

Top End



Native Plant Society

August 2017 Newsletter

General Meeting Times

The next TENPS meeting will be held on *Thursday September 21st 2017*. Meetings are usually held at 7:30 pm on the third Thursday of each month at Marrara Christian College, on the corner of Amy Johnson Avenue and McMillans Road. The meeting is followed by a chance to chat with other members and access the TENPS reference Library over a cuppa. Bring your plants along to swap, sell or have identified. The guest speaker presentation commences around 8pm. All are welcome.

Field trips are usually on the weekend following the meeting. Details of upcoming events are provided in the newsletter, or check the TENPS website.

Sandsheet Flowers



Uvedalia linearis photographed by Sarah Hirst.

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Sarah Hirst

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Palmerston NT 0831

Or email us:

topendnativeplantsociety@hotmail.com

Natives mean more!

www.topendnativeplants.org.au

Upcoming TENPS guest speakers

September 21st: Marj King – Seed propagation workshop

October 19th: Peter Christopherson & Sandra McGregor – ‘Bush tucker and Indigenous plant use’ TBC

November 16th: AGM; Ian Morris – ‘Nectar flow in Northern Australia’

TENPS Field Trips & other events

September Saturday 23rd: Casuarina Coastal Reserve Loop walk – led by Dave Liddle

October: Escape Cliffs Sailing trip (*fully booked*)

October Saturday 21st Fogg Dam boardwalk
Meet at 8.30 at the car park before the dam wall. Led by Sarah Hirst and Louise Becker.

November TBA: *Typhonium praetermissum* – hosted by Plaxy Purich (*exact date will be announced when the plants start flowering but around*)

November Saturday 25th: TENPS Plant Sale – Venue TBA

December TBA – Christmas Party

Notice of Annual General Meeting:

The Annual General Meeting of The Top End Native Plant Society Incorporated will be held at 7.45 pm on **Thursday 16th November 2017** at Marrara Christian College, on the corner of Amy Johnson Avenue and McMillans Road.

Thank you for renewing your membership...

Thank you to all the members who have renewed memberships recently, we appreciate your ongoing support. For anyone who has not yet renewed for 2017/18, memberships are now overdue. Payment details are shown on the membership form on the back of this newsletter if you would like to pay by electronic transfer.

If you think we could improve the society for you, we would also love to hear your feedback. If you will not be continuing your TENPS membership, please let us know so we don't send further reminders. Email us at topendnativeplantsociety@hotmail.com

NT Field Naturalist Club Events

Meetings are held at 7.45pm on the second Wednesday of each month except January in the Function Room, Level 3, Red Precinct 1 at Charles Darwin University Casuarina Campus.

Field Trips are a great way to explore the best of Darwin area's nature spots in the company of like-minded people. These are usually held on the Sunday following the monthly meeting and often related to the topic of this meeting. Additional outings are held from time to time, and everyone is welcome.

September Meeting – Wed 13, 7.45 pm – AGM plus Alan Andersen – Biodiversity monitoring in Kruger National Park

September Field Trip: Sat 16, 7.00 pm – Spot lighting at Fogg Dam

October Meeting – Wed 11, 7.45pm – Birding Trip to Sri Lanka, Mike Jarvis

October Field Trip – Sat 14 – Microbat Spotting – Damian Milne – time and location to be confirmed

November Meeting – Wed 8, 7.45pm – Re-Introduction of Quolls to Kakadu Nat Park – Chris Jolly

November Field Trip – Sun 12 – Introduction to birding at Mary River Wilderness Retreat – Diana Lambert – TBC

December Meeting – Wed 13, 7.45pm – BushBlitz Trip to Bradshaw Station – Michael Hammer

TENPS Committee Meeting

Committee meetings are held every second month and members are most welcome to attend. The next committee meeting will be on **Wednesday 11th of October from 7.15pm**. Venue: Blain Electorate Office, next to Pizza Hut, Oasis Shopping Centre, Palmerston.

August meeting report:

Rehabilitation of monsoonal vine forest in East Point with Vishushi Thusithana.

Vidushi has been comparing the rehabilitated patches of forest with the small area of remnant original forest to see if the rehab forest will look the same as the original forest or if it will be different. Her study was entitled *Seedling recruitment in different aged rehabilitation patches of monsoonal vine forest in East Point Recreational Reserve* and she generously shared her work at the August TENPS meeting.

East Point forest is a dry monsoon vine forest as there is not permanent water. Most of the original forest was cleared for a variety of uses between 1932-1974, including the military installation, the golf course and then Cyclone Tracy damaged the remainder in 1974. The patch that is considered remnant forest is about 20% of the original forest.



East Point monsoon forest in 1943 during military construction. Photo courtesy of Franklin et al., 2010

There have been several efforts at revegetation since 1975. The NT government revegetated the remnant patch in 1975 and another area opposite the Military Museum between 1985-1991. Since 1992 the Council of Darwin planted more in and around the remnant forest, and since 2000 the Council has worked on several smaller areas.

The revegetation work has used mainly pioneer species that will grow quickly and cope with the sun whilst they colonise open areas. Pioneer species have included *Alstonia actinophylla* (milkwood), *Sterculia quadrifida* (peanut tree), *Cupaniopsis* (tuckeroo), *Peltophorum* (yellow flame tree) *Acacia auriculiformis* (black wattle), and *Micromelum minutum*. These revegetated patches may in future come to resemble the original forest but will need climax species to colonise, or they may become a new or different kind of forest.

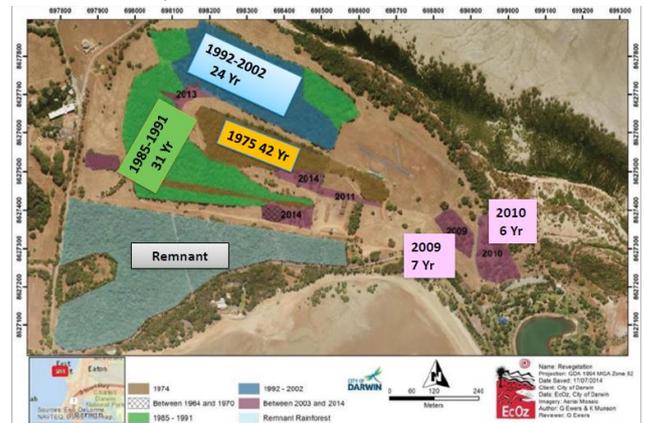
Climax species are the final species that make up forest patches; they form the canopy and seedlings grow in shade. These species are also typically attractive to birds and bats and the wildlife is responsible for the spread of seeds from remnant forest patches. The following 7 climax species were identified: *Aidia racemosa*,

Antidesma, *Drypetes*, *Diospyros calycantha*, *D. compacta* and *D. rugulosa* and in the understory *Glycosmis trifoliata*.

The progression of the forest seems to be that pioneer species grow and develop deep shade, wildlife disperse climax species fruit/seed to the new forest and over time a climax forest results. Vidushi set out to test this assumption with her project. Limiting factors include the proximity of old climax forest patches for the wildlife to disperse propagules from, suitable conditions for seedling establishment. If either dispersal or seedling establishment is limited the development of a climax forest will be retarded.

Vidushi's aim was to determine if dispersal is limiting the development of the revegetated patches. Six sites were selected across a range of patches of different ages (*below*):

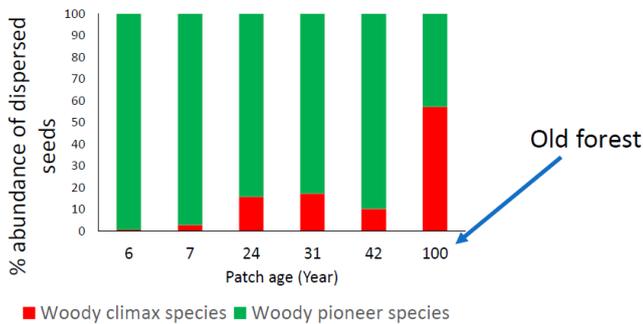
- remnant
- 42 years
- 31 years
- 24 years
- 6/7 years



Seed traps (*below*) were used to collect seed fall representing dispersal by wildlife.

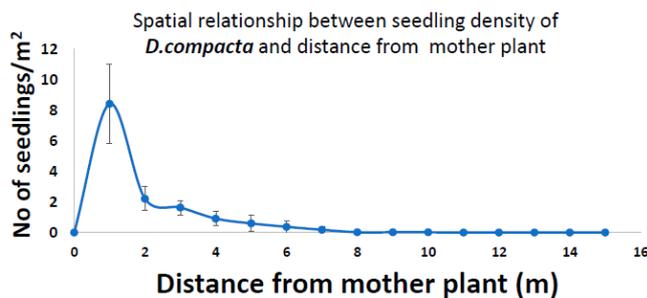


The results (below) showed that all the revegetated sites had reduced amounts of climax species whilst the remnant patch had more than 50% of seed trapped from climax species.

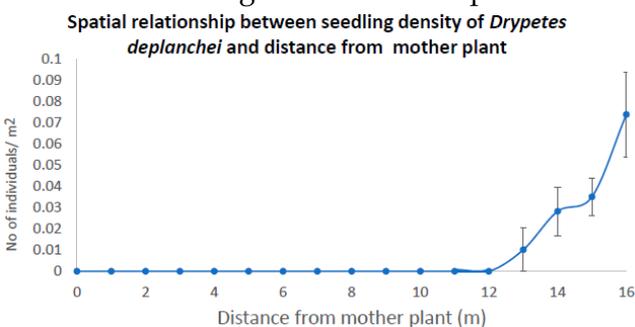


This was also the case for species diversity with the remnant forest having all 7 species and all rehabilitated patches having reduced diversity with patterns over time evident for *Drypetes* and *Diospyros compacta* that increased in direct proportion to the age of the rehab patch.

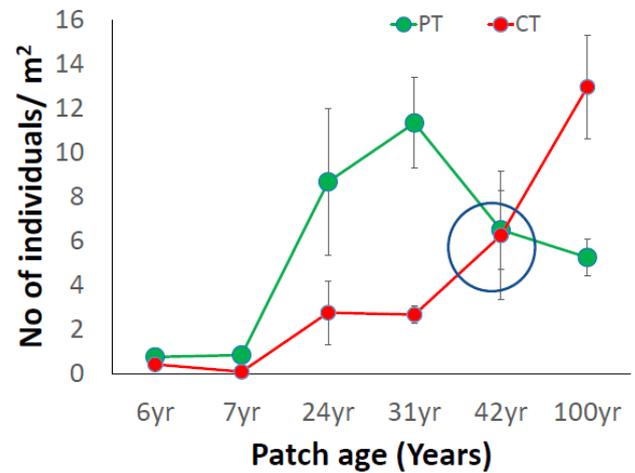
To understand why this is the case Vidushi looked at the dispersal patterns for climax species. *Diopyros compacta* is a poor disperser with seed shed directly below the canopy and seedlings establish under the parent tree. Seeds are not easily dispersed over distance and therefore this species is underrepresented in rehabilitated sites.



Drypetes is the reverse with highest seedling establishment more than 12m from the host and none establishing under the parent tree.



The results show that pioneer species seed dispersal increased up to the 31 year old patch then drops off, whilst climax species increase slowly over time but increase as the patches become older.



Species diversity of climax species falls into 3 groups with the remnant patch having 10 species, the 24-42 year old patches with 6-8 species and the 6/7 year old new patches having a single climax species present.

The findings of Vidushi's work were:

- Recruitment of pioneer species is favoured over climax species in all revegetated patches except the remnant patch.
- Poor dispersal in space of climax species limit the successful establishment of these species in rehabilitated patches
- The oldest rehabilitated patch is on course to become the same as the remnant patch in time, however limited seed input of climax species retards the successful

We thank Vidushi for sharing her work with us; this talk provided an insight into the importance of the remnant monsoon forest patches around Darwin and explained the progression that is occurring on a small scale in urban gardens around Darwin.

Article by Sarah Hirst,
Photos/graphs supplied by Vidushi Thusithana.



Utricularia caerulea. Photo by Sarah Hirst.

Sandsheet field guide launched

The publication “A field guide to plants of Darwin Sandsheet Heath” was launched on Sunday August 26 on sandsheet heath adjacent to the Humpty Doo and Rural Area Golf Club. A series of speakers presented short talks about various aspects of the sandsheet vegetation and local hydrology. The launch was conducted by the Honourable Member for Nelson, Gerry Wood. Following the launch, guides were available to assist the public with use of the field guide.



Ian Cowie talking about some of the sandsheet species named after historical NT botanists. Photo by Sarah Hirst.

A field guide to plants of Darwin Sandsheet Heath



David T. Liddle, Ian D. Cowie, Sarah Hirst and Ben Stuckey

Version 1.0, August 2017

A collaborative project funded by:



The field guide includes in excess of 140 species; with mainly herbs, but also sedges, grasses and trees or shrubs. The guide is designed to be used on a tablet or phone and typically contains an illustration and text for two species per page, on the equivalent to an A5 document. With the electronic version it is easy to zoom in to see more detail in the images. The guide also works well as a paper version printed in A5 format as an 85 page book.

The field guide is available as a free download in PDF format from the TENPS website under the “resources” tab. In the future the guide will also be available from the NT Herbarium website.

It is planned that a new version will be released in time for a field day in May 2018, but we encourage everyone to use the guide and provide feedback, comments or suggestions. Also we do not have image for some species so if you can help please contact us at topendnativeplantsociety@hotmail.com

Article by Sarah Hirst.

SUBSCRIPTION FORM - ANNUAL MEMBERSHIP (DUE 1 JULY)

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Please Note: The electronic edition of the newsletter will be uploaded to the member's page of the website each month and members will be notified by email (Acrobat Reader is required).

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