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~ August 2008 NEWSLETTER ~

MEETINGS AND FIELD TRIPS

We meet on the third Thursday of the month at 7:30 pm. Following the TENPS general meeting, the speaker will commence at 8pm. Tea & coffee are available during the meeting. The venue for the meeting is Marrara Christian College, on the corner of Amy Johnson Avenue and McMillans Road. All welcome. Bring plants to swap, sell or have identified.

~ NEXT MEETING - Thursday 21st August ~

Floristics of East Timor

Mr Ian Cowie is a botanist at the NT Herbarium, which is part of Biodiversity Conservation. He has lived in the Top End of the NT for the past 21 years and has a wide experience in flora survey and in the taxonomy and ecology of NT plants. Ian has authored many books and botanical publications. His research interests include plant taxonomic revisionary work on the genera *Tephrosia* (*Fabaceae*) and *Helicteres* (*Sterculiaceae*), threatened plant species, wetland plants, biogeography of the NT flora, preparation of flora treatments and keys to NT plants and weed floras. Ian will be discussing the Floristics of East Timor.

~ NEXT FIELD TRIP- Saturday 23rd August ~

Channel Island

Please note the change of date and time

Channel Island is significant for both its natural and cultural heritage values. Located in Darwin Harbour, Channel Island leprosarium provides evidence of the official policy of enforced segregation of diseased people. It also offers an insight into the experience of this compulsory isolated group. Set amongst the mangroves, the natural environment of Channel Island is significant as a teaching site for its geological features, mangroves and for the rocky reef with coral between the island and the mainland.

This field trip is to look at mangrove and monsoon rainforest plants. It will be led by Russell Dempster. **Meet at the Channel Island end of the Channel Island bridge at 8:30 am.** Don't forget the insect repellent! Contact Russell for more details.

WHAT IS YOUR COMMITTEE DOING???

- Provided donation to the East Point Breezeway Landcare group. Possible future field trip or group planting session
- Website redesign in progress
- Support for landscaping Rocky Knoll at Palmerston. Working with the Apostolic Church and planning to visit the area to offer advice and possible plant list.
- Confirmed a site at the Tropical Garden Spectacular 9-10 August 2008 and preparing for the TENPS plant sale stall
- Continuing our collaboration on talks and activities with Field Naturalists.
- Working to obtain ongoing maintenance funding for fencing at Bankers Jungle.
- Next committee meeting will be held at 7.30 Tuesday 26th August at Gerry Woods electorate office in Howard Springs. Members are very welcome to attend committee meetings if they wish so to do.

~ Notes from GENERAL MEETING – June ~

Bushfoods of Arnhem Land - Ian Morris Notes by Grusha Leeman

Ian's best ethno-botany days were when he lived on Elcho. The bush kids came out of the bush to start school – secondary school aged kids – and they were great founts of knowledge.

Habitats

- 70% of the Top End is woollybutt and stringybark country.
- There are well-watered fantastic and unique drainage systems flowering into the Arafura Sea.
- Waterways like the South Alligator River and Baralmana River with *Hanguana* forest – almost a separate habitat in itself.
- Drainage corridors – billabongs – whipped into a froth by lures.
- Paperbark swamps have a lower diversity than other habitats – monocultures for trees – fauna leave or go underground when it dries out.
- Sandstone country – 1/3 Arnhem Land is dissected sandstone country, about 30,000 sq kms and north east to the Wessels.
- Monsoon forests – all kinds –springs in rocky country with *Allosyncarpia* and beautiful rainforests.
- End of waterways are alluvial deposits full of mangroves with different species in levels going away from the water. Tidal forests are a very complex ecosystem well known to the Aboriginal people – akin to a supermarket.

Seasons

There are six seasons in the Gungeyhmi (Mayali) language, though this is very simplified.

- Gurrung (Aug, Sept) – End Dry
- Gunumeleng (Oct to Dec) – Storm season
- Gudjewg (Jan to Mar) – Rain
- Bang-Gerreng (Apr) – Knock –em down storms – Harvest
- Yegge (May) - Cooler but still humid
- Wurrngeng (June, July) – Cold

Stringybarks

Aboriginal people in Arnhem land see themselves as stringybark people. It is the great economic tree of Arnhem Land (and Cape York). The 101 uses for stringybark products have been replaced by iron dingies and iron roofing.

All the animals are geared up to get an infusion of energy from the cold season *E. tetradonta* flowering flush. This flowering starts in the Kimberley and moves East. The varied lorikeets follow the flowering The pulse of nectar brings on the sugarbags. Up to 2 litres are found in a sugarbag, dead trees, stumps, termite mound, not usually in a healthy tree. In traditional times – it was one of the only forms of sugar.

Buchanania obovata is one of the best for the kids in Gurrung. These mini mangoes are very sweet and very high in vitamin C.

Green Plum/Toothache Tree – for a toothache take a pulped leaf vein and put it in the cavity – it does the work but tastes terrible.

Bush grapes are very popular with the kids. When the leaves go yellow it is time for the ladies to dig the yams – seen at start of Bang-Gerreng – a great indicator.

Sorgham seeds were harvested in the old days, winnowed, pounded to make flour, then damper. It produces an incredible crop and is a staple food for finches, pigeons and parrots as well as people.

The first night the humidity rises, there are termites flying everywhere. If only one pair reproduce it is worth it. They are like krill – very high in protein. They trigger Frill Neck Lizard breeding. There is a balance between termites and fire. The termite colonies stockpile resources for 2 or 3 years ahead, so if fire takes away their resources they can cope for a few years.

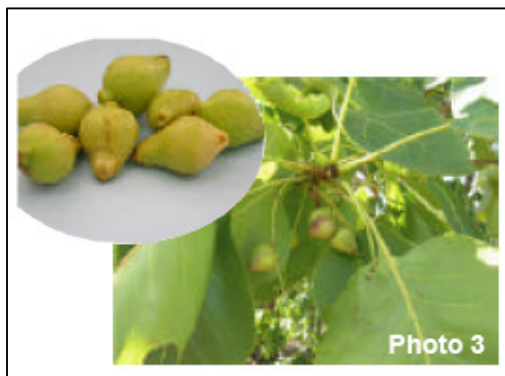
Greenants are a useful critter. Aboriginal people eat the allates not the greenants. They are seen during Gunumeleng.

Flueggea virosa – white currant

Brachychiton paradoxum has roots which can be when less than 2 years old – like carrots. The inner bark is incredibly tough and is used to make dugong rope, and bush string, plaited to make rope that can tow cars.

Haemodorum aineum (Bloodroot) with red flowers –big purple sacks when pollinated - the fruit - makes mauve dye for the string weavers. The shaved root is put in boiling water and dip the pandanus string in to create orange, and then brown with more boiling, and four colours in total.

Grewia – eat fruits in the wet season. Roots for medicine – even long grass mob- - fixes stomach ailments and used as a poultice.



Terminalia ferdinandiana - **Billy Goat Plum** – very high vitamin C fruit

Ipomoea graminea is a morning glory climber with a nocturnal flower of one night duration. It is moth pollinated and has an edible tuber. At the end of the wet in the woodlands towards the creeks you need good eyes to see it in the long grass.

Brachystelma uniflorum is eaten raw or roasted and is good like potatoes.

Fig 1. *Terminalia ferdinandiana* taken from http://www.nt.gov.au/dpifm/Content/File/p/General/FF15_bushtucker_in_top_end.pdf

Amorphophallus grandifolus (Snake plant) has a pumpkin like root and is a cheeky yam – shred the yam, soak a day or so and bake in cakes, tastes good.

Owenia vernicosa – has no food value but used for stupefying fish without poison.

Vigna vexillata is a legume. In wet – nice flowers, many types, all have edible roots.

Freshwater people live where rivers have a flat meandering habit providing many extra kilometers of riparian – mangrove habitat. It is rich man country – very prolific in shellfish, goannas, fish, crocs, eggs...

Nymphaea bulbs are a primary target. The lilies are pollinated by bees and butterflies and they grow into a big seedhead with rich oily seeds that are used to make cakes in the dry season. Waterlilies are a major part of the diet – the celery like stems are 2 to 3 metres long. Muddy water can be drunk by using a stem as a straw to filter out the muck. The leaves taste terrible.

Barringtonia has many uses, such as a fish immobilizer. The bark is pulped until it is sappy and thrown in a small billabong where the alkaloids stop the fish getting oxygen, so they are stunned, but it soon wears off. The new red leaves are used to flavour fish, esp Saratoga – in the body cavity, covered in paperbark in the coals. It has lots of little bones, but the women know how to slice the flesh off the ribs leaving the bones.

Triglochin have sweet roots in a cluster of bulbs and are dug out of billbongs. They are eaten raw or cooked.

Antidesma wet season - early Gudjewg, a high vitamin C plant. There is fruit available in the bush every month – huge range available across habitats.

Smilax – edible, quite nice, but horrible to walk through.

Livistona inermis cabbage in heart. Taking the cabbage kills the sand palm and so is desperation tucker

Cycad: there are a dozen species and the fruit can be eaten after careful preparation. The women fill baskets when the fruits are ripe in the early dry season, then the kernels are removed and crushed by belting the fruit with 2 rocks. Then it is put in the sun for 4 days, belted again and put in *Brachychiton* stringy bags, which are durable to leach the milky oxalic acids out, on the bottom of a flowing current for 4 to 5 days. Then it is sniffed to see if it's done enough and beaten smooth with a mortar and pestle. These detoxified crushed kernels are wrapped in paper bark and put in the fire for 10 minutes. It can be eaten immediately or kept for 6 months. Often the women make many parcels for the mens ceremony.

Sugar bags: There are 6 species of *Trigona bees* in Aboriginal terminology, which taste differently and have different hives – there are spherical not hexagonal walkways forming big wax balls which are sealed off and filled with honey – all is eaten, the bees are quite digestible, brood, rubbish – fermented and bitter. One species clamps onto your eyelashes so you can't see. You have to know where to look to find sugarbags.

Monsoon forest

Dioscorea transversa – premier yams, a metre long, you can eat raw, they are sweet and creamy, nicer than spuds when cooked. There are loads at sandy Middle Point.

Bush peanuts – there are plenty in Wurrngeng – dry season

Mangroves have more food resources than other habitats; fish, shellfish, mammals. The mangrove worm is delicious; a high protein food. Oysters, big cockle shells, mussels, long bums; the Aboriginal people know when to gather so they will be plump with meat instead of water. They only fish for Barramundi at the right time.

Cyprus Pine is a very useful tree, used for food preparation, timber on the fire, keeps the mozzies away, flavours food, foliage is an insect repellent.

Ipomoea pes-caprae is a coagulant, the leaves are heated on a hot rock and used to treat wounds, including circumcisions.

Dugongs were caught in dugouts which were silent, unlike modern boats. The flesh is very nice, like pork though less oily, it is a dark red meat, and it is obvious why it is endangered. It is speared with a *E. tetradonta* spear with a detachable harpoon, still today.

~ Notes from GENERAL MEETING – July ~

Identifying plants – Marj King Notes by Jane Burford

The important points that came out of the workshop were:

- To identify plants it's important to look at botanical detail such as flowers, fruits, pods, leaves and bark to provide clues as to what a plant might be. It is usually done by a process of elimination.
- The overall form of the plant and its habitat are also very important components to consider.
- If we want to know more about any plant, we need more than just one feature. When using botanical keys, choices start with details such as how are the leaves positioned on the stems, how many petals or stamens are in the flowers, what sort of pods or bark does the plant have? Without answers to those questions, we can't proceed with absolute certainty.
- If you want to know more about any plant, field/botanical keys are a useful tool.

The workshop involved looking at examples of various types of leaves and phyllodes. We discussed bark, particularly examples of *Eucalypt* and *Corymbia*. The workshop then moved onto identifying plants that members had brought along.

Marj is a renowned seed collector and rehabilitation consultant. She has extensive experience in the Top End bush with her interests in bushwalking, rogaining, and TENPS and has undertaken projects involved with native plants. She has worked as a guide for Willis's Walkabouts and operates her own business – Top End Seeds – collecting seeds of Top End Native Plants.

~ July FIELD TRIP ~ Holmes Jungle

Jane Burford

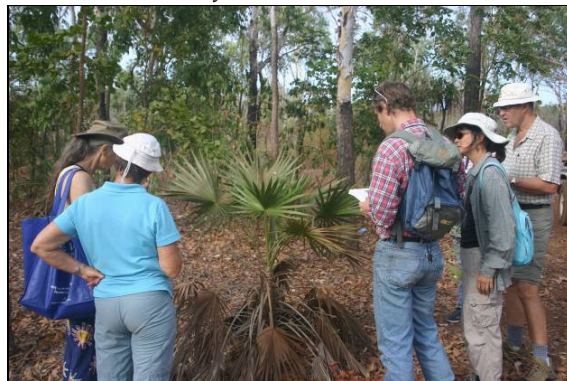


Fig 2. The group examining *Livistona humilis*

What we learnt at the general meeting was put into practice in Holmes Jungle on the Saturday. We categorically identified a number of different species of plants including:

- *Alphitonia excelsa* (Red Ash)
- *Erythrophleum chlorostachys* (Ironwood)
- Several *Eucalypt* sp
- *Corymbia* sp
- *Livistona humilis* (Sand Palm)
- *Lophostemon lactifluus*
- *Persoonia falcata*
- *Petalostigma pubescens* (Quinine tree)
- *Planchonia careya*
- *Syzygium eucalyptoides* ssp *bleeseri*

Marj's advice is to always carry some empty envelopes in your car and if you find a plant you are having difficulty identifying, gather a few leaves, flower and fruits if possible, then write on the envelope any other important features such as bark type and location. The herbarium will want as many details as possible for a positive identification.



Fig 3. *Persoonia falcata* buds



Fig 4. Bark of a young *Erythrophleum chlorostachys* (Ironwood)

Many thanks to Marj for her time and knowledge.

WHAT'S IN FLOWER? ~



Vitex trifolia var. *subtrisecta*

This hardy shrub flowers periodically. The flowers are pale blue to purple and the leaves underside also have a purple tinge, making it an attractive stand-out plant.

An easy plant to propagate and grow. Does well in many positions, but prefers sunny areas.

CONTRIBUTIONS WELCOME

Photos of flowers, plants, gardens, vegetation ... ©

If you are willing to have your photographs included in newsletters please forward to Melina McDowell melinajmcdowell@yahoo.com.au

~MY NATIVE GARDEN ~

Jane Burford

I bought and moved into my home in Dec 2002. Apart from a large Cheesewood and Mango tree, the garden was essentially over-run with palms, bromeliads, weeds and rubbish. There were also a number of very ugly home-made structures resembling greenhouses.

I stupidly thought I'd be able to get plants in the garden in that wet season!

Job No 1 – the cleanup.

Disassembling the “greenhouses” opened the garden up a lot, but also left a lot of bare ground with soil like concrete.

Removal of weeds, some up to 2 metres high, took much longer than expected, especially when we discovered lots of little “treasures” in the garden, including garden gnomes and large, dead tree trunks.

Cutting down ALL palms – about 40 in total - was done over time. I had the largest removed early by the professionals, and my partner Blair soldiered on with the rest over the next couple of years. Soil around the palms was also like concrete, with about 3 inches of roots to get through.

Job No 2 – preparing the soil

I really had little idea how to improve the completely infertile soil in my yard, but I knew it would be hard to make it worse than it already was! Digging was such an effort I didn't even bother. I first sprinkled Gypsum over most areas. Then I covered the ground extensively with 2 layers manure and mulch.

Job No 3 – choosing plants

I knew I wanted natives, but didn't investigate whether there was a local society, or other places to obtain information and plants from. Therefore I initially relied on local nurseries for plants, and soon discovered a number of plants I bought were Queensland natives.

In my mind, one of my biggest mistakes, was not taking the time to research the plants or their habitat enough. Needless to say, I have a combination mostly of monsoon rainforest and sandstone country plants, planted at random around the place.

In hindsight, although I love the rainforest plants, I would have chosen more sandstone plants as one of my motivations for a native garden was that it would be low maintenance and water friendly. I find my rainforest plants need regular (which they don't get) watering to look good all year 'round. I also would have selected a few less deciduous plants.

Job No 4 – planting

This job has never ended! I always seem to find places to put a couple of new plants or replace ones that have died for some reason or other.

I did have a reasonably poor success rate in the beginning for plant survival – I'd say about 1 out of 3 plants died. This was due to things like:

- Poor placement for that particular type of plant eg too little sun
- Planting more established plants – I find seedlings have had a higher survival for me
- Not watering enough during the dry when the plants are young
- Planting things in the dogs runway – no more to be said here
- Using the incorrect fertiliser – I now use very little, mostly slow-release for natives when initially planting. I sometimes use a seaweed fertiliser in small amounts
- Some plants were blown over in near miss cyclones or vandalised on the nature strip.

I rarely lose a plant these days. Some things that have helped this are:

- Dig a reasonably large hole, larger than the plant
- Loosen some soil at the base of the hole
- Fill it with water at least once
- Sprinkle a little slow release fertiliser for natives in the bottom
- Put the seedling in and fill with the surrounding soil
- Sprinkle more slow release fertiliser on top and water again
- During at least the first dry season, sometimes also the second dry, water the plant 2-3 times per week.

I initially over-planted my garden with the thought that I would lose some plants anyway. I have had to remove or cut back some plants – usually the ones that are in the least appropriate position or ones that I am least attached to.

The best advice I can give is to do plenty of planning and research about the type of plants, their features, habitat and size/shape before beginning a native garden.

~FUTURE EVENTS ~

August

Tropical Garden Spectacular - August 9th - 10th, 2008

The NT Tropical Garden Spectacular is the industry's largest event and greatest promotional opportunity. TENPS has a stall at the garden spectacular, which we promote and sell top end native plants.

Please consider volunteering a short spell at the TENPS stall. This will provide you with free entry to the spectacular and also help us out considerably. It is not necessary to have extensive knowledge of the plants as there is usually an experienced member present to answer any tricky questions! **Call Russell if you can assist 8983 2131**

September

General meeting

To be advised

Field Trip September Sun 21st Fogg Dam.

Coordinated with *Friends of Fogg Dam Field Day*.

Activities for the whole family - on the hour every hour from dawn to dusk.

- experience this tropical wetland only an hour's drive from Darwin
- exploring its diverse habitats - monsoon rainforest, billabong boardwalk, open water, savannah woodland
- enjoying its wonderful wildlife –water birds, bush birds, pythons, turtles, frogs & cane toads
- engaging with the traditional owners – culture & history, bush tucker & music
- educating your family - learning about the amazing research projects being undertaken at Fogg Dam by Sydney University & CDU
- exercising your creativity in art & photography workshops

Barbecued lunch available for purchase

TENPS will run a guided walk. This is a great opportunity to also see plenty of birdlife.

For more information see <http://www.foggdamfriends.org/>

NT Threatened Species Art and Photography Exhibition

The NT Threatened Species Art competition has been cancelled for 2008.

Field Naturalists Diary:

August 2008 meeting. Wednesday August 13. Annual General Meeting. Gay Crowley: Botanical stories from Vietnam. Travelling through Vietnam, one is struck by how hard the people work, and how much of the country is under cultivation. Before too long, you realise that there are botanical stories underpinning every aspect of life in Vietnam. What did the environment look like before its long human history? How are so many of its plants useful to its people? What are so many Australian trees doing in Vietnam? And what could inspire Ho Chi Minh to take off 4 days from fighting the Vietnam War? Gay Crowley will explore these botanical tales in her talk to the Field Naturalists Club in August.

Gay Crowley is the Biodiversity Information Officer with the Tropical Savannas Cooperative Research Centre. She and her family have traipsed around Australia studying its plants and animals. Before her children grew up and left home, they wanted to experience one holiday without field guides and binoculars. Vietnam looked promising. But even when shopping, eating and boat cruising, Gay couldn't leave plants alone. This talk will give her the chance to revisit her travels in Vietnam from a botanical perspective.

Our Annual General Meeting will be held prior to the main meeting.

August field trip. to be advised at the August meeting

September 2008 meeting. Wednesday Sept. 10. Mark Ziembicki: Stuffed mammals.

September field trip. Welcoming the Waders

Sunday 6th September from 8:30 am at Sunset Park, Nightcliff foreshore (between the Nightcliff Jetty and the western end of Aralia Street). A repeat of past year's popular event to mark 'Threatened Species Day'.

At this time of year, international migrants are arriving on the shorelines around Darwin, with no visas and mostly unnoticed by the majority of Territorians. Everyone is invited to come to the Nightcliff foreshore from 8:30 am onwards, to learn about the amazing shorebird species that have travelled from as far as Russia to experience the Territory lifestyle. Spotting scopes and some of the Top End's best bird experts will be on hand to help identify the birds. For more information call Arthur and Sheryl Keates on 8948 1794.

October 2008 meeting. Wednesday October 8. Peter Dostine: The Flock Bronzewing.

November 2008 meeting. Wednesday Nov. 12. Don Franklin: Slow boat on the Mekong.

For more information contact: Don Franklin & Christine Maas eucalypt@octa4.net.au or 8948 1293

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

TO:

~SUBSCRIPTION FORM MEMBERSHIP DUE 1 JULY 2008~

Please accept my subscription for membership of the Top End Native Plant Society

€ *New membership*

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Newsletters are now available by email (Acrobat Reader required to read files).

If you would like your newsletter sent by email please tick the box.

Payment Enclosed \$..... (\$20.00 per member/family, \$15.00 unwaged)

Signature Date: .../...../.....

Meeting the third Thursday of the month at 7:30 pm at Marrara Christian College