

ANNUAL GENERAL MEETING 2013

SGAP Cairns Branch Annual general meeting was held at the new Botanic Gardens Visitor Centre on 16th March. Thanks to Tony Roberts for booking the venue and setting up the tables and chairs.

The new committee was elected – the 2013 committee is listed on the last page of the newsletter.

A couple of other important notices arose from the meeting:

- We would cancel our Post Office Box.
- Stuart to organize a redirection to PO Box 5542 (his personal PO Box), and Tony to update the website accordingly.
- Tony advised that we had access to the visitors centre at any time, provided there were no clashes with existing bookings.
- We should have at least one excursion per year with Innisfail and/or Tablelands branch. We could also combine with Townsville branch.
- The proposed Banks and Solander beds in the Centenary Lakes section of the Botanic Gardens is to be progressed through a series of working bees through the year.
- Excursions to remain at the third Saturday of the month.



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Excursion Report - Tablelands SGAP 31 March 2013

On 31 March I joined SGAP Tablelands on their excursion to the Far North Queensland Rainforest Supersite. The Supersite is a huge, 25 ha research plot located in the catchment of Robson Creek, north east of Lake Tinaroo. Federally funded and managed collaboratively by JCU, CSIRO, National Parks, La Trobe University and Griffith University, the plot is not just for rainforest vegetation studies. Research within the plot will also focus on fauna, atmospheric gas exchange, climate and hydrological monitoring.

The site is managed by CSIRO Field Botanist Matt Bradford. Over the past three years, he (and quite a few others) have measured, identified and labeled 23 416 trees. That's every single tree over 10 cm diameter when measured 1.3 m above ground level. As for smaller trees – there are over 10 000 stems per hectare over 1 cm diameter – far too many to count and measure.

The site has been logged, but there are still a few monster old trees scattered here and there, including one huge old *Ceratopetalum succirubrum* by the side of the track. *Pouteria brownlessiana*, *Placospermum coriaceum*, and *Alphitonia whitei* are also prominent. Ferns abound along creeks and in wetter areas. Nada Sankowsky pointed out *Marrattia oreades*, *Lastreopsis*

wurunurun and *Diplazium dilatatum*. The impressive *Colysis ampla* crept its way up some narrower saplings (see photo at the top of the next page).



Clambering over fallen trees to access the site

Afterwards, lunch was enjoyed in a clearing on the edge of the plot, then everyone jumped into their cars to check out some huge *Pseudovanilla foliata* plants growing on rotting stumps just down the road.





Banks and Solander collections in the Natural History Museum

BY STUART WORBOYS

Just seven years from now, Australia marks the 250th anniversary of James Cook's first great voyage of exploration and discovery, which lead directly to European settlement of our remote continent. The Cairns and Tablelands Branches of the Society for Growing Australian Plants has for a long time taken an active interest in this voyage, with special focus on the activities of naturalists Joseph Banks and Daniel Solander. The interest has for some years found

its outlet in the development of the Banks and Solander gardens at Cooktown where the Endeavour was beached for so long and where (as Professor Darren Crayn has pointed out) a significant proportion of the local native flora was collected and returned to Europe.

But Cook's first voyage was not just a journey to New Holland and back: it was a voyage of exploration and discovery that was as scientifically significant in its time as NASA's Voyager space probes were in the last century. It was a voyage that carried with it the support of the greatest scientific organisation of

its time - the Royal Society of London, the Admiralty, and King George III himself. The primary goal was to observe the rare astronomical phenomenon of the transit of Venus across the face of the sun. By comparing observations of the transit from Tahiti with observations made elsewhere in the world, it was hoped the distance of the Earth from the sun could be calculated. To undertake these observations, the Astronomer Royal's assistant, Mr Charles Green, was engaged. Cook also carried sealed orders to search signs of the fabled *Terra Australis Inognita*. I think most readers will know the outcomes of this search.

Also appointed to the voyage was Joseph Banks. Although

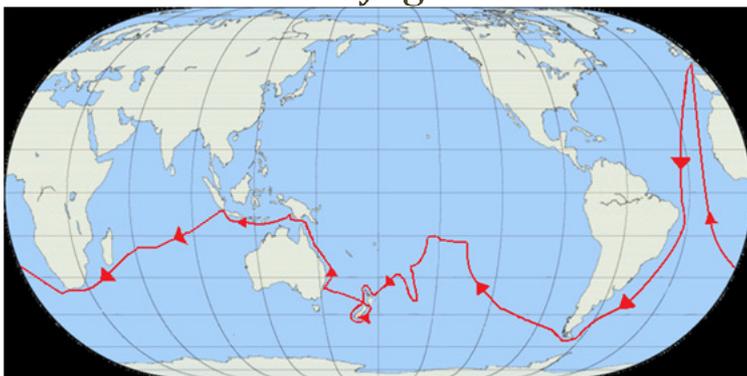
only 25 at the time of embarkation, he was nonetheless, through fortuitous inheritance and force of intellect, a man of considerable influence in the English scientific community of the time. He brought with him a staff of eight: Daniel Solander (a Swedish botanist close friend and pupil of the great Swedish scientist Linnaeus), Herman Spöring (naturalist and secretary), the artists Sydney Parkinson and Alexander Buchan, and servants James Roberts, Peter Briscoe, Thomas Richmond and George Dorrton. Only four of these men – Solander, Roberts, Briscoe and Banks himself – survived the journey.

In terms of natural history collections, the voyage was very much a success. An earlier expedition to Newfoundland had taught Banks how to transport fragile specimens in the cramped and ungentle conditions aboard ships of the era. His team was able to return with some 107 bird species, 248 fishes, 370 arthropods and even 30 medusae (jellyfish). But it was in the field of botany, Banks' true passion, which the expedition excelled. For the plant kingdom, it is estimated that over 30 000 plant specimens were collected during the three year voyage.

Collecting specimens was not the only botanical activity. During the voyage, the artists produced 18 volumes illustrating the colour and diversity of the new discoveries. Banks' ultimate goal for all this collecting and illustrating was the publication of the botanical discoveries of the voyage, to be illustrated with over 750 hand coloured engravings. Although many of these engravings were finished, manuscripts were prepared and much cataloging of information completed, the ambitious project was never completed, and much of the collection and its documentation still resides in the Natural History Museum in South Kensington.

(continued, page 4).

250th Anniversary of Cook's first voyage



HM Bark Endeavour departed Plymouth 25 August 1768, bound for Tahiti. Important ports and anchorages on its three year voyage are summarised below:

- 14-18 September 1768. Madeira (a Spanish possession off the north African coast). Banks and Solander made significant collections whilst here.
- 13 November – 8

December 1768. Rio de Janeiro. Mistaken for a pirate vessel and held up longer than expected.

- 20 January 1769. Tierra del Fuego.
- 3 June 1769. Transit of Venus observed from Tahiti.
- 19 April 1770. First sighting of the New Holland mainland – Point Hicks.

- 29 April 1770. First landing at Botany Bay.
- 28 May 1770. Shoalwater Bay.
- 9 June 1770. Named Green Island and Fitzroy Island. Went ashore on the mainland coast.
- 11 June 1770. Struck Endeavour Reef.
- 14 June – 4 August 1770. Repairs at Endeavour River.
- 22 August 1770. Raises flag at Possession Island.
- 10 October 1770. Arrives Batavia. Commences repairs.
- 17 March 1771. Arrives Table Bay, Cape Town.
- 1 May 1771. Arrives at the English-held mid Atlantic Island of St Helena.
- 10 July 1771. England sighted. Everyone breathes big sigh of relief.

This tree revealed itself on the edge of the rainforest behind our shed after cyclones Tasha and Yasi had performed some clearances. The extra light sent the new tree into a growth and flowering phase and it became a tall slender trunk with a mop of short densely leaved branches on the upper quarter of the trunk. Flowering was profuse last year (2012) and this year is even better with flowers appearing in mid-February and still covering the tree a month later.

The CSIRO book (Australian Tropical Rainforest trees) lists two species of *Homalium*, one from dry country (*Homalium brachybotrys*) and the other, *Homalium circumpinnatum*, seemed a likely starter for our Graham Range area opposite Bellenden Ker [Editor's Note: *Homalium alnifolium* is another species reported from dry rainforests from Mt Elliot south to Wivenhoe Dam. *Homalium* sp. South Molle Island is known only from a few collections in the Whitsundays/Shoalwater Bay area]. However, discussion with Rob Jago has evinced that our tree is a third, little known and undescribed species: *H.* sp. Johnstone River, which occurs in a small range of habitat of lowland very wet rainforest. Johnstone River catchment is immediately to the south of the Russell River catchment which includes our area, and we share other rare plants. (The gorgeous orchid *Dendrobium nindii* is such a plant)

Homalium sp. Johnstone River was discovered by the Reverend N. Michael (a colleague of Rev. Gribble of Yarrabah fame), in the period of 1890 -1893, but it has still not been formally described and thus has no "proper" species name. This may be an indication that it is rare and little known.

Beautiful tree species of the Wet Tropics

Homalium sp. Johnstone River
(N. Michael 176), SALICACEAE

By Don Lawie



Our specimen of *Homalium* sp. Johnstone River is a handsome tree with a straight erect columnar trunk measuring 75cm girth at breast height and an estimated height of about 20 metres. The lower 15 metres of the trunk is bare but the upper part has a close cloak of leaves covered by masses of inflorescences up to 15 cm in length with perhaps 50 closely packed, shuttlecock-shaped, ivory/white flowers. I had to use the .410 gun to shoot down some flowers for closer inspection and the firing angle was so steep that I fell over backwards while observing the fall of plant material. The leaves are ovate, sharply serrate, 6-7 cm long, and shiny bright green. We have not yet observed the fruit but will await their appearance with keen anticipation.

According to Rob, the species *H. circumpinnatum* differs in that the inflorescences are shorter and the flowers are more sparsely positioned on the rachis. The leaves of *H.* sp. Johnstone River are glossy beneath.



2 Flowers shaped like little shuttlecocks.

We have not seen any other specimens of *Homalium* but have had a reliable report from a SGAP member of their appearance on the Red Arrow Walk in Cairns. It would be interesting to do a comparison of plants to evaluate the species. In the meantime we continue to admire the view from our bedroom window and trust that this will be a cyclone-free year to give "our" tree a chance to develop more robustness.

Banks and Solander collections in the Natural History Museum (from page 2)

I had the fortune to holiday in London in October last year. Strategically timed to avoid the worst of the Olympic madness, it placed me in the city in the midst of a grey, drizzly autumn.

Nevertheless, one does not visit London for its weather, much as one does not visit Cairns for its history and culture. A few well-placed emails had put me in contact with Mr Steve Cafferty, Collections Project Manager at the Museum, and with his help I had the privilege of spending a day examining the Museum's historic collections, including many from Cook's first voyage.

The Natural History Museum sits on Cromwell Road in South Kensington, its brick and terracotta Romanesque façade, enlivened by often idiosyncratic gargoyles representing the diversity of life.



3 The Natural History Museum's Cromwell Road façade.

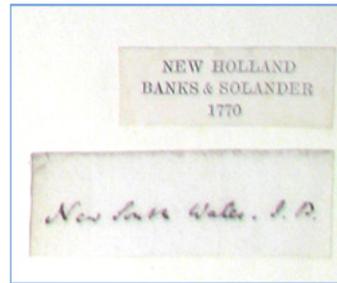
The botanical collections are housed in the recently built Darwin Centre – a slight disappointment, as I was hoping for dusty dungeons filled with ranks of mahogany storage cupboards. The botanical collections occupy two whole floors of the modern, air-conditioned,

fire-safe Centre. They comprise over six million specimens from around the world, dating from the 17th century. The historic value of these collections cannot be overstated – here we find collections by Darwin, the first scientific collections of plants from Sri Lanka and the Caribbean, and collections of plants studied and annotated by Linnaeus in preparing his *Species Plantarum*, the work which is now internationally accepted as the starting point of modern botanical nomenclature. Over 100 000 type specimens (*i.e.* the plant specimen referred to when a new species is named) are held.

And scattered through this vast, seemingly endless collection (which has, for the most part, not yet been electronically databased), are the collections of Joseph Banks from the Endeavour voyage. Naturally, the order in which they are arranged facilitates scientific study – first all the species in one family go together, then each family is subdivided into collections made from major geographical regions. Unfortunately, this arrangement doesn't aid biographical research – if you want to tell the full story of Banks and Solander's collections from you have to rifle through 6 million specimens. At least there's a little tag on each sheet to help out. However, with a little help from Steve Cafferty, I was able to search out some useful specimens.

The first specimen on my list was a rather bland but common tree known from upland rainforests of the Wet Tropics, *Chionanthus axillaris*. The type of this species was collected at Endeavour River by Banks and Solander. Rob Jago pointed out some time ago that this was a little odd – here's a species that has been collected almost exclusively from upland rainforests, but Joseph Banks found it somewhere along the Endeavour River 240 years ago. At first glance the Endeavour River type specimen and the upland rainforest variety are the same. But a closer look reveals one tiny difference – flower stems on the Banks and Solander specimen are really hairy, those on upland rainforest collections are not. Is this difference big enough to rewrite the history books (or at least describe a new species)? A little more

investigation is needed to work this out.



2 Banks and Solander tag on *Ipomoea littoralis*. This specimen is labeled by Banks "New South Wales J.B."

Another Banks and Solander collection, *Ipomoea trichosperma*, doesn't seem to have been seen in Queensland since. On the other hand, Banks' note on his *Ipomoea pes-caprae* specimen says the species was found 'everywhere north of Botany Bay'.

At the end of the day, I had the privilege of a tour of the core historical collections of the British Museum. These are the collection amassed by John Sloane from 1687 onwards, and later donated to the nation. Along with others of similar age, these are housed in a special

room at the core of the Darwin Centre. The historical flora collections are all bound in massive, heavy leather volumes. Open them up, and every page reveals an item of botanical history – the illustration below is the type of the common garden variety hibiscus, *Hibiscus rosa-sinensis*, collected in Sri Lanka by an officer of the Dutch East India Company, and described by Linnaeus. Look carefully and you'll see the praying mantis squished alongside the botanical curiosity.

But for me, one of the most intriguing items came in a simple, solid plywood box. This was opened to reveal a loosely wrapped bundle of papers. These turned out to be specimens collected during the Endeavour's visit to Madeira that had never been mounted. Perhaps, in the excitement to study the masses of new material from the mysterious and distant continent, they were set aside and forgotten. They were found years later, still wrapped in pages from Milton's *Paradise Lost*, and kept unchanged as a relic of the process of botanical science in an era long past.



6 The type specimen of *Hibiscus rosa-sinensis*. Notice the squished praying mantis!



5 Banks and Solander specimen from the island of Madeira. Still in the same condition as when it was unloaded from the Endeavour in 1771.

Upcoming Events

CAIRNS SGAP

Saturday 27th April

12 noon. To be advised

Bring lunch, and suggestions for excursions.

TABLELANDS SGAP

Meetings on the **4th Wednesday of the month.**

Excursion the following Sunday.

Any queries, please contact Chris Jaminon on 4095 2882 or email hjaminon@bigpond.com

TOWNSVILLE SGAP

Meets on the **2nd Wednesday of the month**, February to November, in Annandale Community Centre at 8pm, and holds excursions the following Sunday.

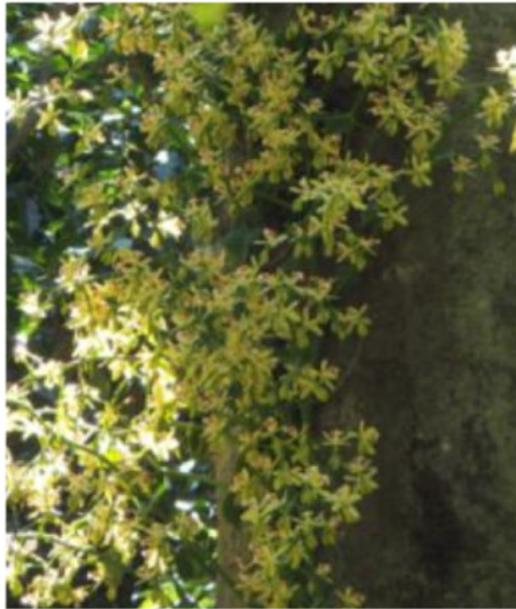
See www.sgaptownsville.org.au/ for more information.

OTHER EVENTS OF INTEREST

10-16 August 2013

ANPSA Biennial Conference, Sunshine Coast. Held every two years, this is the conference of our national parent organization.

See www.sgapqld.org.au/anpsa2013.html for more information.



Flowers and fruits of the magnificent Pseudovanilla foliata, a rarely seen orchid that grow on rotting tree stumps.



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