Society for Growing Australian Plants (Queensland Region) Inc.

Cairns Branch
PO Box 199
Earlville Qld 4870

Newsletter No. 104
Oct 2010

Society Office Bearers

Chairperson	Tony Roberts	40 551 292
Vice Chairperson	Mary Gandini	40 542 190
Secretary	David Warmington	40 443 398
Treasurer	Robert Jago	40 552 266

Membership Subscriptions- Qld Region- Renewal $30.00, New Members $35, each additional member of household $2.00 **Student** - Renewal $20 New Members $25.00, **Cairns Branch Fees** - $10.00 Full Year

To access our Library for the loan of publications, please contact David Warmington
Newsletter Editor: Tony Roberts travelling_botanist@yahoo.com.au

Dates to remember

Cairns Branch Meetings and Excursions – third Saturday of each month.

NEXT MEETING AND EXCURSION

16 Oct at 1200 at The Barron Falls' Boardwalk

Tablelands Branch Excursion– Sunday following the meeting on the fourth Wednesday of the month. Any queries please contact Chris Jaminon 4095 2882 or hjaminon@bigpond.com

Townsville Branch
General Meeting Please contact John Elliot: jw-elliott@aapt.net.au for more information

Crystal Ball

Nov – Ellie Point

Dec – Botanic Gardens

October

We will meet at the Barron Falls' car park in Kuranda at 1200. See map below.


Esplanade
Kennedy Hwy
Butler Dr
Saddle Mountain Rd
Victor Pl
Salamone Dr
Coondara St
Thongon St
Booroo St
Therwine St
The Savannahlander
Kuranda Hotel
Kuranda
Australian Butterfly Sanctuary
Kuranda Rainforest View
Barang St
Kuranda Backpackers Hostel
Kuranda Visitor Information Centre
Kuranda Villas
Birdworld Kuranda
Wirramo St
Harriman St
Jumrum Creek
Caroona St
Arara St
Monty St
Barron River
Bartley Park
Barron Falls Rd
Kuranda Koala Gardens
Jumrum Creek Environmental Park
Kullaroo Cl
Kuranda Cres
Weir Rd
Intake Rd
Meet Here
Barron Falls
Barron Gorge National Park

September Excursion Report
By Don Lawie

Nine of us met for lunch at the old Highway crossing over Harvey Creek then, ignoring the threat of rain, made our way to the property which gives access to the rainforest on the north bank of the creek. This area is renowned in botanical circles for the profusion of rare and primitive plants, a number of which occur only here and in the Daintree area. Apart from those plants we were treated to an array of interesting trees, shrubs, ferns, palms and orchids all growing in profusion in this high-rainfall lowland vine forest on granitic soil.

We were at the base of the mile-high Bellenden Ker Range – a granite upthrust just north of Mount Bartle Frere, Queensland's highest mountain, and large emergent granite rocks were the first items we noted. These had an Angkor Wat appearance, being covered with large fig trees with their roots reaching into any crevice, and ferns and epiphytes taking advantage of the shade cover. Barbara spotted the first orchid of the day, a Pencil – *Dendrobium teretifolium* - followed by a flowering *Cymbidium madidum* nestling among the enclosing roots of a Strangler Fig on a large specimen of Milky Pine (*Alstonia scholaris*). Large Milky Pines and Golden Pendas (*Xanthostemon chrysanthus*) dotted the cleared cow paddock (and so did the cows!) and a pair of Pendas had a flowering *Barringtonia calyptrata* growing between them in a very scenic display.

We found our first Rare Plants growing along the bank of a small tributary creek : *Storckiella australiensis* (White Bean) presented its pretty yellow pea-type flowers right alongside a so-called Daintree Penda (*Lindsayomyrtus recemoides*), which had a flush of pale purple new leaves along the tree's outer edge. *Storckiella australiensis* grows nowhere else in the world but here and the Daintree but it does have close relatives in New Caledonia and Fiji. *Lindsayomyrtus* also only grows in the Babinda/Daintree area of Australia but can be found in the Indonesian Moluccas and New Guinea.

Tony found our second orchid hiding on a vine above some slippery rocks, but neither Pauline nor Mary, our orchid experts, managed to fall into the creek while examining *Pomatocalpa macphersonii*. This orchid was in bud. They are fairly common in the area, usually in colonies that favour vines and skinny tree branches. This plant appeared to be solitary but I'm sure that a search would find more specimens.

We moved into the rainforest itself, remarkably clear of mosquitoes and leeches but both Pauline & I woke up next day with a good dose of scrub itch; a small price to pay for the wonderland that we visited. Rob was in his element, naming plants, giving us fascinating facts, and scrambling through the forest to find more treasures. He came to a sudden halt in a little glade occupied by a graceful palm: "*Oraniopsis appendiculata*!" he said "what's that doing here? " The *Oraniopsis* or Grey Palm grows only in Australia and only in the area from here to the nearby Tablelands, usually at some altitude. It is unusual to find Grey Palms at such a low level, and after discussion we concluded that the steepness of the nearby mountain, heavy rainfall and cold air downdraughts would have encouraged their growth.

Orchids are rarely seen in deep rainforest but we know that they are up there in the canopy. A fallen Johnstone River Hardwood tree (*Backhousia bancroftii*) presented us with some Spider Orchids (*Dendrobium tetragonum*) and also a large number of Tassel Ferns (*Huperzia phlegmaria*) to delight the eye. The star of the show though was a mature specimen with a nearby seedling of the rare and primitive *Idiospermun australiense*, first discovered in the 19th century in this vicinity, lost, and found again in the Daintree area. The story of this tree is so fascinating that I will write of it separately.

Emerging from the forest we followed the creek downstream and Barbara and Mary found a patch of tiny terrestrial orchids *Zeuxine oblonga*, flowering among small rocks, with a fruiting *Cadetia maideniana* low down on a small adjacent tree.

We saw many other interesting plants, but the above may serve as an introduction to the plants of the Harvey Creek area.....It may be of interest to add that access is through a locked gate. The owner has had problems with visitors leaving the gate open and his cattle being exposed to heavy Bruce Highway traffic. The story goes that a year or two ago one of our members drove in in search of a rumoured rare plant, not knowing how to contact the owner, who came along and locked the gate behind him. Poor Anton was in heaps of trouble. I went to school with the owner, many, many years ago and he was hospitality itself when I approached him on behalf of our branch. Just goes to show that the proper approach – and the Old School Tie – always pays dividends. Come to think of it we didn't have a tie, nor did we wear shoes to school in those days.

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IDIOSPERMUM AUSTRALIENSE: Family Idiospermaceae. The family consists of just one genus, the genus of just one species, and the plant grows only in the Bartle Frere /Bellenden Ker and Daintree areas. It is one of the "dinosaur" plants, one of the first flowering plants to emerge on earth. I quote from "TREAT News, Storm Season 2004": "The original plants had been collected from Harvey Creek near Babinda by Deils, collecting for Von Mueller who was working in the Botanical Gardens in Melbourne. He identified the insect damaged specimen as *Calicanthus australiense* and took the only specimen with him when he returned to Germany, where it was destroyed by bombing in World War Two. There had been extensive unsuccessful searches for this plant and when the floral material of the re-discovered tree was properly examined it proved to belong to a new family of primitive flowering plants and was renamed *Idiospermum*. This discovery, along with the number of primitive flowering plants that were then found in the Wet Tropics, changed the whole status of Australian rainforest. Far from being a recent invader from the North, it showed that Australian rainforests are ancient and contained relics of the old Gondwana early flora. This provided the scientific foundation on which the declaration of the Wet Tropics World Heritage area was based" end of quote.

The "re-discovered floral material" is a saga in itself: The original collection was deemed to be so unusual that it was not taken seriously in Berlin. Many years after World War Two, a Nth Qld veterinarian named Doug Clague was investigating cattle deaths in the Daintree area. He determined that the deaths were a result of the cattle eating the poisonous fruit of a single tree. He sent plant material from the suspect tree to the Queensland Herbarium, where the Government Botanist, Sel Everist made the connection – it was the botanical find of the century. In the meantime the offending tree had been cut down and burnt and all fruit had been disposed of in a pit toilet. The Find became the Tragedy of the century and whether the intrepid vet recovered the fruit and seed is not reported but other trees were eventually found and so the story continues...

We members of Cairns Branch SGAP have a closer affinity to *Idiospermum* : Stuart Worboys, a botanist and one of our valued members, collected what is now the Type Specimen of *Idiospermum australiense* from the south bank of Harvey Creek and it is kept in the Queensland Herbarium with Stuart's name recorded as the Collector.

Photos by Robin Smith

Angiopteris evecta

Crepidomanes saxifragioides

Antrophyum reticulatum

Selaginella longipinna

Diplazium dietrichianum

Crepidomanes barnardianum

Crepidomanes bipuncatum sporangia

Phaleria clerodendron

Hoya australis

New leaves on Idiospermum australiense

Tabenaemontana pandacaqui

Bronwyn, Don, Mary, Pauline

Barringtonia calyptrata

Plant of the Month

By Bob Jago

Family: PIPERACEAE

Piper mestonii F.M. Bailey

Common Name: Meston's Pepper; Long Pepper; Queensland Long Pepper
Entomology: The species epithet is in honour of Archibald Meston co-collector with F.M. Bailey of the type specimen from Harvey Creek.

Piper mestonii is a dioecious vine (separate male & female plants) with adventitious roots; leaves simple, 90-280 mm. long by 40-200 mm. wide, lamina glabrous except for minute hairs towards the base on the under surface that are visible with the aid of a hand lens; inflorescence an axillary or leaf opposed spike; flowers, individual flowers minute with one flora bract, petals and sepals absent, greenish cream or yellow; fruit, a multiple fruit, red, erect, fleshy, spike-like 30-70 mm. long and 15-18 mm. wide; seeds numerous.

Distribution: Rainforests between Harvey Creek and Innisfail from near sea level to 350 metres altitude on soils derived from meta-sediments, granites and basalts. Also found in New Guinea. Common along rainforest creeks in the foothills of Mt. Bellenden Ker and Mt. Bartle Frere.

Notes: A very attractive rainforest vine with attractive fruit suitable for cultivation in local gardens, easily grown from cuttings, rooting at the nodes; needs protection from sun when young but hardy once established. Listed as Near Threatened in the Schedules of the *Nature Conservation (Wildlife) Regulation 2006.* Illustrated upside down by the famous wildflower artist Ellis Rowan No. 115 Queensland Museum collection. A similar work (plate 12) in F.M. Bailey, *Comprehensive Catalogue of Queensland Plants,* (1913) is also illustrated upside down.

References: Cooper, W. & W.T; *Fruits of the Tropical Rainforest;* 398; (2004).
Spokes, T.M.; Piper; *Flora of Australia 2;* 236 (2007).

Meet the Locals

Eupomatiaceae comprises 3 species in one genus, *Eupomatia*, all of which occur in Australia.

All three species are hermaphroditic.

Eupomatiaceae is regarded as a primitive family (closely related to Annonaceae and Magnoliaceae); that is a family exhibiting primitive characteristics. The most obvious primitive characteristic of the family is the lack of petals and sepals. The flowers of the Eupomatiaceae comprise spirally arranged, petal like stamens and staminodes (sterile stamens).

Another primitive characteristic is the method of pollination. The Eupomatiaceae is pollinated by beetles.

Excerpt from "*Flecker Botanic Gardens, Australian Gondwanan Heritage, Interpreting the Evolution of Australia's Wet Tropics Flora*".

"Like animals, plants need to avoid in-breeding (or self-fertilization). Some plants go to great lengths to prevent self-pollination. *Eupomatia laurina* achieves this by changing the sex of all of its flowers simultaneously during the day. Flowers are the reproductive part of the plant. All flowers opening on a particular day, do so in time with each other, commencing early in the morning with all of the flower covers falling off within an hour. Over the next hour and a half the flowers open fully, exposing the female flower parts (gynoecium), commencing the female phase of flowering. The staminodes produce a fruity/musky floral fragrance attractive to the pollinating beetles (*Elleschodes* sp.), which start arriving at this time to feed on, mate and lay eggs in, the inner staminodes. Some of the pollen attached to the beetles from the previous day's feeding is deposited on the female part of the flower, initiating pollination.

The flowers commence closing at about 7am, the inner staminodes completely hiding the female organs by the middle of the day, ending the female phase. The beetles continue feeding throughout the day, and though the flower is closing, are free to come and go as they wish. They tend, however, not to leave, leading some scientists to believe that the closed flower offers them some protection against predators.

By late afternoon the flower appears fully closed again, however the pollen bearing anthers are exposed to their maximum and they open, initiating the male phase of flowering. Much of the pollen is deposited on the feeding beetles. During the night, the stamens and staminodes (androecium) are shed as one unit and fall to the ground with the beetle eggs attached. The eggs hatch two days later and the larvae feed on the remains of the fallen androecium. The larvae pupate in the soil and emerge as adults about two weeks later. The remaining pollen of the fallen androecium can still pollinate flowers that are in the female phase. The female flower parts are again exposed but are no longer receptive.

The next flush of flowering does not take place for a further 24 hours, preventing

self-pollination by the fallen stamens."

The genus name is derived from the Greek eu=well and poma=cover as the flowers have a cover over them when they emerge.

The Eupomatiaceae of Mt Whitfield: Two species of Eupomatiaceae occur on Mt. Whitfield; they occur in a single genus *Eupomatia*.

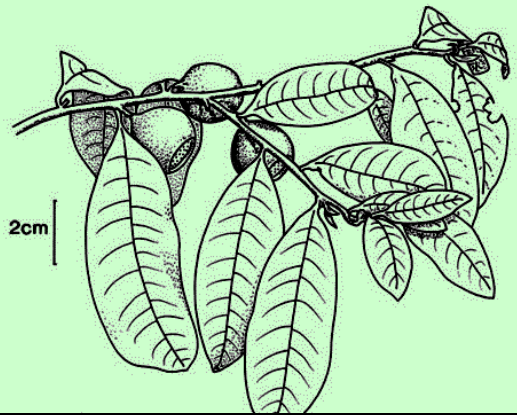
Eupomatia laurina, Copper Laurel, Native Guava or Bolwarra is a shrub or bushy tree to 10m tall. It occurs from PNG to eastern Victoria in rainforest and moist open forests.

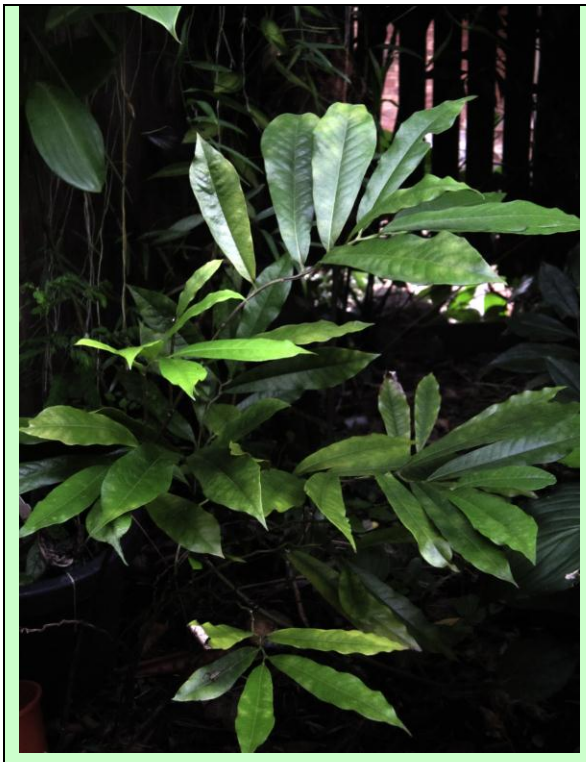
Leaves are simple, entire, and alternate with petioles and no stipules. The stems are round.

The flowers are cream to white, to 25mm in diameter, unpleasantly perfumed, consisting of many, spirally arranged, petal like stamens and staminodes. They occur in the leaf axils.

The urn-shaped edible yellow-green fruit are 15-20mm in diameter and have sweet tasting flesh and spicy tasting seeds (I find the seeds inedible).

Traditionally the bark was used for string and fishing lines and the fruit were eaten.





Eupomatia babarta, Northern Small Bolwarra is a shrub to 1m in height, often flowering at less than 30cm in height. It occurs from the Annan River to the Tully River in Northern Qld, in mesophyll and notophyll vine forest.

Leaves are simple, entire, alternate with petioles and no stipules. The stems are two ridged.

The flowers are white, consisting of many, spirally arranged, petal like stamens and staminodes. They occur singly at the ends of the branches.