-58 cm long, , with 44 to 80 spikes		Spreading to slightly reflexed, ovate, 4-7 x 2-4.5 cm, with 3 to 5 flowers, no sterile bracts at base	Spreading to somewhat reflexed, ovate-orbicular at base, upper bracts ovate-lanceolate, apiculate, 3.5-4.5 cm long, green with red apex, as long as the spikes,	3.2-3.8, elliptic-oblong, acute-apiculate, carinate, yellow with reddish edges	2.8-3.3, oblong, posterior shortly connate, carinate	Not known
T. pastensis (Colombia & Ecuador)	1-1.5	same color as blade	50-60 cm long. Blade ligulate, acute to acuminate, 4.5-8 cm wide, green with lilac spots.	Erect, exceeding leaf-rosette, 1 cm in diameter. Bracts 18 cm long or longer, acute or acuminate.	Bipinnate, dense-cylindric, 30-50 cm long, With ca. 25 spikes		Erect, 4.5-7.5 x 2 cm, with 6-8 flowers	Erect, 4-10 cm long, triangular, acuminate to caudate, red, at least the lower exceeding the spikes	1.9-2.4, ovate-elliptic, acute, carinate, base yellowish-green, upper half red	1.7-1.8, elliptic, posterior shortly connate, posterior carinate	2.5 cm long, blades white with purple apices
T. stenoura (Ecuador)	1-1.5	10-18x 5.5-10, purple, very dark when dry	25-70 cm long. Blade triangular to ligulate, 3-5.5 cm wide	Erect, 0.50-0.75 m long, 1-1.5 cm in diameter. Bracts 12-30 cm long, acuminate, red.	Bipinnate or tripinnate, 0.25-0.5 m long, purple, with 12 to 15 spikes		Erect to spreading, 5-20 x 2-2.5 cm, with 6 to 30 flowers	Erect to spreading, ovate, 4-7 cm long, red sometimes with dark edges, much shorter than spikes	2.5-3.5, ovate, acuminate, bicarinate, unicarinate toward apex, red to purple	2.1-2.5, narrowly elliptic to narrowly lanceolate, acute, posterior carinate	3 cm long, blades violet or lavender
T. superba (Ecuador)	Up to 2	26 x 15, purple	50-70 cm long. Blade ligulate, acute, 9-11 cm wide, green densely purple-spotted.	With inflorescence 2 m long, 1.1 cm diameter. Bracts red and light green.	Bipinnate, subdense, 40-100 cm long, with 33-40 spikes		Spreading to reflexed, subovate, 11 x 4.5 cm, with 11-18 flowers	Sharply reflexed, elliptic, acute, red, 4.5-7 cm long, less than ½ length of spikes.	3.5-4, acute to obtuse, bicarinate, red.	3.6, linear-ovate, acute, the posterior carinate,	3.6-4 cm long, blue

Table 1. Comparrison of *Tillandsia santieusbii* Morillo & Oliva-Esteve to *T. oerstediana, T. pallescens, T. pastensis, T. stenoura* and *T. superba.*

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are more than 100 species of trees in San Eusebio. Dominant plant families in the area include: *Lauraceae, Rubiaceae, Melastomataceae, Araliaceae, Arecaceae, Euphorbiaceae, Myrtaceae, Piperaceae* and *Solanaceae*, and within the vascular epiphytes *Orchidaceae* has more than 120 species.

Figure 2. *Tillandsia santieusebii.*

There are at least eight species of Bromeliads frequently found in the locality where the new species was collected. *Pitcairnia meridensis* Kl. ex Mez is terrestrial, the rest are usually epiphytes: *Guzmania mitis* L.B. Smith, *Racinaea tetrantha* (Ruiz et Pav.) M. Spencer & L.B. Sm., *Tillandsia biflora* Ruiz et Pav., *T. complanata* Benth., *T. longifolia* Baker, *T. tovarensis* Mez and *Vriesea tequendamae* (Andre) L.B. Smith.

A different grouping of bromeliads live some miles away from the type locality, within a drier vegetation, and as part of semideciduous and secondary forests, which occur in the state of Mérida at lower altitudes. There you can see *Catopsis nutans* (Sw.) Griseb., *Guzmania monostachya* (L.) Rusby ex Mez, *Racinaea tenuispica* (Andre) M. Spencer & L.B. Sm., *Tillandsia fendleri* Griseb., *T. myriantha* Baker, *T. juncea* (Ruiz et Pav.) Poiret and *T. variabilis* Schltr. are common. Sometimes it is also possible to find *Puya floccosa* (Linden) E. Morr. Ex Mez, as terrestrial, and *Tillandsia biflora* Ruiz et Pav., *T. complanata* Benth. and the very interesting *T. francisci* W. Till & J.R. Grant, growing as epiphytes.

The new species was collected by the authors for the first time in 1994, but was not properly identified until now. New collections, a more detailed study of the living plants, more complete literature, and information obtained from Julio Betancur (Colombia) and Francisco Morales (Costa Rica), have led us to conclude that it is a plant not described previously. Main references used in our investigation include keys to the subgenera and description of species of tillandsia published by Smith (1957) for Colombia, Gilmartin (1972) for Ecuador, and Smith & Downs (1977). Other

important references used in our study include, the treatment of Bromeliaceae for Flora Mesoamericana by Utley and Burt-Utley (1994), and books with photographs published by Oliva-Esteve (2000); Oliva-Esteve (2002), Shimizu & Takizawa (1998) and Oliva-Esteve & Steyermark (1987).Additional information was obtained from Garcia & Betancur (2002) and Till and Grant (2003), and from internet sources at the Missouri Botanical Garden's VAST database http://mobot.mobot.org/W3T/Search/vast.html and the International Plant Names Index http://www.ipni.org/ipni/plantnamesearchpage.do

Initially we thought that the new taxon could be placed within Allardtia Baker, a large subgenus comprised by more than 150 species, as treated by Smith & Downs (1977). However, partial results published by Barfuss, Samuel et al. (2005), and Till and Barfuss (2006) strongly indicate that Allardtia is not a natural group (not monophyletic), and therefore includes species from diverse origins. Due to the large number of taxa involved, and the lack of a complete taxonomic and phylogenetic work within the genus, it is not possible to propose close affinities to our species.

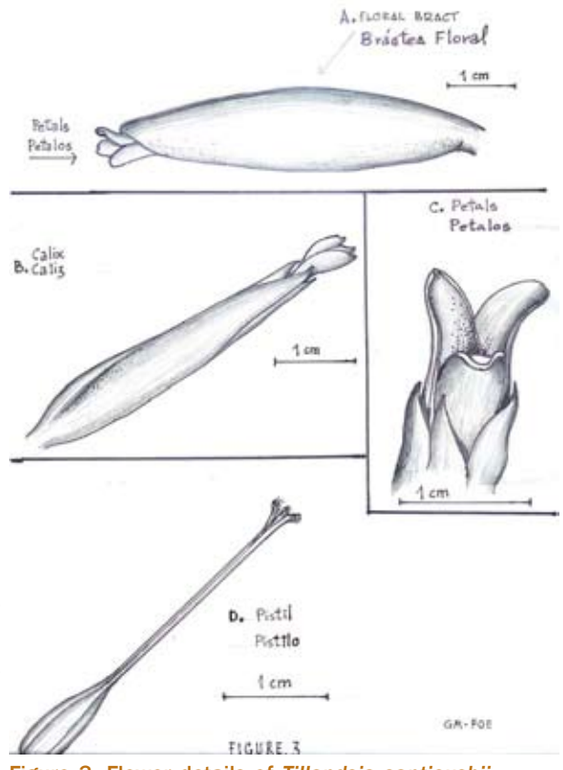

Figure 3. Flower details of *Tillandsia santieusbii* Morillo & Oliva-Esteve. Illustrations based on Morillo 13576

Based on sources consulted and cited above, we find that *Tillandsia santieusebii* presents significant morphological similarities with *T. pallescens* Betancur & N García, (from Colombia), *T. pastensis* André (from Colombia to Perú), *T. superba* Mez et Sodiro, and *T. stenoura* (from Ecuador), *T. wurdackii* L.B. Sm., (from Perú), and with *T. oerstediana* L.B. Sm. (from Costa Rica and Panamá). A comparison between the six species cited above, and the proposed *T. santieusebii* is presented in table 1.

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Terminology

Derek Butcher, Bromeliad Cultivar Registrar

Some growers do get concerned with understanding various terms used in naming plants and sometimes general writers wax lyrical on the subject without basing their comments on facts.

Plants found in the wild are covered by rules called the **I**nternational **C**ode of **B**otanical **N**omenclature (ICBN) and taxonomists, as the name implies, deal with a taxon (plural taxa) which is defined as "the international abbreviation for the "taxonomic group" or "taxonomic unit"

Plants arising in cultivation are covered by rules called the **I**nternational **C**ode of **N**omenclature for **C**ultivated **P**lants (ICNCP) and horticulturists act with a cultivar in the same way.

Let us look at some of the more common definitions used in the International Code of Nomenclature for Cultivated Plants – Seventh edition 2004 because we should always refer to the official source (my comments are in [] brackets):

"Clone - two or more individuals, originally derived from one plant by asexual propagation, which remain genetically identical.

Cultivar – an assemblage of plants that has been selected for a particular attribute or combination of attributes and that is clearly distinct, uniform, and stable in these characteristics and that when propagated by appropriate means retains those characteristics. [These can have originated either from the wild or from cultivation and are not covered by ICBN rules].

Group – a formal category denoting an assemblage of cultivars, individual plants, or other assemblages of plants on the basis of defined similarity (see Grex).

Grex – a type of Group used in orchid nomenclature applied to the progeny of an artificial cross from specified parents. [note that this no longer applies to bromeliads]

Hybrid – the result of a cross between differing plants or taxonomic units.

Mutant – an individual produced as a result of mutation.

Mutation – a spontaneous or engineered change in the genotype (genetic make-up of an individual), which may alter the phenotype (the sum total of all the characteristics of an individual plant). [in other words what the genotype actually looks like]

Sport – an apparent mutation which has occurred on part of a plant. [e.g. offset)"

If you as a writer want to explain these definitions further please do so but remember to always refer back to these definitions to make sure you are in fact explaining such definition and not your own conception of what you think it should be.

If you want further definitions and do not have access to the proper document please let me know and I will tell you what is in the GOOD book.

Neoregelia bahiana Pabst

Geoff Lawn

Neoregelia bahiana 'Pabst.' Photo by Geoff Lawn,

After extensive field studies, in 1998 Brazilian botanist Elton Leme made synonymous with *Neoregelia bahiana* the following taxa: *Neo. bahiana* forma *viridis*, *Neo. bahiana* var. *bahiana*, *Neo. bahiana* var. *viridis*, *Neo. bahiana* forma *bahiana*, *Neo. hatschbachii, Neo. diamantinensis, Neo. pabstiana* and *Neo. intermedia*. This reduction and grouping of diverse forms, foliage colours and variable trichome-density leaf textures into one species simplified matters taxonomically but left at least one distinctive clone of former *Neo. pabstiana* without any distinguishing name identity for growers.

Leme summarised in his book *Canistropsis: Bromeliads of the Atlantic Forest* that "Leaf colouration , whether green, red or purplish red, means little, however, within the range of variation shown by *N. bahiana*. Furthermore, entirely red plants in the wild turned completely green in cultivation, which shows that this trait is not consistent enough to sustain a valid taxon even at the intraspecific level".

This changing of foliage colour under cultivation seems not to apply to our purplish red clone of former *Neoregelia pabstiana*, which in Australia at least, if given strong light and restricted feeding, is slow-growing but retains it's unusual tints on sub-tubular to narrowly ellipsoid rosettes to 25cms. tall of only 10 to12 thick, stiff coriaceous leaves and with short, woody stolons.

After consulting the BSI Cultivar Registrar Derek Butcher about this situation, it has been decided to name and register this particular clone as *Neoregelia bahiana* Pabst. Originally *Neoregelia pabstiana* (or "*pabstii*" in error) was named and described in 1972 by the eminent Brazilian botanist Edmundo Pereira (1914-1986) to honour his close friend the renowned orchidologist and botanist Dr. Guido Pabst (1914-1980) who was the co-founder (1958) and lifetime curator of the Herbarium Bradeanum in Rio de Janeiro.

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Vriesea Sceptre d'or : Another Can of Hybrid Worms!

Derek Butcher, Cultivar Registrar

This old hybrid has two sources which makes things somewhat difficult. First we read in Duval, 1902 that he created *Vriesea* Sceptre d'or in the period 1895 –1900 from Rex x *V. mirabilis*. There is conjecture as to whether mirabilis is the same as *xGuzvriesea* Magnifica but you would expect a branched inflorescence in this hybrid.

***V**riesea* Sceptre D'or, Belgium

In 1898 in Revue Hort 70: 246. there is a reference to a *Xsceptrum* which Smith in Flora Neotropica14 part2 1977 page 1274 says is Sceptre d'or which could well refer to the French hybrid but doesn't! Leo Dijkgraaf from the Netherlands went to the trouble of finding the reference and all we find under 'LES ORCHIDEES, BROMELIACEES ET AUTRES A L'EXPOSITION DE GAND' - le *Vriesea sceptrum* expose par M. Thomson, d'Angleterre. All this means is that M. Thomson from England showed *V. sceptrum* at the Exhibition . How you can interpret this as referring to Sceptre d'or is a mystery.

In 1909 in Gartenflora 58: 200.which was also referred to in Flora Neotropica14 part2 1977 page 1274 we see the parentage of *Vr. gloriosa* x *saundersii* . Thanks again to Leo Dijgraaf I have copy of the article referred to. Here we read under Grosse Internationale Gartenbau from 2 to 13 April 1909 in the Zoohalle in Berlin "new Vrieseas displayed by the firm of Smet of Schloss Schouwbroek near Vinderhoute, Belgium (amongst others) *Vrisea* Sceptre d'or (*Encholodium Sanderi* x *Vr gloriosa*) . The Encholodium would be a misspelling of Encholirion an old name for vriesea but the 'Sanderi' could well refer to Wittmack's Sanderiana not Morren's *saundersii*

***Vriesea* Sceptr Cinnamon. Photo by Peter Huddy.**

In 1942 Chas Chevalier listed all plants that had been seen in the University of Liege but this plant is not there.

In 1965 Richter published his *Zimmerpflanzen* from the then East Germany and he described this plant admittedly with reverse parentage as follows. Remember this seems to be the first description published some 70 years after the hybrid was made!

"Plant large to very large, many leaves.. Leaves wide base, linear

lanceolate, bent over, green, lively brown spotted (I had originally thought that these spots were *saundersii* type spots BUT if Sanderiana were involved you could have guttata type spots)

Scape very large and tall.

Inflorescence strongly branched, yellow with reddish brown marks

Flower yellow."

In 1973 Victoria Padilla in *Bromeliads* quoted a "*Vriesea* 'Sceptrum var. Sceptre d'or' described as a large rosette with a robust, branched inflorescence. The bracts are coppery yellow." As the floral bracts of *Vriesea sceptrum* are quoted as red we assume she is talking about the hybrid.

In 1977 Richter in 'Bromeliads' says this has strong growth rhythm. Peculiar flower spike. Few in cultivation.

In 1977 at the World Conference in New Orleans, Herb Plever took a photo of this plant in the collection of Eric Knobloch, only now the plant was medium sized with a single spike.

In the 1980's the Research Institute in Melle, Belgium were growing this as a predominantly single spike with a small side spike with not particularly golden bracts. We are unaware of any accession details.

***Vriesea* Sceptre Knoblock. Photo by Herb Plever.**

In 2006 in a response to a plea on the internet I got an answer from Jay Thurrott of Florida whose plant was sending up a flower spike. Alas, a raccoon, searching for frogs shredded said flower spike plus a bit more. I could not understand the adjective that Jay used in describing the raccoon. Apparently Jay got his plant in 1996 from Boggy Creek Bromeliads and assures me it has flowered for him but alas has no photographs. In any event, I feel this could be linked to the 'Knobloch' plant somehow or another.

Now we move to Antipodean shores! In the late 1950's early 1960's there was a commercial concern just south of Sydney growing *Vriesea* Komet from seed! There was quite a varied progeny as would be expected as Komet is said to be hybrid between *V. corcovadensis* and Sceptre d'or. Some would have looked like Komet and some like variations on the parents. Therefore some could well have been identified as Sceptre d'or because plants currently growing in Australia under this name bear no resemblance to other plants with this same name.

In 1963 Laurie Dephoff in New Zealand imported a plant called Goldzepter

from a dealer in Australia called Longton. Nobody in Australia can remember such a bromeliad grower and there is nothing in local newsletters about him! The interesting thing is that Sceptre d'or follows Dutrie who was a Frenchman and Goldzepter is the German equivalent. Apparently this plant is reluctant to flower and is described as being medium sized, with upright, stiff, grey green leaves which suggests influence of *Vr. corcovadensis* with minute red spots towards the tip which suggests influence of the grandparent saundersii. This plant is still growing in New Zealand and the spotting seems to have disappeared but we have a photo thanks to Barry Uren which we will place on record as Goldzepter. The interesting thing is that the only thing gold about the plant is the colour of the petals. In other words, it is a dead end in my search for the 'true' Sceptre d'or !

Vriesea Sceptre Saffron. Photo by Andrew Flower

In the 1992 Bromeliad Society of Australia seed list they had *Vriesea* Sceptre d'or on offer and Andrew Flower of New Zealand could not resist the challenge. By 2006 he has produced progeny which do have a simple flower spike with yellowish bracts. No trace can be found of the origin of the seed, which could well have originated in the USA. To date nobody in Australia is owning up to having this plant.

What can we do? Clearly, the large plant with the branched inflorescence produced at the end of the 19th century is not being grown but has been surplanted by smaller plants with sword shaped single inflorescences of a yellowish colour. These may branch in optimal conditions. My suggestion is:

1. The American clone be called 'Sceptre Knobloch'
2. The Australian clone be called 'Sceptre Cinnamon'
3. The latest New Zealand clone be called 'Sceptre Saffron'

This whole problem stems from the fact that here we have a hybrid that readily self-sets seed, AND we all should know that seed from a hybrid NEVER has the name of its mother UNLESS you are prepared to cull and only retain those plants that are virtually indistinguishable from mother in both plant and inflorescence. We know this rarely happens.

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Richter (1965) in 'Zimmerpflanzen'

Richter (1977) in 'Bromeliads'

Tillandsia Little Orphan Annie (unreg.) growing on a stick of mixed "orphans".

Dawn Sweep of Greenhouse Rescues Orphans

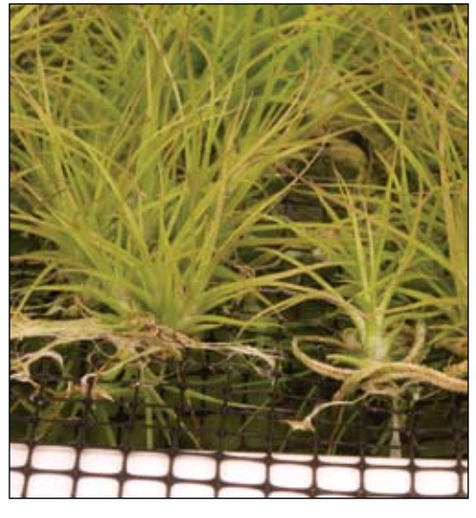
Andrew Flower, BSI Editor. Photos by the author.

Over the past ten years, I have grown 2,500 batches of tillandsia seed, each one carefully labelled with parent(s) name, sowing date and batch number. Despite this, Little Orphan Annie managed to survive until flowering with no record of her parentage, nor a resemblance to a single one of the seedlings raised during this period. How come?

First-transplant tillandsia seedlings in the author's growing-on house.

Some people grow-on tillandsia seedlings on a horizontal medium - often plastic mesh. Others, myself included, grow them vertically on thin pieces of wood. All sorts of other substrates such as tree or fern fibre, cork bark, can be used in either orientation.

My method uses glue to hold the transplanted seedlings in place. Some successful growers use hot glue guns at this stage, I don't - I use Weldbond "Universal Space Age adhesive (made in Canada and distributed world-wide). Another good one is DAP "Weldwood" carpeter's wood glue, and for this type of glue the key phrase to look for on the label is "aliphatic resin." Glues to avoid are PVA based ones - some are ok, but you have to be careful. The disadvantages of PVA glue is their tendency to not last long in a wet environment, and they can be so alkaline they destroy young plants. Try them on a small number of seedlings first: one PVA glue that killed off a number of my trial seedlings was Fullers MaxBond (made in Australia).



Tillandsia seedlings on horizontal mesh at one of Rainforest Flora Inc's greenhouses in California.

Every couple of months we sweep up the 15-20 seedlings that have fallen off their mounts, and glue them onto "orphan sticks." Years later they can usually be easily identified, but Little Orphan Annie is unique!

Madeira - Garden in the Atlantic Ocean

Heinz Schwendener. Photographs by the author

Madeira Island is considered to be one of the most beautiful islands in the world, not only due to its lovely landscape but also to its year-round mild subtropical climate. The island is situated in the Atlantic Ocean, 514 miles from Lisbon, 1500 miles from London and 220 miles from the Canary Islands.

Neoregelia Josef Bek

Neoregelia Madeira Sunrise

I started cultivating neoregelias in 1994, and since 2004 on this beautiful island. Most of my bromeliads are hybrids cultivated from seed. The climate of Madeira is ideal for neoregelias, never too hot or too cold. Bromeliads are not very well known on the island and only a few species are offered in flowershops, mostly imported from Holland. I grow my plants in a shadehouse on a private property, the "Quinta da Boa Vista"[1]. So maybe one day the neoregelias will be a part of the diversity of the well-known Flowers of Madeira on the "Island of Flowers".

Madeira was discovered in 1419 by the Portuguese navigators João Gonçalves Zarco and Tristão Teixeira. They landed at the eastern side of the island and found a deep forest. So the island was named "Madeira", which in Portuguese means "wood". Moving along the coast, they then landed at a bay where they found large areas covered with a plant called "Funcho", which in Portugues means "fennel", thus giving a name to "Funchal", today the capital of the island.

The island of Madeira is lapped by the waters of the Gulf Stream with warm, comfortable summers (78 degrees F) and mild winters (63 degrees F) that makes it an enchanting holiday destination all year round. It is one of the Autonomous Regions of Portugal and part of the European Union.

1 Quinta da Boa vista (estate with the nice view) is the home of a fabulous Orchid collection. The owner of the Quinta is Betty Garton, daughter of Sir William Cooke, one of the pioneers of orchid cultvation in England. The garden at Boa Vista Orchids was founded in 1960 by her husband Captain Cecil Garton, the ex-British Consul, who inherited the Quinta.

Neoregelia Madeira Magic

Neoregelia Madeira Beauty

Madeira with a surface of 460 miles has a length of 30 miles, a coast-line of 80-90 miles and 300,000 inhabitants. The highest point on the island is Pico Ruivo, at 1862 meters (6107 feet). On the south there is very little left of the indigenous laurisilva forest which once clothed the whole island (until the original settlers decided to clear the island for farming by setting most of the island on fire), but on the north the valleys contain native trees of fine growth. These laurisilva forests on the northern slopes of Madeira are designated a "World Heritage Site" by UNESCO. It is the largest surviving area of Laurel forest and is believed to be 90% primary forest.

Madeira is quite a floating garden. Volcanic ashes and demolished lava has given the island a rich soil. The nature is simply luxurious. The region harbours an important floristic diversity. But the island has much more to offer: many historical monuments, enchanting gardens, picturesque villages, impressive volcanic caves, rugged coast-lines, natural beaches and breathtaking views. There is so much to see that you will soon realize that one visit to Madeira just isn't enough!

North side of Madeira, with typical hortensias along the road.

Top Award Survives Hurricane Katrina

Carol Wolfe

The Greater New Orleans Bromeliad Society held its annual show on May 18, 19, 2007 in the Lakeside Mall in Metairie, Louisiana. The Mall is one of the best in the country to hold a bromeliad show. Natural light from the dome-shaped glass roof shows off the real beauty of the bromeliads and the colors are radiant. The natural lighting is a photographer's dream. There were 107 entries in the show.

Mal Mele with award-winning *Alcantarea* Black Cinder. Photo by Carol Wolfe.

Taking the Mulford Foster Horticulture Best of Show Award, was Mal Mele's Alcantarea Black Cinder. Mal is shown here with his award winning plant. This is his first showing of this bromeliad. About three or four years ago, Mal begged Sharon Peterson, to sell him a pup of Alcantarea Black Cinder. Although constantly on the look out for more of these, Mal has never been able to find another one. His search includes nurseries and shows and sales in Florida, Louisiana and Texas. It is with passion and a degree of frustration that Mal will tell you "it is almost impossible to find this plant!"

The Florida Council of Bromeliad Societies web site FCBS.org has the following information about "Alcantarea Black Cinder, Shiigi, D., 1986, Seed Parent: imperialis, cv. of Alcantarea imperialis - Shiigi said, "Out of 500 seedlings only this one showed different color characteristics - large plant 5-1/2' in diameter by 4' tall - leaves narrower than type in very deep purple to black coloration". Registration Documents 1998"

This pup was 8" to l0" in size when purchased from Sharon. Mal is challenged by the prediction and comments from BSI Judges and visitors to show a mature size of the plant, the height of the inflorescence, and how long the inflorescence will last. Mal plans to measure and photograph the plant monthly. We will do a follow up article next year with pictures and a growth chart!

Mal is not new to bromeliads. He joined GNOBS in 1967 and took Best of Show at the 1977 BSI World conference with *Vriesea gigantea* var. *seideliana*.

The picturesque, park-like setting of Mal's greenhouse complex. Photo by Andrew Flower, taken during a visit kindly arranged by the GNOBS following the BSI Board Meeting in July, 2007.

In 1975, Mal moved from New Orleans to Covington, Louisiana on the north side of Lake Ponchantrain. It took him a year to build a house and another year to build a 40' x 80' luxury greenhouse with a 20' ceiling. The cost at that time was an astronomical $150,000. Some of Mal's friends call it the "cathedral".

As soon as Mal moved his bromeliads into the greenhouse, trouble started. The bromeliads were dying by the hundreds. For no apparent reason, they began to rot in the center. After extensive research into water, soil, and other elements, BSI Board Members taking plants to research, all was to no avail. Mal could get no answers to this phenomenon. In l985, after ten years with no answers, discouraged and downhearted, Mal gave up his pursuit of his bromeliads and quit his beloved hobby.

It was many years later when Herb Hill, Jr., a world renowned bromeliad grower and hybridizer from Lithia, Florida, was able to solve Mal's dilemma. (Mal was a very close friend to Herb's Mom & Dad.) The problem was copper treated lumber used to build the greenhouse. In the summer when the greenhouse was open, the breeze from Lake Ponchantrain had kept the lumber from sweating. However, in the winter when the greenhouse was closed, the heat turned on, lack of adequate air movement

had caused condensation to form on the wood, then dripped into the bromeliads cups until the copper build up killed the plants. At last Mal had some answers. He had always wondered why his Tillandsia and staghorns had not been affected. Now he knew that with no cups in these plants it had prevented a copper build up. The mystery was solved.

About 2004, Mal had some health problems with emphysema and his Doctor advised him to get more activity into his life. The emphysema could never be cured but activity could keep it from deteriorating further. Mal started thinking of things to make his retirement more "active." After thirty years, his long-standing greenhouse had probably leeched most of the copper out of the pressure treated lumber. He decided to put plastic inside the greenhouse to protect the bromeliads and pursue his long forgotten hobby. About this time, Tom Wolfe of Lutz was coming to Judge their show and also bringing bromeliads for sale. Mal called Tom and placed a phone order for some of his favorite bromeliads. When Tom arrived, he was waiting to sort through the boxes of bromeliads. He was out of retirement and once again back into bromeliads.

Mal becomes passionate in whatever activity he is involved in, so within the year, he built a new 40' x 80' Quonset style greenhouse with NO treated lumber. The cost was between $12 to $15,000. This type greenhouse only cost him a tenth of the cost of the original greenhouse. He began earnestly rebuilding his bromeliad collection.

Then August 29, 2005 hurricane Katrina hit. The new greenhouse was destroyed. Mal says the original greenhouse, built like a tank, withstood the storm. He replaced the plastic and extend the greenhouse 20' making it 40' x 100'. He considers it fortunate that he was able to save most of the bromeliads from the greenhouse that had blown down. He immediately replaced the destroyed greenhouse with another 40' x 80' Quonset style greenhouse with double insulated roof and lots of Schaffer fans. Both greenhouses are now full and Mal estimates that he has several thousand bromeliads. Out of the last six shows he entered, Mal has taken "Best of Show' three times.

Mal's morning begins in the greenhouses by 6 AM. He stops for breakfast with his wife, Mich, at 8 AM and then back to the greenhouse until lunch. The heat of the day is the hardest on him, so he stays indoors until about 3 PM and then back to the greenhouse until 6 or 6:30 PM. He does this for five days a week. On the weekends, you can find Mal and his wife at the Covington Market selling and sharing his bromeliads with the public. Mal is now especially interested in Tillandsias. He likes the creative part and excitement of mounting Tillandsias.

Giving up his retirement and increasing his daily activity has done exactly what the Doctor predicted and Mal's health has very much improved. For a retired person, he is very active, full of energy, enthusiastic, works more than 40 hours a week with his bromeliads, and loves doing it. He is enjoying his success in growing bromeliads and enjoying the benefits it has brought to his life.

In Memorium. Ed Prince

On June 7, 2007 the bromeliad world lost one of its titans, Edward J. Prince, who died at age 74 from cardiac failure while vacationing in Europe. Ed, along with wife and ever-present partner Moyna, was a stalwart of the Bromeliad Society of South Florida (BSSF). Ed served as president, board member, annual show chair, and primary organizer of many of the society's events countless times over decades of service to the society, his fellow members, and to the place the society called home, Fairchild Tropical Botanic Garden. Ed wielded great influence in the Florida Council due to his experience, authority and responsible demeanor. Ed was an accredited bromeliad judge with an extensive knowledge of bromeliads, most of which he knew from personal experience, since he and Moyna grew them all to award-winning perfection. He knew all the international players, as well as what was in their nurseries, and he prowled the jungles of the Americas with the best of them. Ed was a tireless promoter of not only bromeliads, but the wealth of good fellowship that was to be enjoyed by active membership in Miami's most convivial plant club, the BSSF. Ed was the Society, in the eyes of many of us who were privileged to know him over the years. Most of us remember Ed and Moyna as the first people we got to know in the BSSF.

Born in Atlantic City, Ed made his home in Miami for good when he moved here to attend the University of Miami. Upon graduation in 1958 he began a long career as an educator in the Dade County Public School system from which he retired in 2002. Ed's perspicacious talents as a mentor were honed there and in his role as father to Michael and Andrew, and grandfather to 4. Again, the Society benefited. Each of us has at least one "Ed story", and most of us have dozens. One recent tale illustrates the crucial nature of Ed's service in the BSSF: his decision that our society would have a judged show in 2007. Ed couldn't bear to discourage one novice grower's award-winning eagerness to do it all over again, and so he decreed we would have a show in 2007, not just a sale as he originally envisioned. Ed had lots of opinions about bromeliads, and he never lacked for good advice and the confidence to deal it out as the gospel we all listened to and, if we knew what was good for us, heeded. These memories of Ed comfort us as the BSSF and the wider bromeliad community try to move forward without him. We know Ed would be displeased with us if our efforts were anything less. Nevertheless his colleagues of the BSSF, Fairchild Garden and his many friends outside Florida, especially in the Australian and New Zealand Bromeliad societies, will miss him terribly in the years to come.

Lynne Fieber

Did You Know?

Joyce Brehm, BSI President

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An affiliated Society can also publish their activities on the BSI web site. To do this notify Ken marks, Web Master for the BSI at webmaster@bsi.org. He will tell you exactly how to set up your page and access it so you can make changes monthly.

Only members of the Bromeliad Society International can download a membership directory for the Bromeliad Society International from the www.BSI.org web site? You can save this to your hard drive or a file and search it at will. You cannot cut and copy it, but you can search the files for names. The Directory is updated twice a year. There are currently privacy issue concerns in Australia, New Zealand, the US and probably other countries. These issues are delaying publication of a printed and mailed copy of the directory to our Members.

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Claudia Goodridge, New Haven, CT
Glenys Guild, Waitakere City, New Zealand
Mr Alfredo Grau, Yerba Buena, Argentina
Mr Gary Gergeron, New Orleans, LA
Mr Michael Gimeno, Tampa, FL
Mr Randy Garcia, Tampa, FL
Ms Kathleen Greenway, Thuringowa, Australia
Ms Zaiga Gardiner, Kuranda, Australia
Steve Goode, Scottsdale, AZ
Sturt Gibbs, Manunda, Australia
Susan Gan, Selangor, Malaysia
William D Grimes, Iquitos, Peru
George W Henderson, Fort Lauderdale, FL
Jack Hagenaars, Victori BC, Canada
Jason Harris, Sebastian, FL

Jeff Hutchinson, Beach, FL
John F Hardaway, Columbia, SC
Lesley Hepburn, Cairns, Australia
Mr Herbert H Henry, Orlando, FL
Mr John Hiatt, Deland, FL
Mr Robert J Heer, Houston, TX
Ms Darleen E Hill, Dana Point, CA
Ms Fran Hardy, Rancho Santa Fe, CA
Ms Sue Haffner, CA
Rex L Hughes, Jr. Stroudsburg, PA
Susan Holcombe, Mt Molloy, Australia
Instituto de Biociencias, Sao Paulo, Brazil
A.G. Jam, Kedron, Australia
Dr Wichien Julasareekul, Sriracha, Thailand
Kathy Jenkins, Spring Hill, FL
Jacquelyn E. Lucas, Loganville, GA
Ms Shirley Jones, Orlando, FL
Dr Thorston Kromer, San Andrea Tuxtla, Mexico
Jeffrey & Lindsey Kent, Vista, CA
Leroy G. Kavalijan, Sacramento, CA
Mr David Kayo, Orlando, FL
Mrs Edith T Kawashima, Honolulu, HI
Mrs Mary Keller, Pensacola, FL
Ms Dianne Krumel, Pensacola, FL
Ronald & Diane Kisler, Fort Walton Beach, FL
Russell & Indra Kingston, Torbanlea, Australia
Shirley & Richard Konefal, Hollywood, FL
Allan Ladd, Booyong, Australia
Dave & Brenden Leishman, Clifton Beach, Australia
David Liddle, Mareeba, Australia
Fred Learey, Mountain Lake Park, MD
Jan & Sue Liddy, Norwalk, CT
Jesus & Elizabeth Lopez
Joe Libertucci, West Palm Beach, FL
Mr Eric Love, Carpinteria, CA
Rafael Batista Louzada, Sao Paulo, Brazil
Malcolm McCorquodale III, Houston, TX
Bruce McAlpin, Miami, FL
Carolina Granados Mendoza, Mexico City
Demetria Mondragon, Oaxaca, Mexico
Heather Markert, Woodland, CA
James McIntyre, Charlevoix, MI
James P Marcuse, Marina Del Rey, CA
Jason Mellica, Sarasota, FL
Joachim Marx, Plochingen, Germany
Ken & Mary McGillivary, Naples, FL
Lillian Mulligan, Townsville, Australia
Louis Moffett, Spring, TX
Mr Gary May, Narangba, Australia
Mr John Murray, Earville, Australia
Mr John Robert Mareing, St Louis, MO
Ms Carolina Granados Mendoza, Cuidad de Mexico
Robert Mills, Miami, FL
Wali & Raheemah Muhammad, Fairburn, GA
George Nauyok, San Francisco, CA
John O'Neill, Norco, CA
Ms Holly Nichol, Corpus Christi, TX
North Carolina Zoo, Asheboro, NC
Peter Nixon, Sydney, Australia
Barry Osborne, Cairns, Australia
John & LeAda Orrell, Monte Sereno, CA
Mr Harvey Ottley, Howard Springs, Australia
Chris Patterson, Auckland, New Zealand
Dee Porter, Clinton, IL
Jeremy Prentice, Melbourne, Australia
Jewell Dean Paul, Jena, LA
Mark & Marie Pattillo, Rockport, TX
Mr George W Page III, Houston, TX
Mrs Kathy Phinney, Kissimmee, FL
Phyllis & Bruce Purdie, Wellington, New Zealand
Robin Pacholder, Houston, TX
Tan Hong Piao, Penang, Malaysia
Terry Penuel, Enterprise, AL
Viktor & Yvonne Przetocki, Hamersley, Australia
Jeff Rood, Trabuco Canyon, CA
Linda Ruschin, Cairns, Australia
Mr Charles F Ray, Naples, FL
Fredrick Joseph Rosel, Rockhampton, Australia
Mrs Susan Rhoads, Orlando, FL
Robert Raabe, Edge Hill, Australia
Steven Reynolds, Austin, TX
Russell's Bromeliads, Clermont, FL
Vicente A Rizzuti, Caracas, Venezuela
Sandy Stonham, Auckland, New Zealand
Ari Stein, Bullinudgel, NSW
Bertha Schollum, Tauranga, New Zealand
Brian & Barbara Surman, Buderim, Australia
Catherine Summers, San Diego, CA
Craig Smith, Bayview Heights, Australia
Eric J Stephens, Kaikohe, New Zealand
Gregory Schilling, Pasadena, CA
Gregory Spak, Cocoa, FL
Shreveport Bromeliad Society, LA
Karen Stevens, Cairns, Australia
Laurel Salzman, Riverside, CA
Linda Sammon, White Rock, Australia
Marguerite Sexton, Cairns, Australia
Monica Stapleton, Cairns, Australia
Mr Kesson Sharp, Waitakere, New Zealand
Mr Robert D. Swan, Cumberland, MD
Ms Barbra Schiappadori, Townsville, Australia
MS Linda Sheetz & Mr Brian Corey, St. Petersburtg, FL
Ms Marion Seaman, Tampa, FL
Ms Mary Siemers, Tucson, AZ
Paul F Schlicht, Vero Beach, FL
R.D. Sturgeon, Homewood, IL
Robert & Wendy Searles, Wellard, Australia
Robert Schaffer, Lacombe, LA

Steven Salley, Bonsall, CA
Wayne Scott, Napa, CA
Alan Thomson, Auckland, New Zealand
Bill Tweet, Arlington, VA
Mr Asawin Thongtham, Bangkok, Thailand
Mr Jack E. Tock, WI
Mrs Gail Taifalos, Caravonica, Australia
Ms Marion Turner, Clinton, SC
Ms Sidney F Tatom, Gorda, FL
Unimatiaps, Hobro, Denmark
Christian Vogt, San Lorenzo, Paraguay
David Vaughn, Pace, FL
Gustavo Valdes-Ponce, Antofagasta, Chile
James R. Valentine, Savuavu, Fiji
Jose Eduado Villanueva, Guadalajara, Mexico
Roy E Valentine, Jupiter, FL
Alastair Wilson, Bolton, United Kingdom
Maria das Gracas Lapa Wanderley, Sao Paulo, Brazil
Michael Williams, Everett, WA
Mr John W Wirth, Madison, WI
Mr Matthew Wilson, Columbus, GA
Mrs Grace Lum Wan, Bowen, Australia
Nalda Wilson, Cairns, Australia
Neville Walker, Cardwell, Australia
Tom Winn, Concord, CA
Chris Young, Cairns, Australia
Ms Sharon Yost, San Juan Capistrano, CA
Ms Marie Zimmerman & Mr David Duffy, Whittier, CA

WELCOME to you all!

EVENTS CALENDAR

Australia

September 6-9, 2007. Central Coast Bromelid Society Show, Mt. Penang Parklands at Kariong, N.S.W.

September 8-9th, Illawarra Bromeliad Society Spring Show, Corrimal

September 21-23, 2007 14th Australian Bromeliad Conference. Rydges resort Hotel, Port Macquarie. Enquiries to 47 Boden Street, Edge Hill QLD 4870 or lynnie@ledanet.com.au

October 13-14, 2007 Bromeliad Society of Australia Spring Show, Burwood RSL Club.

October 27-28, 2007. Bromeliad Society of NSW Spring Show, Wellbank Street, Concord.

November 10-11, 2007. Bromeliad Society of Queensland "Bromeliad Bonanza" at Mt Coot-tha Gardens Auditorium. Contact Bob Reilly, tel. 3870-8029.

June 24-29, 2008, BSI World Conference in Cairns (Australia.) Enquiries to Lynn Hudson, 47 Boden Street, Edge Hill QLD 4870 or lynnie@ledanet.com.au

Europe

September 14-16, 2007. The First European Bromeliad Congress. Utrecht University Botanic Gardens. Organised by the German and Dutch/Belgium Bromeliad Societies. Contact E.J.Gouda@uu.nl

New Zealand

October 9-15, 2007. Bromeliad Society of New Zealand Spring Display & Plant Sale. Milford Shopping Mall, Auckland. Contact Alan Cliffe 09-479-1451.

United States of America

August 18-19, 2007. Seminole Bromeliad and Tropical Plant Society & Florioda east Coast Bromeliad Society Show and Sale. The garden Club of Sanford, 17-92 and Fairmont drive. Contact 321-363-7351.

September 15-16, 2007. San Diego Bromeliad Society. Bromeliad Show & Sale, Casa del Prado, Room 101, Balboa Park, San Diego CA. 10:00am-4:00pm, contact (858) 453-6486.

September 7-9 2007. 33rd Annual Southwest Bromeliad Guild Show & 10th International Cryptanthus Show. MCM Elegante Hotel, Beaumont5 TX. Contact SteveandLarry@comcast.net or call Cynthia Johnson at (409) 753-3652.

September 29, 2007. Florida Council of Bromeliad Societies 2007 Bromeliad Extravaganza. Hosted by Bromeliad Society of Broward County (see advertisement on page 90).

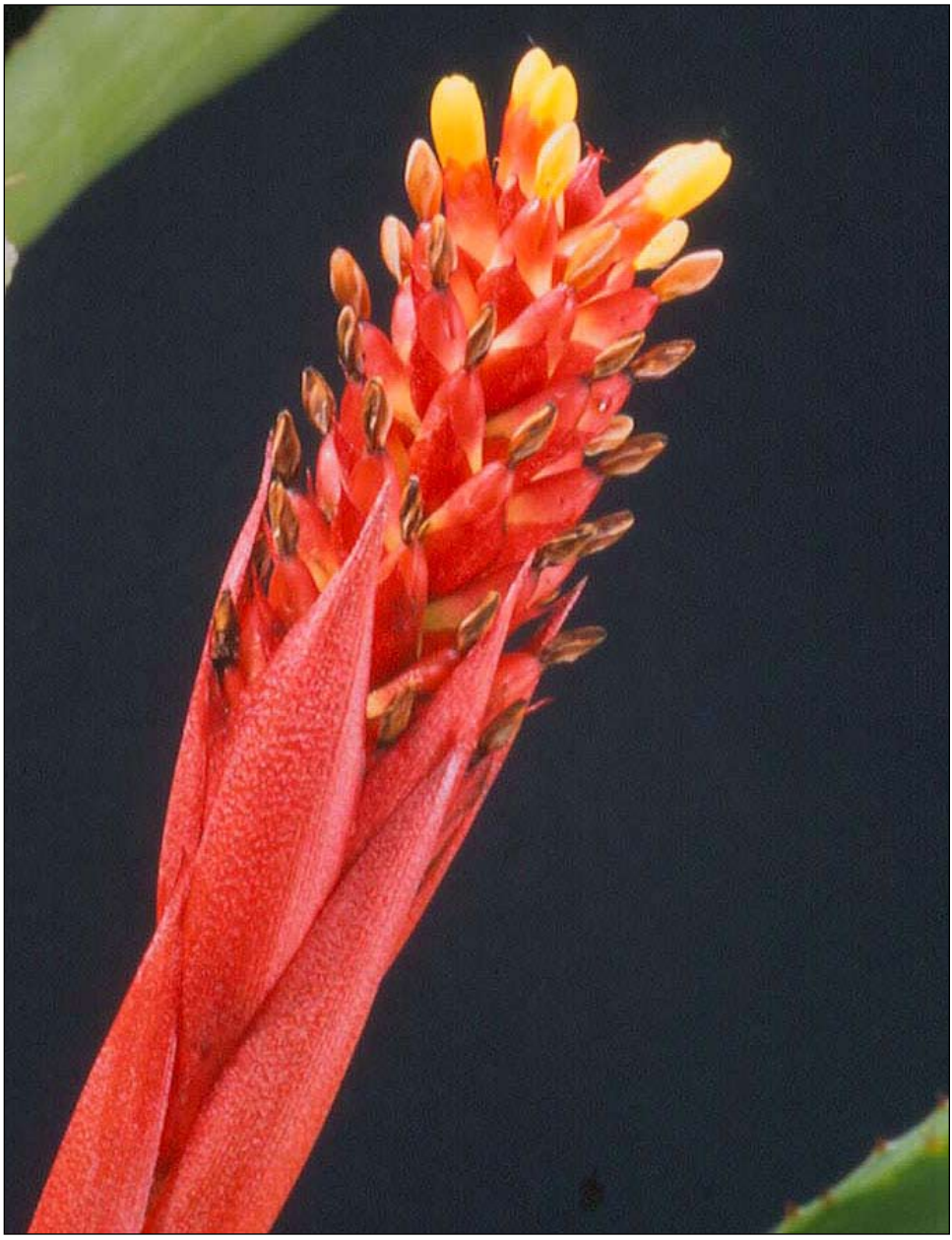
November 30-Dec. 2, 2007. Caloosahatchee Bromeliad Society Sale and Show. Terry Park, 3410 Palm Beach Blvd (SR80), Fort Myers. Contact Steve Hoppin at SteveandLarry@comcast.net or 239-997-2237.

July 26 - August 1, 2010. BSI World Conference to be held at the Astor Crowne Plaza in New Orleans.

The Bromeliad Society International

The purpose of this nonprofit corporation is to promote and maintain public and scientific interest in the research, development, preservation, and distribution of bromeliads, both natural and hybrid, throughout the world. You are invited to join.

Members-Only web site access: *Username*: Orphan *Password*: Annie



Aechmea pseudonudicaulis Leme. Although this new species superficially resembles the widespread and variable *Aechmea nudicaulis*, it seems to be rather closely related to *Ae. comata*; at any rate the plant is robust and easily cultivated.

Harry Luther, The Mulford B. Foster Identification Centre.