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**~ SEPTEMBER 2005 NEWSLETTER ~**  
**MEETINGS AND FIELD TRIPS**

We meet on the third Thursday of the month at 7:30 pm. General meetings conclude by 8:15 pm and are followed by a guest speaker beginning at 8:30 pm. There is time for a cuppa between the meeting and the guest speaker. The venue for the meeting is Marrara Christian School, on the corner of Amy Johnson and McMillan Drives. All welcome. Bring plants to swap, sell or have identified.

**~ SUBSCRIPTION REMINDER ~**  
**MEMBERSHIP FEES ARE DUE 1 JULY 2005**

See the back page of this newsletter for details

If you haven't renewed your subscription this may be your last newsletter!

**~ NEXT MEETING THURSDAY 18<sup>th</sup> SEPTEMBER 2005 ~**  
**~ GUEST SPEAKER ~**

A member's night with an opportunity to discuss the proposed changes to the constitution along with a short talk by Denise Goodfellow on Baby Dreaming in Arnhem Land.

**~ SEPTEMBER FIELD TRIP ~**  
**Day Field Trips**

**Sunday 11th and Sunday 18th September 2005**

The ongoing search for additional populations of Darwin Palm (*Ptychosperma*) will continue on the next two Sundays. Timed to coincide with National Threatened Species Day on September 7th, the anniversary of the death of the last Tasmanian Tiger in Hobart Zoo; TENPS, Parks and Wildlife, and members of the public will search some rainforest habitat for Darwin Palm. The endangered Darwin Palm is only known to occur in a handful of rainforest patches in the Litchfield Shire. We are hoping to discover populations of the Palm in places where it is not currently known to exist. If you would like to join in on either or both of these trips please call Dave on 8944 8492 during business hours or 8945 6809 after work. Sturdy footwear is essential, along with sunglasses, hat and water-bottle. Long trousers and long-sleeved shirt are recommended for protection from scratchy vegetation and mosquitoes. For those who came on the plant identification workshop, a chance to brush up on rainforest plant identification skills.

**~ OTHER UPCOMING EVENTS ~**  
**October General Meeting**  
**20th October**

Dr. Jeremy Russell Smith will talk about the ecology and management of sandstone communities.

**~October Field Trip ~**  
**16<sup>th</sup> and 23<sup>rd</sup> October**

*Ptychosperma* population Monitoring at Bankers Jungle contact Dave Liddle on 8945 6809

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## ~ The Flora of Namibia ~

Namibia is located in south-west Africa and as Marj discovered home to some unusual plants. At our last meeting she presented images of some the more unusual flora and provided an introduction to the contracting landscape of this country. Namibia is divided into 4 vegetation zones.

- Tropical forests and wetlands along the banks of the perennial rivers in the Kavango and Caprivi regions,
- Savannah plains with occasional trees in the Kalahari,
- Mountain escarpment regions such as Kaokoland and Damaraland, and
- Low altitude coastlands and Namib Desert.

Savannah cover 64% of Namibia, dry woodlands and forests 20%, while desert vegetation is distributed over 16%. Over 120 species of trees grow in Namibia ranging from the umbrella-shaped camel thorn, *Acacia eroloba*, to the valuable ana tree, *Faidherbia albida*, with its white flowers and nutritious pods, which is an important source of food for the animals of the desert. Typical trees found in the north are mopane, terminalia, marula, giant figs, baobabs, Makalani palms and timber species such as kiaat, tamboti and Transvaal teak. Common to the arid central and southern region is the distinctive kokerboom or quiver tree, *Aloe dichotoma*. There are approximately 200 endemic plant species in Namibia that include lithops that are popularly referred to as "flowering stones", and the *Aloe asperifolia* of the desert regions. Other noteworthy plants are the curious elephants foot, *Adenia pecuelii*, and the "halfmens", , which is found in the far south near the Orange River.

The most bizarre species found in Namibia's desert is the *Welwitschia mirabilis*. It is the only genus of the family Welwitschiaceae, in the order Welwitschiales, in the division Gnetophyta. This is a desert plant that grows from a short, thick trunk, with only two leaves that continuously grow from their base, and a long, thick taproot. After germination, the cotyledons grow to 25-35 mm in length, and are followed shortly afterwards by the appearance of the two permanent leaves. These leaves are produced opposite that of the cotyledons, and continue to grow throughout the life of the plant, eventually growing to 2-4 m long and usually becoming split into several strap-shaped sections. After these appear, two cotyledonary buds appear; in these, the growing tip dies, causing elongation of the buds. Growth continues sideways, which forms the obconical growth of the stem. The species is dioecious, with separate male and female plants. It is believed that they are very long-lived, possibly living 1000 years or more. Some individuals may be more than 2000 years old. The plant is thought to absorb water through peculiar structures on its leaves, harvesting moisture from the dew that comes into the desert every night.



Male and female examples of *Welwitschia mirabilis* (Photo Marj King)



From <http://en.wikipedia.org/wiki/Welwitschia>  
<http://www.mobot.org/gradstudents/olson/welwitschia.html>  
has many more pictures of *Welwitschia mirabilis*.

Named after Dr. Friedrich Welwitsch, it is generally considered to be one of the oddest plants in existence. Although considered endangered due to its very slow growth and the fact that older plants are desired by collectors, a fair number of plants exist in the wild. The plants living in Angola

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are generally considered to be better protected than the plants in Namibia, owing to the relatively high concentration of landmines in Angola, which keep collectors away.



*Marj meets a Pachypodium namaquanum*



*Aloe pillansii*



*Aloe pillansii* flowers

Another plant endemic to the southern Namib and the drylands in north western South Africa is the halfman tree, *Pachypodium namaquanum*. The halfman is a cactus like plant that grows in a group that, from a distance, look like people frozen in a laborious motion. Their spiny trunks, forever inclined northwards, with crinkled leaves at the top like mops of hair.

*Aloe pillansii* or Quiver trees are also endemic to the southern highlands. These trees were given their name in the 17th century when bushmen hunter were seen to fashion quivers for their arrows from the branches. Usually 3 to 5m tall with a tapered trunk 1m in diameter the quiver tree is a giant aloe. They are often the only tall plants in the area and thus they are advantage points for raptors and are safe sites for birds which nest amongst the leaves or which bore into the stem. *A. pillansii* is a reservoir of hundreds of litres of water, which is accessible to a host of animals. This may be important for the survival of many species during extremely arid times.

The strangest tree in the highlands is perhaps the *Cyphostemma currorii* or African Moringa. It has a squat and swollen trunk with gnarled branches, rather like a root system sticking up into the air, similar to the more familiar Baobab tree. It too is deciduous. Recent research suggests that a tree with a girth of 25m may be over 3000 years old.



These are just a few of the plants that Marj saw whilst in Namibia. I plan to put a small version of Marj's powerpoint on the website in the coming weeks.

From <http://www.namibiatourism.com.na> and <http://www.namibian.org/>

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## ~ 2005 TROPICAL GARDEN SPECTACULAR ~

The 2005 Tropical Garden Spectacular was held at the George Brown Darwin Botanic Gardens on the weekend of the 8th and 9th of August. We set up our shelter tent late on Friday afternoon in our allocated spot under trees near the large shallow pond, unloaded some tables and display material and set out some plants in our space. Early Saturday morning more plants were brought in, labelling was completed, the colourful display of photographs and information was assembled, and reference books, membership forms, information sheets and TENPS business cards were set out on the tables.

Thankyou to everyone who helped the club in any way with the Tropical Garden Spectacular this year. Many members gave of their time in manning the stand, promoting native plants and educating the public enthusiastically about the benefits of going native. Others had grown a variety of healthy looking specimens to sell, some

members brought in cut flowers for the display and some members took part in other aspects of the Garden Spectacular. A huge thankyou also to NT Carers Association for lending the display boards and other items.

One of the other highlights of the weekend was the official launching of 'A Guide to Threatened, Near Threatened and Data Deficient Plants in the Litchfield Shire of the Northern Territory', by Jarrad Holmes, Deborah Bisa, Audrey Hill and Beth Crase. The Top End Native Plant Society logo is on the cover of the book as the club made a contribution toward the cost of printing.

President David Liddle spoke at the launch, noting the significant contribution the book will make in promoting awareness of and education about these plants in the Litchfield Shire. He highlighted two habitats of particular conservation significance, the sand sheet habitat of seasonally flooded areas and the

mosaic scattering of rainforest patches, both of which the Top End Native Plant Society have been involved with in recent years. Dave sensitively and respectfully honoured Joyce Stobo in his speech, sharing with those present her knowledge, enthusiasm and love of the small flowering plants that seem insignificant to most, but which survive and thrive often in harsh, nutrient deficient environments.

Our thanks go to Jarrad Holmes and to the Threatened Species Network for donating copies of the book to each member of the Top End Native Plant Society. The availability of the book at our stand helped gain a significant number of new members over the weekend. The 2005 Tropical Garden Spectacular was financially beneficial for the club, raising nearly \$563 through the sale of plants (\$300), memberships (\$215) and books (\$48).

*- Russell Dempster*

## ~ TENPS AND CASUARINA COASTAL RESERVE LANDCARE GROUP VISIT THE NEW LYONS SUBDIVISION ~

On Sunday 21 August about 10 members of TENPS and the Casuarina Coastal Reserve Landcare Group gathered at the RDH for a visit to the new Lyons Subdivision, located between RDH, Henbury Avenue, Tambling Terrace and Lee Point Road in Tiwi, to assess the developer's plans to preserve native vegetation there.

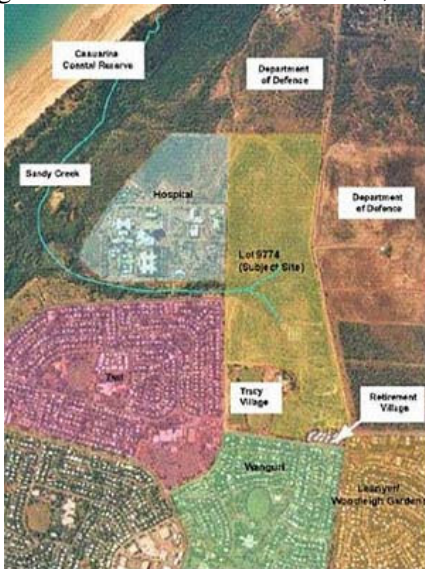
The developer of the site the Defence Housing Authority (DHA), has undergone an extensive process of community consultation and has made commitments to preserve an area along the drainage line that forms the headwaters of Sandy Creek (which flows alongside Rocklands Drive in front of the

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Hospital). They have also promised to re-locate most of the plants of *Cycas armstrongii* that occur in the subdivision as a whole to the area designated for preservation.

The group made a very general survey of the area we presumed was to be preserved (from a map of the site) and agreed that it was important that the vegetation be retained and managed appropriately to reduce erosion and the incidence of fires and misuse of the area by itinerants. The vegetation is typical of the area with an over-storey of Eucalypts (mainly *E. tetradonta* (Stringybark) but with scattered *E. miniata* (Woollybutt), *E. bleeseri* and *E. confertifolia*). There was a variety of other species present, from *Carallia brachiata* along the drainage line to *Livistona humilis* (Sand Palm), *Alstonia actinophylla* (Milkwood), *Brachychiton diversifolius* (Kurrajong) and unrecorded others. There was also an area with a number of mature *E. tintinans* and *E. bigalerita* that looked as though they had been planted, perhaps when the area was a caravan park after Cyclone Tracy.

The Developer's plan provides for a vegetation corridor to be maintained along the drainage line as far as Lee Point Road, but



this does not join up with the bush on the other side of the road, so the Landcare Group will propose to the developer that the corridor be moved so that wildlife can more easily move from one area to another.

The Landcare Group intends to keep a watching brief on the progress of the development, in conjunction with Darwin City Council and government departments, to ensure that the best outcome is achieved for the environment. As the developer has previously assured us that our involvement is welcome, we anticipate a productive relationship.

After the walk, members of the Group had drinks and snacks at the Group's current development site on the dunes near the Free Beach at the Coastal Reserve. Thanks to President Dave Liddle, wife Robyn and family for attending. Any TENPS members interested in joining the Group would be most welcome. The next working bee will be at the Free Beach site on Sunday 18 September at 4 pm; plants that have been in the ground since last December will be identified and watered and a BBQ at the Free Beach car park will follow as a publicity and recruitment exercise.

- Geoff Gaskell



The price of development. Cleared land in Palmerston, a stone's throw from the busy and very noisy Stuart Highway. Not my idea of quality of life!

**Proposed Redevelopment of land at Lee Point, in Darwin, for Defence and Private Housing** On Wednesday 8 December 2004, the Joint Standing Committee on Public Works tabled its report on the inquiry into Proposed Redevelopment of land at Lee Point, in Darwin, for Defence and Private Housing. A copy of the report is available from the following link. <http://www.aph.gov.au/house/committee/pwc/leepoint/report.htm>

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## ~ The Litchfield Plant ID workshop ~

My housemate was more than a little astonished when I told her my plans for the long weekend were to learn about identifying plants using vegetative characteristics – apparently this isn't everyone's idea of a fun weekend! Well, little do they know...

Saturday morning saw about 20 enthusiastic souls gathered at the Litchfield Education Centre, clutching hand lenses and hungry to get started. After a quick introductory talk by Dave Liddle, Dale Dixon from the Herbarium took the stage. Dale's approach to plant identification is to play the game of "spot, match and win": look for easily identifiable features, then match that combination of features to determine what plant family it falls into. He took us on a wander through the bush near the education centre, stopping at various plants and pointing out some "spotting characteristics". Dale's little demo of decussate leaf arrangement was unforgettable!

Armed with a sample of each plant, we headed back to the centre to have a go at identifying them. We then played with Dale's hot-off-the-press "*Trees and Shrubs of Nitmiluk and Litchfield National Parks*" to work out what family each specimen belonged to. Dale's book uses characteristics that are generally readily identifiable with the naked

eye or a hand lens such as visible oil dots, distinctive fragrance, leaf arrangement and presence of latex, hairs, glands or stipules. Note that I said "generally": there were a few specimens that required a rather active imagination to spot those features.

We also tried keying out some of our specimens using the "Field Key for the Monsoon Rainforest Flora of the Darwin Region", which uses leaf features only. Because the two books had very different approaches to identifying plants, often if a plant didn't readily key out with one book, it could still be identified with the other – a good lesson in why it pays to have a few different books at hand.

Overall, though, I found Dale's approach more intuitive because it teaches you to recognise features that are common to all members of a particular plant family, an approach which is useful no matter where in the world you are.

That evening Sally entertained us with a really interesting slideshow about some of the conventions and rules of how plants are named. She also had some fun anecdotes about the origins of some plant names. For instance, did you know that *Verticordia* is reference to the ancient Roman goddess Venus. Venus was regarded as the

goddess of beauty and love and considered to have had the power to bewitch, enslave and turn the hearts of her suitors. Her sacred flower was the Myrtus, or Myrtle, which belongs to the family Myrtaceae, as does *Verticordia*. From the Latin words *vertere*, 'to turn' and *cordatus*, 'of good heart', *Verticordia* literally means 'turner of hearts'.

Sunday's session focused particularly on the Myrtaceae family, starting with a walk around the grounds noting features and collecting samples of various plants. We then returned to the education centre to spend the afternoon burrowing through keys to identify the genus and species each sample belonged to. This time we used more conventional dichotomous keys, where each step has only two choices: true or false. It proved an excellent opportunity to practise using keys and sharpening our eyes to the features that those keys picked up on.

Sunday evening was wrapped up with a talk by Dave about vegetation communities and how they're classified, including plenty of pictures of different types of vegetation communities.

There were still a few die-hard enthusiasts remaining on Monday morning, and this time the day's entertainment was to

construct our own plant key using some of those by now familiar characteristics. Dave and Sally prepared a series of specimens each simply identified with a letter, and pointed out the plants around the grounds that each came from. Most of us developed our keys based on the collected samples, but Raylene and Claire took a slightly different approach: they chose to develop a field key using characteristics of the

whole plant rather than just the features of the collected samples.

To road-test how successful our various keys were, we tried using each other's keys to identify plants from among the samples. We also had a bit of fun inventing our own names for each plant. For those of us with a thirst for knowing the scientific names of the plant samples, Dave wound up the day with a tour of each

plant telling us its scientific name and pointing out a few of its characteristics.

Then it was pack up and head home time. Tired, happy and with my head bursting with semi digested information, my housemate back in Darwin observed I was displaying a few vegetative characteristics of my own!

*- Mani Berghout*



The Dempsters examining a leaf for the presence of oil glands

Photo by Deb Bisa



David assists with a subtle feature of a plant key

Photo by Deb Bisa



Dale provided instruction on keying out plants

Photo by Deb Bisa



Everyone listening with interest whilst out in the field

Photo by Deb Bisa

**~ Newsletter Contributions ~**

Send any contributions for the newsletter to Mark Raines at [rain0021@optusnet.com.au](mailto:rain0021@optusnet.com.au)

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~ What's in Flower this month? ~

*Opilia amentacea* is a bushy, evergreen climber. It climbs to 10 metres with a 20 cm stem with rough corky bark. Leaves are alternate, oval to oblong and leathery.

It responds well to pruning, survives without dry season watering and the pervasive sweet fragrance of the yellow-green inflorescences make it an ideal garden plant. It flowers from August to October. Edible fruit appear until January. The bark has been used as a fish poison. The roots of this plant provide a yellow to orange colour for dyeing pandanus used in traditional weaving. The root of this shrub is boiled with pandanus strips until the desired depth of colour is reached. They are then hung to drip-dry, and are ready for weaving whilst the fibres are still moist and pliable. *Opilia* is pan tropical, often found in coastal vine thickets with a good source of fresh water. Photo by Sally Jacka.



*Canthium schultzei* is a multi-stemmed tree to 10 metres, with smooth leathery opposite, dark green leaves. Scented flowers are initially white becoming yellow with age, with 5 to 6 star like petals in clusters along the stem. Flowering from September to November producing an edible, red two lobed drupe. These photos were taken from the walk around Howard Springs.

**Correction** The photographs of *Calytrix achaeta* used in last month's Newsletter were actually taken by Deb Bisa whilst on the Plant ID weekend.

~ What's the TENPS Committee Meeting Up to? ~

- Working on guidelines for cultivation, borrowing equipment and books.
- Planning field trip for the remainder of the year. Any suggestions for next year would be welcomed.

LANDSCAPES OF NAMIBIA



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**NEXT MEETING THURSDAY  
GUEST SPEAKER: 18<sup>th</sup> SEPTEMBER 2005~**

A member's night with an opportunity to discuss the proposed changes to the constitution along with a short talk by Denise Goodfellow on Baby Dreaming in Arnhem Land.

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