Top End Native Plant Society

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~ OCTOBER 2006 NEWSLETTER ~

MEETINGS AND FIELD TRIPS

We meet on the third Thursday of the month at 7:30 pm. General meetings conclude by 8.15pm 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 Library, on the corner of Amy Johnson and McMillan Drives.
All welcome. Bring plants to swap, sell or have identified.

~ NEXT MEETING THURSDAY 19TH OCTOBER~

Surprise Guest Speaker or Dave Little

We have approached Glenn Wightman hoping he may be able to speak to us, but at the time of printing this newsletter we have not been able to secure a response. Our own president has volunteered to present some findings from his very recent work on threatened plant species on Tiwi Islands. Either way a wonderful night. See you there.

~ FIELD TRIP- Saturday 22rd October ~

"Counting Ptychosperma"

Up early for a 0900 start. Meeting at Howard Springs Nature Park, at the main car park. Ptychosperma is one of our most endangered of native palms, be part of this yearly event to see how they are coping at Howard Springs.

~ OTHER UPCOMING EVENTS ~

~Next Meeting AGM Thursday 16th November 2006~

~Christmas Party 3rd December Berry Springs~

Meet at Picnic area at 1 pm, bring a plate to share.

We will be counting **Nervila Peltata** at Charles Darwin National Park again, get in touch with Dave or watch this space if you would like to be involved.

Are you a financial member of TENPS? Please check all subs were due in July.

~Acacia Limbata~

The above photos were taken by Marj , near Cape Crawford. This is the real Acacia Limbata, with bigger bulky seed pods and smaller leaves than what we consider to be the A. limbata around Darwin. The Darwin Acacia could be A. stigmatophylla or A. cataractae. What do you think?

~Greening Australia ~
URGENT REQUEST
"Gardening and Landscaping/Native Plants in the Top End"

Lesley Alford, the Community Projects Manager has sent us the following request.
"We are getting to close to finishing our book on gardening and landscaping with native plants in the Top End and are still on the lookout for good photos. I have attached a list of species for the book that your members may be interested helping out with (this could be their opportunity to see their favourite photos in print!). Who owns the nice melastoma shots on the web page? We're also after great shots of native gardens.
All contributors to the book will be acknowledged. It's getting to be a pretty tight timeframe.
If the October newsletter has yet to go out that may be a possibility if people were urged to act fairly quickly. Our nursery will supply a prize to any TENPS photographers who end up with their photos in the book.

Photo's can be e-mailed to
lesley.alford@nt.greeningaustralia.org.au

Phone 89 81 1344 GPO Box 1604 Darwin NT 0801.

Very High Priority – any quality photos of plant welcome	
Acacia alleniana	*Ficus coronulata*
Acacia producta	*Helicia australasica*
Aidia racemosa	*Petraeomyrtus punicea*
Breynia cernua	*Pleomele angustifolia*
Buchanania arborescens	*Themeda triandra*
High Priority – quality photos of items listed welcome (or other stunning photos you would like included)	
Acacia conspera	habit and fruits/seed
Acacia gonocarpa	fruits
Acacia hemignosta	habit and fruits/seed
Acacia limbata	fruits/seed
Acacia mountfordiae	habit and fruits/seed
Acacia nuperrima	fruit/seed
Acacia torulosa	seed
Acacia wickhamii	seed
Allosyncarpia ternata	flower and fruit
Asteromyrtus magnifica	fruits/seed
Bossiaea bossiaeoides	fruits/seed
Brachychiton diversifolius	seed
Cochlospermum fraseri	seed in cotton
Corymbia bella	fruits/seed
Corymbia jacobsiana	fruits/seed
Cupaniopsis anacardioides	flowers and seed
Cyclophyllum schultzii	habit and fruit
Denhamia obscura	habit and seed
Dodonaea platyptera	habit and flower
Eucalyptus alba	habit and fruits/seed
Eucalyptus herbertiana	fruits/seed
Eucalyptus phoenicea	habit and seed
Ganophyllum falcatum	flowers
Grevillea angulata	fruit
Grevillea heliosperma	habit and fruits/seed
Grevillea pteridifolia	fruits/seed
Grevillea pungens	habit and fruits/seed
Horsfieldia australiana	habit and flowers
Hydriastele wendlandiana	fruits/seed
Jacksonia dilatata	habit and fruits/seed
Leea rubra	habit
Livistona benthamii	fruit

Maranthes corymbosa	flower, ripe fruit close up
Melaleuca argentea	fruits/seed
Melaleuca minutifolia	habit and fruits/seed and bark
Melastoma malabathricum	habit, ripe fruit
Millettia pinnata	flowers, ripe fruit
Mimusops elengi	flowers, seed
Myristica insipida	habit, flowers
Pavetta brownii	habit, flowers
Petalostigma pubescens	habit
Syzygium armstrongii	seed
Syzygium fibrosum	habit, fruits/seed
Syzygium nervosum	habit, flowers
Templetonia hookeri	habit, seed
Terminalia microcarpa	fruit
Timonius timon	habit
Medium Priority – quality photos of items listed welcome (or other stunning photos you would like included)	
Acacia difficilis	habit
Acacia latescens	habit
Acacia multisiliqua	habit, flowers
Acacia simsii	habit
Acacia sublanata	habit, flowers
Blechnum orientale	habit
Calytix brownii	habit, flowers
Corymbia setosa	habit, flowers
Diospyros compacta	habit, fruit
Eucalyptus bigalerita	flowers
Eucalyptus clavigera	habit, flowers, red leaves
Gardenia fucata	habit, flowers
Grevillea aurea	habit
Grevillea refracta	habit
Hoya austalasica	habit, flowers
Lithomyrtus obtusa	habit
Lophopetalum arnhemicum	habit, flowers
Lophostemon gandiflorus	habit
Lophostemon lactifluus	habit, flowers
Pachynema dilatatum	habit
Pittosporum melanospermum	habit, flowers or fruit
Pittosporum mollucanum	habit, flowers
Sarcostemma viminale	habit
Syzyigium eucalyptoides ssp eucal	habit, flowers
Tamarindus indica	fruit
Wrightia pubescens	habit
Low Priority – if you have stunning photos you would like included feel	

free to submit	
Acacia auriculiformis	*Fagraea racemosa*
Acacia dunnii	*Ficus aculeata*
Acacia oncinocarpa	*Grevillea decurrens*
Alphitonia incana	*Grevillea dryandri*
Alstonia actinophylla	*Grevillea formosa*
Asteromyrtus symphyocarpa	*Grevillea goodii*
Auranticarpa melanosperma	*Grevillea parallela*
Banksia dentata	*Haemodorum coccineum*
Callitris intratropica	*Ipomoea pes-caprae*
Calophyllum inophyllum	*Leptospermum madidum*
Calytrix exstipulata	*Lithomyrtus retusa*
Canavalia rosea	*Melaleuca leucadendra*
Carallia brachiata	*Melicope elleryana*
Chrysopogon elongatus	*Micromelum minutum*
Clerodendrum floribundum	*Morinda citrifolia*
Corymbia confertiflora	*Nauclea orientalis*
Corymbia polycarpa	*Pandanus spiralis*
Corymbia polysciada	*Peltophorum pterocarpum*
Corymbia ptychocarpa	*Plumbago zeylanica*
Crinum angustifolium	*Stenochlaena palustris*
Curcuma australasica	*Syzygium eucalyptoides*
Cycas armstrongii	*Syzygium forte*
Cymbopogon bombycinus	*Verticordia cunninghamii*
Dillenia alata	*Vitex rotundifolia*
Ectrosia leporina	*Xanthostemon paradoxus*

Plus any great native garden shots.

Emails to lesley.alford@nt.greeningaustralia.org.au

Prints or CD's (happy to return if you specify) to:
Lesley Alford, Greening Australia, GPO Box 1604, Darwin NT 0801

Many Thanks

~Polygala Taxonomy~

Talk by Raelee Kerrigan on *Polygala* taxonomy and threatened plants of the Northern Territory

Last month Raelee Kerrigan from the Northern Territory Herbarium discussed her work on *Polygala*, a group of herbs with purple flowers that looks very like a pea flower, but isn't! Raelee is sorting out the taxonomy of the *Polygala* of northern

Australia, a detective project with many challenges. *Polygala* is a large genus of the Polygalaceae. It has about 500 species worldwide and was described initially in 1753. The name is derived from 'polys'(many) and 'galos' (milk) and was so named because it was believed that cows eating it produced more milk. That doesn't really seem to be so but some species are used in Chinese and Native American medicine.

The flower is quite unusual and a key to its taxonomy. It has a keel combined with lateral petals, similar to a pea flower. They are all purple and Raelee says an easy way to identify a *Polygala* is that if you see a purple flower that looks like a pea flower then it is a *Polygala*. The structures of the flower are different if you look closely and also *Polygala* produces a fruit that is a capsule rather than a legume.

There are 3 – 4 species of *Polygala* in southern Australia but most of the *Polygala* species occur in northern Australia. In Western Australia three are 12 species described and 2 potentially new species, in the NT 17 described and 11 potentially new taxa and 16 described and 4 potentially new taxa in Queensland. The appendages of the flower are important for identifying the species. There is a lot of variation in the style and stigma. They are of different lengths and shapes. The stamens position the pollen at a particular length along the insect and then the stigma is adapted so that it collects pollen from that position along the insect when the insect then visits the next flower. Flowers of other *Polygala* species have stamens and styles of different lengths so that an insect can carry pollen of several species but cross pollination won't tend to occur.

Investigating the taxonomy was a challenge. To determine if a specimen is a new species, the specimen is compared to the original written description and the pressed specimen collected when it was originally described. However *Polygala* was described in 1753 and some of the original specimens in the European herbaria are in poor condition. Some of the specimens lack flowers and some of the descriptions accompanying the specimens are very brief. So comparing the specimens can be challenging!

The ecology of *Polygala* of northern Australia is also interesting. These annual species have seeds which have a food attachment to promote ant dispersal. They don't germinate easily and probably have dormant seeds. However the stimuli that trigger germination are largely unknown, although a Florida species has been found to be stimulated to germinate by smoke.

In the second half of her presentation, Raelee discussed threatened and data deficient plant taxa of the Northern Territory. One role of the herbarium is to assign conservation codes to the each species of the 4500 + species of the NT flora. The IUCN Red List categories are used: not evaluated (NE), data deficient (DD), least concern (LC), near threatened (NT), vulnerable (V), endangered (EN), critically endangered (CE), extinct in the wild (EW) and extinct (E). Of particular concern is the task of identifying threatened taxa so that steps can be taken to ensure their survival. Threatened taxa include those in the categories vulnerable, endangered and critically endangered. These categories are based on international criteria including the number of individuals, the area of occupancy and the extent of the species range.

A first step is to assess which taxa can be evaluated. If the nomenclature of the taxa is uncertain then it is generally not able to be evaluated. That is one reason why Raelee's *Polygala* work is important; it is clarifying the taxonomy and nomenclature of those plants. Species are then evaluated using herbarium records (which now contain information on over 200,000 sheets of specimens) and the non-specimen database. The non-specimen database contains 125,000 records of plant localities from surveys carried out by herbarium staff. If there is insufficient locality data on the species to evaluate it then the species is classified as data deficient. A species may also be classified as data deficient if it is minutely different to and thus easily confused with a common species. A

species is categorised if sufficient records of the species exist or if the species has been searched for in potential habitat and not found.

One local species that was recently listed as Critically Endangered is the unnamed wattle, *Acacia* sp. Graveside Gorge from Kakadu National Park. It is an *Acacia* that was originally collected in 1975 and is unlike any other NT *Acacia* species but similar to a WA species. Thus there was a query as to whether it had really been collected from Kakadu as it could not be found in spite of several searches of the area. Finally it was found again in 2003 but the population included only one adult plant and 20 seedlings. Over the next three years all the plants in that population died. Luckily recent surveys have found two new populations containing about a thousand plants.

Sean Belliars

~NEXT MEETING THURSDAY 19th OCTOBER~

~See inside this newsletter~

SENDER: TOP END NATIVE PLANT SOCIETY
PO BOX 135 PALMERSTON
NT 0831

TO:

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