S.A. BROMELIAD GAZETTE

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Tillandsia muhriae

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THE BROMELIAD SOCIETY OF SOUTH AUSTRALIA INC

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Meetings Venue:
Maltese Cultural Centre,
6 Jeanes Street,
Beverley
Time: 2.00pm.
Second Sunday of each month (unless advised otherwise)

President:	Mr. Len. Colgan, 1 Ailsa Avenue, Warradale, 5046	82969426	
Secretary:	Mr. Derek. R. Butcher 25 Crace Road, Fulham, 5024	83567728	
Pots:	Available Feb., March, Sept., and Oct., meetings	83514876	Ron Masters for order or pick-up.

Dates for 2009

Meeting dates:- Jan11th (miniature Neoregelias), Feb 8th –AGM and Broms native to Minas Gerais, Brazil), Mar 8th (Summer brag), Apr - no meeting, May 3rd (1st Sunday), June 14th, July 12th, Aug 2nd (1st Sunday), Sept 13th, Oct 11th, Nov meeting 8th

Special Events:- March Show 28 & 29, Bromadelaide 2009 conference 10th – 13th April, Nov7th Sales day

Applications for membership always welcome.
Subscriptions $10.00 per year Feb. to Feb.

Several reference photos courtesy of "fcbs.org"

November Sales Day from the Secretary

On Friday Nov 7th at 2pm the workers started to arrive and by 3pm they were standing around looking self satisfied in having completed the job. The sales area was full of plants and there was even a small display area. The number who turned up to help made it all the more surprising that we did not have differences of opinion expressed. So I was a happy chappy when I locked the doors.

Some were so keen to work that they arrived before the scheduled logging on time of 9am ready for the 10am rush. We knew we would have a rush because advertising went better than expected. We had a small segment in the Messenger Newspaper thanks to Malcolm Campbell, which was even in colour for the more upbeat suburbs! AND of course we had Adam's mailing list of some 400 names. Talking about this list, it is interesting how so many roll up for either of our sales days to buy new plants. We never know if their second or more visits means they are after replacements or extras to their collection. With members you get some sort of feedback as to how good their husbandry really is! I still believe that growers who have say 50 broms in their garden are better off in being members of our Society and learning how well they can grow their plants by meeting others who have the same sort of woes or brags. You don't really learn much by listening to a chap at the front desk waxing eloquent for a short period twice a year!

Anyway, the rush was on and in two hours most of the plants had been sold. The Treasurer was flat out giving money to sellers as the sold price tags found their way to his office and by the Sunday was able to report record sales again. We certainly have no money worries coming up with our Conference at Easter!

We did have discussions as to the logic of keeping open until 4pm. Could we not advertise our sales day to be 10am to 2pm? This year this time slot would have been great but other years latecomers in the afternoons had a fairly large range of plants to choose from. Certainly something to discuss even though hindsight is best! Perhaps an earlier closing time of say 3pm at our 2day show in March would allow sellers more time to get home for fresh stocks. Anyway, think about it.

November meeting minutes

Sunday was one of our better meetings if only because I did not have to address the gathering, and the great spread for afternoon tea. There were a few plants brought in for display and Len Colgan was able to give a short talk about them.

Lainey Stainer is showing her worth as a 'Newbie' by bringing in a few plants and we saw how Neoregelia 'Jewellery Shop' can be grown.

➔ Parents ➔

Neoregelia 'Jewellery Shop'

Neoregelia Hades

Neoregelia Mercury

I hope we hear some good news from Lainey in two years time regarding her *Neoregelia* 'Pink Spider' being alive and well, with lots of dangling offsets which I hope she will not be tempted to remove. Why the pessimism? Have you heard about Hylaeaicum? You should start to get your tongue around this because although currently treated as being a Neoregelia it is far apart in current botanical thinking.

November meeting minutes cont:
This group of plants comes from Amazonian Peru area and just as we can't grow *Aechmea chantinii* in Adelaide shadehouses so too do we have trouble with the *Hylaeaicum.* Only when you talk about hybrids and hybrid vigour do things get a bit more rosy.
So Lainey is feeling happy about her 'Pink Spider', which is a hybrid between *N. pendula* and *N. eleutheropetala*. We do not even know the hybridist! Currently the Cairn's lot are bragging about having the most comprehensive collection of this group including unnamed hybrids. Because they have the climate to grow this group like weeds I have tried to get them really interested in the group and become the experts in identifying the various species. We know that Chester Skotak has been hybridizing 'madly' but registering nothing of his own work. This means that this *Hylaeaicum* group in Australia is heading for the same fate of the 'Common' *Neoregelia* where it is swamped by 10,000 hybrids to one species. As conservationists we are failing badly.


Neo. lilliputiana


Neo. pauciflora

George Rudolph brought in a few of the miniature Neoregelias that will be the subject of the Jan meeting when George can't make it. It was pleasing to see two species there, namely, *Neo. lilliputiana* and *Neo. pauciflora.*

He also brought in a *Tillandsia,* which caused a bit of comment. It was flowering and had come from Len where he has difficulty in flowering it, so Len's growing techniques came under fire! Not only that but Len treats his Colgan #5 as being a 'white flowered form' of the normally blue *T. yuncaraensis* because Yunchara was where he found it so many years ago! I have always believed it to be *T. muhriae*. I base my logic on the following. This is **not** boring. In 1986 Wilhelm Weber described a *T. muhrae* (note spelling) from Salta in Northern Argentina. In 1987 Renate Ehlers described *T. alberi* from southern Bolivia. In 1989 Palaci and Gilmartin described *T. guasamayensis* from Jujuy in northen Argentina. In 1990 Walter Till changed *T. muhrae* to *T. muhriae* when explaining that *T. muhrii* was different to *T. muhrae*!
In 1991 when Palaci did his Doctorate in Botany he put *T alberi* and *T. guasamayensis* in synomy under *T. muhriae*. All of these share a white flower with frilly edges but much smaller than *T. xiphioides*. Vegetatively they vary somewhat. Because Len's plant comes within the geographical boundaries and the flower is white and frilly I call his plant *T. muhriae* - see photo - much to Len's annoyance!


T.muhriae photo by D Butcher


Hechtia tillandsioides

One thing I won't argue with Len about is his prickly species (hybrids maybe but species – no!) Somehow, he had got 3 flowering spikes on his clump of *Hechtia tillandsioides* (male) which it itself is a brag. While on this subject there were several specimens on the sales table on Saturday. The advantage of being a member – if you bought one – is that you will now know you should let this plant clump if you want to see its impressive flowers.


Orthophytum albopictum

Finally, I must say I was just as impressed with Len's *Orthophytum albopictum* as I had been with Lainey's *Hylaeaicum* (I hope you are still practising pronouncing this name). This is a group of *Orthophytum* where some grow in a select area of Minas Gerais – our subject for February meeting! Others are mainly from Bahia the next State up. Growing these plants outside habitat – even those collectors in Rio de Janeiro - is a challenge.

November meeting minutes cont
Recently Rafael Louzada completed a Master's degree on these 'Sessile *Orthophytum*' in Portuguese of course but translating it was fascinating. The usual *Orthophytum* we grow 'fairly' easily have the inflorescence on a stalk! The Brazilians call them Raio-de-Sol which I think is much more poetic. I leave it to you to translate!

Special features

Brazil bush fires
Why am I a telling you this? Well, in February, we are talking about plants from Minas Gerais and the area we are now going to talk about is the northern neighbour of Minas Gerais
Is it the media or is the way most humans look at bush fires. Certainly in Australia you read headlines on property loss or shock horror, human deaths but little about plant life. Brazil, it seems, is no different.
On the 24th October the headlines read Bahia decreta situacao de emergencia em 20 municipios da Chapada Diamantina .

My friend Oscar Ribeiro responded to Internet users as follows

Twenty cities of the Chapada Diamantina, Bahia, Brazil are on fire!
How many endemic species will be lost this time? Year after year its the same sad and shameful situation: Criminal fires are never punished by local authorities!
Andara, Mucuge, Rio de Contas, Palmeiras and Lenois are the habitat of numerous species such as:
Orthophytum mucugense, heleniceae, albopictum, burle-marxii, amoenum; Neo mucugense, bahiana; Hohenbergia pennae, burle-marxii,
leopoldo-horstii, catingae, catingae eximbricata; plus *Vriesea, Aechmea,*
Encholirium, Dyckia, Cottendorfia, Bromelia, Tillandsia ....

Take good care of your Brazilian species because they are being destroyed systematically!
Oscar

As you have seen Oscar, is passionate about conservation and he explains further in the following.
THE BRAZILIAN FORGOTTEN BIOMES By Oscar Ribeiro of Bromeliário Imperialis

Brazil has many biomes of which the most famous are the Amazon Forest and the Atlantic Rain Forest. Sadly, rapid de-forestation is taking care of the former and only 7% is left of the latter! But there´s more, much more to be told when it comes to Brazil´s inexhaustible ability to destroy what it cannot create.

This article covers the Cerrado, one of the Brazilian biomes "forgottten" by our legislators back in 1988, when the chapter of natural environment was being discussed for the new constitution to be soon released. The final voting defined the Amazon forest, the Atlantic Rain forest, the Serra do Mar, the Pantanal and the seacoast as national heritage areas. Ironically, the legal guarantee was of little effect for the rate of destruction has only increased ever since!

But what about the Cerrado and the Caatinga, the two forgotten biomes not covered by the constitution? Well, what can I say? The readers know how politicians' customarily react to pressure from private interests (agribusiness and landowners). This time was not different. These areas were declared open to exploitation and "development", whatever this means. The inescapable consequence couldn't be different: the rate of deforestation of the Cerrado now reaches a record of 30.000 km2 per year! **A Project to amend the constitution by granting the Cerrado and Caatinga the necessary protection given to the other biomes, is under discussion since...1995! (PAC 115/95).**

Special features cont:
To illustrate the catastrophic situation of the Cerrado, we have choosen to comment on the extraordinary Chapada Diamantina National Park (Diamond Highlands),in the state of Bahia, located in the Northeast of Brazil, not far from mainland Europe, on the other side of the Atlantic. In Portuguese, the word chapada means a region of steep cliffs and Diamantina refers to the diamonds found there in the mid 1800s when Lençois was an important center of diamond mining.

The region is semi-arid, however it has no shortage of water, from the many rivers and streams. The park is typified by hills, mountains, valleys and monoliths, with few plains.

The National Park of the Chapada Diamantina was created in 1985 but the federal government has not invested in the necessary infrastructure to guarantee the conservation of the area. In fact, a great portion of the land is privately owned but without personnel, transportation and material support it is impossible to enforce the necessary conservation measures.

The Chapada was the dream come true of an American-Brazilian biologist called Roy Funch. He convinced the Brazilian goverment to buy up large portions of land to ensure its survival and became the first Director of the Chapada Diamantina National Park. Funch has lived in Lençois – since 1978 – where he works as a guide, craftsman, biologist and writer. His books are a reference to the Chapada and we owe him very much for his idealism and realizations.

"In the mountains where the Chapada Diamantina National Park is located, altitudinal variations, topography, soils, strengh and orientation of the sun-light, and the rapidly changing humidity of the soil and the air, create opportunities for a rich and varied vegetation – a complex mosaic of ecosystems, which range from forests and swamps (at 400 metres/1300 feet) to high rock peak (1700 metres/5600 feet), each with their own unique and highly-adapted plant life".

The bulk of the vegetation types of the National Park is Cerrado (grassland with shrubs and small trees) or Savanna – a popular definition that the public will recognise and understand -, but we prefer using a more precise definition:

-"**Campos Rupestres** (rocky fields from 700 to 2000 m) basically *herbs and shrubs* with sparce trees in a thin layer of poor soil (sand, pebbles or gravel). Tough weather. In order to survive under these severe conditions, plants had to adopt different strategies. This explains why they became highly specialized. Bromeliads, for instance, have water tanks to hold the rainwater, which are the source of food and shelter for other forms of life. Campos Rupestres are an extraordinary ecosystem with very high endemism and diversity. Fire and drought are their worst enemies;

- **Campos Gerais** (open fields above 800 m) are "flat open grassland valleys found 800 m (2600 feet) or more above sea level. The soils are very sandy, extremely acidic, and have very low fertility....Even though the nutritive value of this natural pasture is very low, the local ranchers drive their cattle up to these high valleys in the dry season to take advantage of the water always available there. The problem is that they set fire to the whole área to force the grasses to sprout (the mature plants are too tough for the cattle), and the wildfires spread to every corner of the Park.

Together, the **Campos Rupestres** and **Campos Gerais** vegetation cover about 90% of the National Park area".

The Brazilian Cerrado is the richest biodiversified Savanna in the world. **It has more than 10.000 species of plants with an incredible 45% of endemism!** It extends to almost 2 million square kilometers, approximately three times the size of the state of Texas, in the United States.

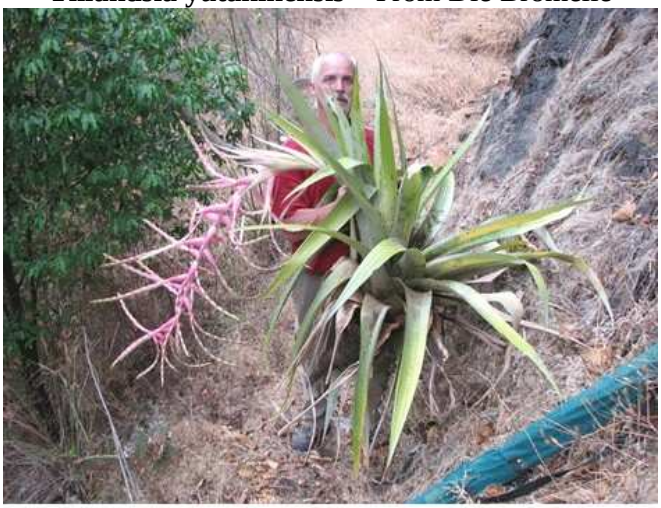
Special features cont:

"The area of Mucuge, in the State of Bahia, surveyed by personnel from the Royal Botanic Gardens, Kew and the Centro de Pesquisas do Cacau in Itabuna, show some 670 plant species in about 900 square kilometres.

The Serra do Cipo, a small sub-region of the Serra do Espinhaço, at much the same latitude as New Caledonia, has been extensively investigated by teams from the University of São Paulo and the São Paulo Institute of Botany. Results to date show an extraordinary 1590 species in an area of only 200 square kilometres. Similar or higher counts, involving different species, are expected from elsewhere in the mountain range. (As a comparison, the whole of the British Isles, with an area of 151 000 square kilometres, has only about 1500 species of plants)".

Here is a brief list of the genera of bromeliads found in the Cerrado: *Aechmea, Billbergia, Bromelia, Cottendorfia, Cryptanthus, Dyckia, Hohenbergia, Encholirium, Neoglaziovia, Neoregelia, Orthophytum, Tillandsia* and *Vriesea*. All formidable plants, highly specialized and a balm to the eye and the spirit but increasingly consumed by criminal fires. Today, only about 20% of the original Cerrado is left and of that, only about 3% is protected. The disappearance of these sanctuaries is a tragic loss to mankind.

Tillandsia yutaninensis – From Die Bromelie



Tillandsia yutaninoensis photo by R Ehlers

Thanks to George Rudolph who did this translation we know how this species was found. I had to smile because in the 2008 issue there was an 'official' translation of the article which would have saved George some blood and tears BUT this summary only had the key points and was more a list of plant names they had seen. A bit boring! George's effort was much better so here it is

A journey of discovery in the Mexican State of Oaxaca. by Juergen Lautner in Die Bromelie 2. 2007
The region along the road from Puerto Escondido to Oaxaca,(Mex 135), is where our reliable team of Renate Ehlers, Manfred Kretz and brothers Uli and Juergen have driven along and have seen many interesting plants. We previously had made only short excursions on the side-roads, but we intended to change it this time.

We had planned for the Journey in 2005 to find out more about the area between Sola de Vega and Tlaxiaco and so drove on the only road on the left towards West. Soon after leaving the Mex 135 we came across a Mezcol-Distillery and were allowed to visit. There we saw for the first time how "Schnaps" was made from the hearts of Agave plants. The 'nice' Mexican invited us to take a swig straight from the bottle, but only a few did because who would drive the car??

Special features cont:
The road, which was really only a path, led us many kilometres. Along a small river which was lined with Cypress (*Taxodium distichum*) on which grew *T. ionantha, T.fasciculata* and *Epiphyllum spec*.

After some time the path left the river and came to a rocky area where on trees and bushes grew *T.schiedeana,T. fasciculata, T.achyrostachys, T.atroviridipetala* and *T. calothyrsus*. My brother was lucky and found a beautiful hybrid: *T. schiedeana* x *T. fasciculata*. We saw quite a few Cactus and Echeveria until we came to a large forest where there were no Epiphytes at all.
After the Village of San Francisco Chahuacua it became more interesting because we saw many nice tillandsias: *T.laui,T.calothyrsus* and *T. bourgeai*. At times the path rose to 2500 m , where you could see many Orchids of the species *Rhychostele*(*=Lemboglossum*) but as far as Tillandsias only the same!
After about 160 km of gravel road we drove out of the forest down into a valley and we saw on a distant rock, large flowering tillandsias with a hanging inflorescence - to get there was unfortunately too late. We calculated it would take 2 hours and it was late afternoon and the village where we knew there was a hotel, was 30 km away. But with binoculars the sight promised much. At the small village of Cuanana we enquired - without much luck - about accommodation. So we had to take the long hard road, which we knew from previous years, to Yosondua . Whoever knows the stretch to Rio Cuanana knows what a grind it is. About 9 pm we finally arrived in Yosondua and had only one possibility, to stay in the concrete box called Hotel California. The evening meal was no special occasion, Sopa de Pasta and meat like the sole of a boot was the only meal we could get.

Next morning we went back the same way to the area near Rio Cuanana we had in the past thoroughly explored and did not waste any time to look around and arrived in about 3hr at yesterday's habitat.

My brother, as always, raced away and both Manfred and I had trouble keeping him in view. Renate kept up for a while but she gave up. We only saw her on the way back. At first it was reasonable easy on animal tracks up the hill. After crossing a plateau with farmland and large pines, the path led up through oak trees and we slipped on the fallen leaves and had to grab small oak trees to stop sliding back down. Soon we could not see Uli , and could only guess where he was because we heard him call some times. The way looked impossible to continue because by our calculations a steep rockwall made it impenetrable.

We could still see the large fissures in the distant rock wall but we both gave up because we were just too tired and made our way slowly back to our car.
After a while we saw Uli behind us dragging a large specimen of a *Tillandsia* behind him. How he reached the monster we did not ask him because the collecting poles had stayed with Manfred. Grinning, he told us the story how he had the *Tillandsia* growing 10 m above him. Using an Agave flower stem, which he found there, he scraped the plant laboriously from the wall. Back at the car Renate was very excited but also a little bit disappointed because we had no flowering plant!! The plant had already some adventitious offsets on the roots and we all took some. But what to do with the gigantic thing - it weighed at least 10 kg.
Uli said "I will take it with me even if I have to buy a suitcase in Mexico City!". We hacked a large piece off the ½ m long stem with a machete and took the bottom leaves off and brought the plant undamaged back to Germany where last autumn the plant started a inflorescence.
Our journey led us back via Cuanana,Yosondia to Tlaxiaco. On the Mex 125 just before the crossroad to Juxtlahuaca we found a sad part of tillandsias history, where the previously prized habitat of *T.copalaensis* had been destroyed through de-forestation. The last few days, as always, went far too fast and the flight from Mexico City home was uneventful.

In 2007 we visited the area again and found a flowering *Catopsis* growing on rock and had luck near the Rio Cuanana to find our flowering gigantic *Tillandsia*. The plant had a diameter of about 140 cm. and an inflorescence of about 180 cm long, so is so far the largest Mexican rock *Tillandsia* with hanging inflorescence, and apart from *T. grandis* one of the largest in Mexico. Unfortunately you cannot carry such a large plant and therefore we separated the large inflorescence to take pieces back for the herbarium.
For the may-be copycats: the trip 'Giant Tillandsia" took 3 hr. in pouring rain.

A safe & prosperous 2009 to all