



SGAP Cairns Newsletter

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Meeting Report - August 2018

Stuart Worboys



Camping Weekend at Brooklyn Wildlife Sanctuary

Cairns' Branch August field trip took us to an unusual and exciting destination - The Australian Wildlife Conservancy granted us access to their Brooklyn Wildlife Sanctuary.

Brooklyn is a huge 60,000 hectare property located at Mt Carbine, 80 km northwest of Cairns. It is one of the most significant assets in the AWC's set of privately run conservation reserves. It straddles the Wet

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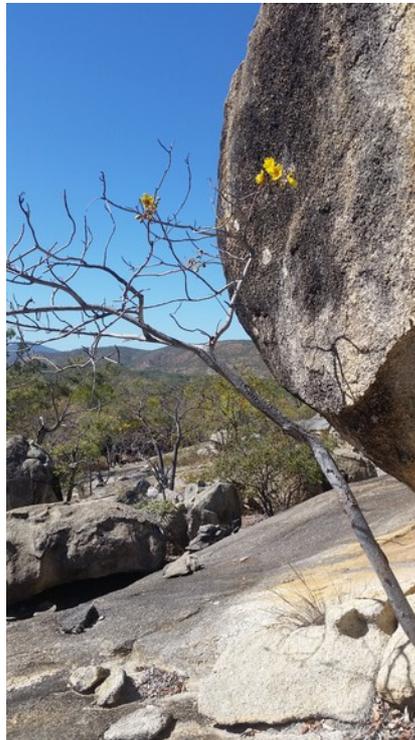
Tropics/Einasleigh Uplands boundary, extending from the dry open woodlands of the Mitchell River valley to the highland rainforests of the Carbine Tableland. With such a diversity of habitats, the property is home to a remarkable diversity of plants and animals: over 1300 plant species (including hundreds collected by the AWC's botanists, Rigel Jensen and Jeanette Kemp) and more than a third of Australia's bird species have been recorded there.

After a little back and forth with the property managers to address planning and safety issues, we were sent the combination for the gate padlocks. Nine of us met at the Mt Carbine Roadhouse on Friday afternoon, before heading down the dusty road to our campsite on a broad shady channel parallel to the Mitchell River.

The next morning, our explorations started with a climb up Mt Alto. This pyramid-shaped granite peak dominates the landscape. Cullen's Ironbark (*Eucalyptus cullenii*) and Molloy Box (*Eucalyptus leptophleba*) dominate the woodlands on the lower slopes. Near the top of the first spur, we came across a plaque commemorating the donors who had contributed to the purchase of the property.

Feeling adventurous, Liz and I continued up the mountain for a better view. Further up,

rocky pavements and boulder-strewn gullies were populated by dry rainforest species, such as *Euroshinus falcata*, *Cupaniopsis anacardioides*, *Alyxia spicata*, *Pandanus cookii*, *Canarium australianum*, *Homalium brachybotrys* and the spectacular *Cochlospermum gillivraei*. Tufts of native lemongrass (*Cymbopogon*) and kangaroo grass (*Themeda triandra*) grew in soil patches, and hares foot fern (*Davallia denticulata*) could sometimes be found hidden in shadowy crevices.



Cochlospermum gillivraei sheds its leaves in the dry season, then produces glorious yellow flowers.

After a lunch and lie down, we continued our explorations, this time around the southern side of the mountain. The walk (Sharren and Rick cycled!) along the "Bethel's Crossing Track" took us

through open woodlands on thin, hungry soils. Here and there remnants were remnants of mine workings: waste rock dumps, concrete foundations and heavy steel machinery too large or awkward to salvage. The vegetation ranged from woodlands to low open scrub. Gnarly *Melaleuca nervosa* was in flower. We also spotted *Grevillea striata*, *Melaleuca stenostachya*, *Wrightia saligna* and *Trichodesma zeylanica*. Weeds were few, with stylo (*Stylosanthes scabra*), the ubiquitous snakeweed (*Stachytarpheta jamaicensis*) and praxelis (*Praxelis clematidea*) recorded.

The next morning, we finished off our explorations with a wander along the Mitchell River. Near our campsite, the main river channel branches, with two or three parallel dry sandy channels standing ready to carry wet season floods. The dry channel we followed was nicely shaded by tall *Melaleuca leucadendra* and *Nauclea orientalis*. Native mangosteens (*Garcinia warrenii*), a close relative of the exotic and expensive mangosteen fruit, were flowering in the subcanopy, sending the scent of cloves into the morning air. All along the channel, low trees of deciduous *Barringtonia acutangula*, some shaped into bonsai-like configurations by regular floods, were sending out new flushes of bronzey red leaves. We stopped where the dry channel rejoined the main river, then returned to pack

up camp.

We finished our weekend away with an excellent home-made pie at the Mt Carbine Roadhouse, then headed home to wash away the campfire smoke and dust.

Flora Species List

I compiled a short report for the AWC on our weekend away. During our casual walks, we noted 124 species, including 24 not previously recorded. New observations for the Brooklyn property are underlined in the following list.

FERNS AND ALLIES

DAVALLIACEAE

Davallia denticulata var. *denticulata*

PTERIDACEAE

Cheilanthes
Paraceterach muelleri

FLOWERING PLANTS- MONOCOTS

ASPARAGACEAE

Lomandra longifolia
Lomandra multiflora

CYPERACEAE

Scleria brownii

HEMEROCALLIDACEAE

Dianella caerulea

PANDANACEAE

Pandanus cookii

POACEAE

Ancistrachne uncinulata
Aristida
Arundinella setosa
Cymbopogon
Heteropogon contortus
Heteropogon triticeus
Megathyrsus maximus
Melinis repens
Themeda arguens
Themeda quadrivalvis

Themeda triandra

FLOWERING PLANTS- EUDICOTS

ACANTHACEAE

Pseuderanthemum variabile
Rostellularia adscendens

AMARANTHACEAE

Achyranthes aspera
Alternanthera ficoidea

ANACARDIACEAE

Euroschinus falcata var.
angustifolius

APOCYNACEAE

Alyxia spicata
Carissa spinarum
Cryptostegia grandiflora
Cynanchum viminalis subsp.
brunonianum
Gymnanthera oblonga
Wrightia saligna

ARALIACEAE

Trachymene bivestita

ASTERACEAE

Cyanthidium cinereum
Emilia sonchifolia
Praxelis clematidea
Pterocaulon sphacelatum
Tridax procumbens

BIGNONIACEAE

Dolichandrone alternifolia

BIXACEAE

Cochlospermum gillivraei



BORAGINACEAE

Trichodesma zeylanica

BURSERACEAE

Canarium australicum

CAPPARACEAE

Capparis canescens

CASUARINACEAE

Casuarina cunninghamii

CELASTRACEAE

Denhamia cunninghamii
Denhamia oleaster

CLEOMACEAE

Cleome aculeata

CLUSIACEAE

Garcinia warrenii

COMBRETACEAE

Terminalia subacroptera

ERYTHROXYLACEAE

Erythroxylum ellipticum

FABACEAE

Acacia auriculiformis
Acacia crassiparpa
Acacia disparrima subsp. *calidestris*
Acacia holosericea
Acacia simsii
Acacia umbellata
Cajanus acutifolius
Centrosema molle
Crotalaria goreensis
Erythrophleum chlorostachys
Flemingia parviflora
Indigofera pratensis
Senna gaudichaudii
Stylosanthes scabra
Tephrosia
Zornia stirlingii

LAMIACEAE

Mesosphaerum suaveolens
Ocimum tenuiflorum

LECYTHIDACEAE

Barringtonia acutangula subsp.
acutangula
Planchonia careya

MALVACEAE

Brachychiton albidus



Brachychiton diversifolius subsp.
orientalis
Grewia retusifolia
Hibiscus meraukensis
Sida acuta

Urena lobata

MENISPERMACEAE

Stephania japonica var. *discolor*

MORACEAE

Ficus opposita

Ficus rubiginosa

MYRTACEAE

Callistemon viminalis

Corymbia clarksoniana

Corymbia dallachiana

Corymbia erythrophloia

Corymbia tessellaris

Eucalyptus cullenii

Eucalyptus leptophleba

Eucalyptus tereticornis

Lophostemon grandiflorus subsp.

riparius

Melaleuca leucadendra

Melaleuca nervosa

Melaleuca stenostachya

Melaleuca viridiflora

Syzygium tierneyanum

Tristaniopsis exiliflora

PASSIFLORACEAE

Passiflora foetida

PHYLLANTHACEAE

Antidesma parvifolium

Breynia cernua

Bridelia tomentosa

Cleistanthus apodus

Phyllanthus fuernrohrii

PICRODENDRACEAE

Petalostigma pubescens

POLYGALACEAE

Polygala paniculata

PROTEACEAE

Grevillea glauca

Grevillea mimosoides

Grevillea parallela

Grevillea striata

Persoonia falcata



PUTRANJIVACEAE

Drypetes deplanchei

RHAMNACEAE

Alphitonia excelsa

RHIZOPHORACEAE

Carallia brachiata

RUBIACEAE

Coelospermum reticulatum

Larsenaikia ochreatea

Nauclea orientalis

Spermacoce

RUTACEAE

Acronychia laevis

SALICACEAE

Homalium brachybotrys

SANTALACEAE

Santalum lanceolatum

SAPINDACEAE

Cupaniopsis anacardioides

SAPOTACEAE

Sersalisia sericea

SOLANACEAE

Capsicum annuum var.

glabriusculum

Solanum seafortianum

THYMELAEACEAE

Pimelea cornucopiae

Pimelea sericostachya subsp.

sericostachya



Wikstroemia indica

VERBENACEAE

Stachytarpheta jamaicensis

VITACEAE

Ampelocissus gardineri



View from Mt Alto across the Mitchell River valley to the unnamed ranges beyond.

STURT DESERT PEA - SOME TRIVIA

Betsy Jackes

Did you know that?

- The Sturt Desert Pea was one of the first Australian plants collected? It was collected by Dampier in 1699, fragments of which are in the Oxford University Herbarium. However, this is not the type material because no name was published based on this specimen. In handwritten notes on the specimen is the name *Colutea novae-hollandiae*.
- One of the indigenous names meant “little liar”? People assumed that it indicated there was water nearby but they often couldn’t find it. After all it favours “soils subject to periodic flooding” as well as growing along waterways etc. Rainfall in arid areas is sporadic but the plant has a long tap root so can really chase after moisture.



Sturt's Desert Pea, *Swainsona formosa*. Image by MissMegido, [CC BY-SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/)

- It has had 8 different names since 1800 – not all legitimate? Why so many?
Because it had such a different and striking flower unlike other known native legumes.
The first official names were *Donia speciosa* G. Don, and *Donia formosa* G. Don – George Don in 1832 named specimens from two different collections in WA after his father. He thought they were different. So do we have one species or two? This is why the specimen the author used to name the plant – the type – is extremely important.

Meanwhile Allan Cunningham had collected a specimen from near Lake Cargelligo in NSW – he initially thought it was a *Dolichos*, but then he decided it was a *Kennedia* and on the manuscript he wrote *Kennedia speciosa*. However, he didn't publish the name and so it remained a manuscript name until Lindley published the eastern species in 1835 under the name of *Clianthus oxleyi* A. Cunn. ex Lindl. (Since published after Don's names, it becomes a synonym). Obviously Don was unaware of the NSW specimen. The western species Lindley published as *C. dampieri* A. Cunn. ex Lindl.

In 1849, Robert Brown agreed that it looked like the N.Z. 'parrot beaks', based on the appearance of the flower and so it belonged in the genus *Clianthus*. He examined many more specimens than either Don or Lindley, as well as the specimen collected by Allan Cunningham from Malus Island, in the Dampier Archipelago. As a result he combined both of Don's names and called it *Clianthus dampieri* (name now illegitimate as superfluous) and so that is what it was generally known as until 1950.

However, in 1907 Ascherson & Graebner called it *Clianthus speciosus* (G. Don) Asch. & Graebn. (incidentally the name is also illegitimate) Possibly because they couldn't find all the types and possibly because it was in German it was probably ignored by many English speaking botanists.

In 1950 based on Don's description, Ford and Vickery decided it should be *Clianthus formosus* (G. Don) Ford & Vickery, and the type was the specimen from Curlew River but where was it?

Getting confused?

In 1990 Joy Thompson decided it was only superficially a *Clianthus* and moved it to *Swainsona* on a number of grounds. The name of the Sturt's Desert pea now became *Swainsona formosa* (G. Don) J. Thomps.

But wait we haven't finished yet.

In 1999, Alex George thought it was too different to the other *Swainsona* species and so called it *Willdampia formosa*. A new genus with a single species. But David Symon (2000) refuted this saying the shape and colour indicated a response to a different pollinator – birds not insects as in other species and therefore should remain as *Swainsona*.

Now to 2018

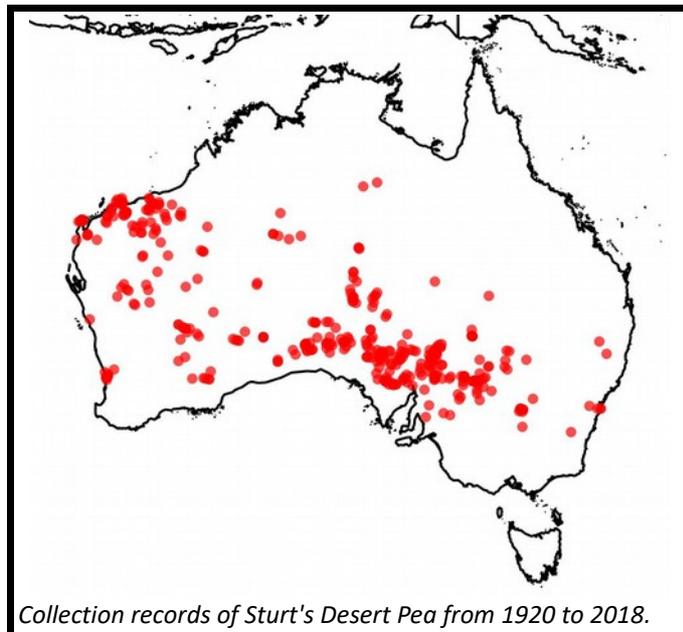
In 2018 the type of *Donia formosa* was located. The type specimen was in a private collection which had been broken up and sold and was only relocated after much searching by Alex George. It is in the Geneva Herbarium. An analysis of the handwriting confirmed its identification and it was actually collected by Cunningham on Malus Island – Curlew River is crossed out. Good sleuthing! So the Type of *Donia speciosa* is at Kew and British Museum.

THEN good old DNA confirmed it was a *Swainsona*.

So what do we know about this plant?

- The formal name of the Sturt Pea is *Swainsona formosa* (G. Don) J. Thomps.

- Isaac Swainson was an English botanist and medico (1746-1812), “formosa” is from a Latin word for beautiful on account of its form.
- It is the floral emblem of South Australia.
- Plant usually prostrate but there are erect forms. Stems are pinkish and hairy. Flowers are typically red with a shiny black boss. However other colour forms are known in the wild - pink, pale red, to pale red with reddish boss, even cultivars are known that are white with a purple boss! Mutated forms exist.
- It is bird pollinated, as far as is known the other species are insect pollinated.
- It is self-compatible and can be hand-pollinated by rubbing the top of the stigma to break the cuticle covering it and so allow pollen to germinate.
- Seeds germinate easily after scarifying or after the appropriate hot water treatment.
- Plants prefer an open well drained media, as well an application of a slow release fertilizer will improve the flowering display according to reports. However, watch out for root rot.
- It is an Australian native found in arid inland regions from WA to NSW. However, it has taken over 300 years since it was first collected to know where it belongs and why.
- Its closest relatives are *S.maccullochiana* F.Muell., a species endemic to the Pilbara, an erect plant with purple flowers; and *S. beasleyana* F.Muell., also from Western Australia but further south. Likewise it is an erect plant with purple to pink flowers.



References:

Cross, H.B., Biffin, E. & Waycott, M. (2018). *Swainsona* 30: 1-8.

George, A.S (2018). *Swainsona* 31:49-53.

More from Cooktown

Rob Jago

Following on from July's field trip to Cooktown, Rob comments:

I had a look along the road that runs from Starke St, Marton down along the river to Stonewall [upstream of Cooktown]. A lot of interesting stuff. Some species noted that might be worth trying to collect [for propagation] are:

Stonewall

Allocasuarina littoralis
Alphitonia excelsa
Asteromyrtus lysicephala
Banksia dentata (with seeds ready for collecting)
Ectrosia leporina
Hakea pedunculata
Hibbertia banksii
Jacksonia thesioides
Leucopogon ruscifolia
Lithomyrtus obtusa
Melaleuca ?acacioides
Mitrasacme stellata
Parinari nonda
Phyllanthus carpentariae
Schoenus calostachyus

Elim Beach

Acacia humifusa
Acacia leptocarpa
Acacia pubirhachis
Allocasuarina littoralis
Asteromyrtus lysicephala
Baumea rubiginosa
Boronia alulata
Eucalyptus phoenicea
Gahnia sieberiana
Gompholobium nitidum
Grevillea pteridifolia
Hibbertia sp.
Ischaemum australe
Labichea buettneriana
Leucopogon yorkensis
Melaleuca arcana
Melaleuca leucadendra
Melaleuca polandii
Neofabricia myrtifolia
Neoroepera banksii
Nypa fruticans
Pandanus solms-laubachii
Phragmites australis

CAIRNS SHOW WINNER



Val advises the winner of our minor sponsorship of the special Prize Australian Natives was Travis Teske.

Apparently Travis was surprised at his win as a woman who usually has many exhibits did not participate this year. He appreciated the win and the possibility of joining SGAP but he is too involved in other things. He will keep the certificate issued to the Show Association for use next year.

Innisfail Branch

Meetings at 4 p.m. on the second Wednesday of each month at 1 Stitt Street, Innisfail.

Contact: innisfail@npq.org.au

Townsville Branch

Meetings at 8 p.m. on the second Wednesday of the month, February to November, in Annandale Community Centre.

Excursions the following Sunday.

Contact: johnelliott@sgaptownsville.org.au

www.sgaptownsville.org.au

Tablelands Branch

Meetings on the 4th Wednesday of the month. Excursion the following

Sunday.

Contact: Chris Jaminon on 4091 4565 or email hjaminon@bigpond.com

Cairns Branch - Next Meeting

Cairns Branch next excursion will be to the Yellow Arrow walk (note the change from the previously advertised Trinity Inlet Bund Wall.). Meet at midday on 16 September at the car park near the Touch Football grounds (circled on the map below) on Aeroglen Drive, Aeroglen.

Bring lunch, a hat and water.

