

**ASSOCIATION OF SOCIETIES FOR GROWING
AUSTRALIAN PLANTS**

HIBISCUS AND RELATED GENERA STUDY GROUP

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The top image on the cover is *Abelmoschus moschatus* subsp. *tuberosus* Borss. Waalk.
The image was taken and seed collected at John Valenta's Tolga Property on the
Atherton Tablelands

The bottom image is a large pink bloomed form of *Hibiscus meraukensis* from site 25(a)
to the west of Charters Towers

Yet another financial year is approaching its end and time has arrived to get busy with
our third newsletter for 2008/2009.

The colour printing we have been doing eats into our finances, so I have to cut down a bit
for this issue.

Colleen and Geoff Keena's article in Newsletter No 16 was very well received, with lots
of good comments relayed back to the editor. For this issue we once again have an article
from the Keenas, this time on *Thespesia populnea* in south east Queensland.

I knew this species from living in Madang, Papua New Guinea. We had a week-end
shack on Rempi Lagoon along the coast to the west of Madang, where several *Thespesia
populnea* gave us welcome shade on the edge of the beach and an abundance of yellow
flowers. Though it occurs on some of the islands in Moreton Bay, I haven't yet managed
to find it along the coast-line, having made a search at Hervey Bay amongst the
mangroves and *Hibiscus tiliaceus*.

Keith Townsend in his book "Across The Top" mentions *Thespesia thespesioides* as a
small erect shrub 1-2 meters high with bright yellow flowers and a maroon-purple centre.
Being a compulsive collector of Malvaceae, I have now added this to my wants list. The
Queensland Herbarium list it as occurring in the Burke Pastoral District and you can rest
assured that I will be making a thorough search if and when I get up to Burktown in the
Gulf.

One Study Group member thought that the overall content of our Newsletter was getting
too technical, so we will make sure in future to strike a better balance. I can see the need
for some basic garden write-ups and would appreciate any contributions along these
lines.

Rosemary Opala who wrote many articles on native plants as well as botanical
illustrations, unfortunately passed on last year. She would no doubt have been very
pleased to know of the progress that our Study Group has made in a few short years. Her
article "Invisible Flowers" is printed in this Newsletter. I would like to mention that all
the localities on the Sunshine Coast where she recorded Hibiscus have been subsequently
found and plants brought into cultivation. Today is the first day of winter and the
Hibiscus heterophyllus from Kenilworth are producing white, cream and yellow flowers.
Not far behind is a large rounded bush of *Hibiscus splendens* from Mt. Tinbeerwah, (see
article) literally covered with hundreds of buds.

I seem to have been working on Hibiscus continually for months and months due to "The Survey and Seed Collection of Hibiscus and Related Genera Field Trip" to north Queensland. This was funded by a grant from the 'Geoff Simmons Bequest'.

The subsequent report required by SGAP runs into about 50 pages, so I can't include all of it in this Newsletter. **As Study Group Members have first choice of the seed collected, a full list being attached herewith.** Should you require seed please send 2 loose 55 cent postage stamps with your request.

During the field trip it was great to catch up with Walter and Judy Willcox at Bowen as well as Bernard Crowe at Innisfail. Walter guided us around the district and whilst accommodating us invited Hibiscus enthusiasts to drop in for a chat.

We were looked after exceedingly well by Garry and Nida Sankowsky at Tolga and Peter and Ann Radke of Yaruga Nursery P/L on the Atherton Tablelands. They are walking encyclopedias when it comes to native plants from the Gulf.

Beverly O'Keefe at Springsure was most helpful, also Peter and Sue Hermann at Taylors Beach.

It is that time of year when subscription money would be appreciated to cover the costs of producing the newsletter.

We have some excellent articles on stand-by including one of much interest from our Tasmanian member, Phil Watson. Who would have thought that an article could be written on Malvaceae native to Tasmania? Watch this space! Newsletter No 18 will be produced in the coming spring.

With best wishes to all members,

.....*Geoff*.....

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For readers interested in more information on *Thesoesis populnea*, an excellent reference can be found at <http://www.hibiscus.org/species/tpopulnea.php>



The bloom image of *Thesoesia thespesiodes* (opposite) can be found at www.chah.gov.au/cgi-bin/stockphoto?herb_code=

The seed capsule image of *Thesoesia thespesiodes* can be found at plantbroome.com.au. *Thesoesia thespesiodes*

Thespesia populnea in South-East Queensland
Colleen and Geoff Keena

Some years ago, we obtained seed of a plant that I recognised from the painting by Sydney Parkinson in Banks' Florilegium (P1: plate 591 Society Islands). It was then called "*Thespesia populnea*".

The plant had the heart-shaped leaves shown in the painting. As I had grown it from seed, it took some time to flower but when it did, it had the lemon flowers and seed capsules of the painting. The painting did not however illustrate the way the flowers changed colour on the second day, turning first to a light pink then to a deep pink. (Fig. 1)

We planted this plant in the lowest section of our garden in the Brisbane Valley. The flood records we consulted before purchasing here nine years ago, showed this part could be flooded in a 1 in 100 years flood. It has already survived two complete inundations.

While it performs well with moisture, to our amazement, it also copes with drought. It has never been watered even in the worst of the drought conditions here, although the rainfall had not been so low in this area for over 100 years.

While flourishing in flood and drought, the same cannot be said of frost. When our winter temperature went to -6 C while the *Thespesia* was still small, we had a plant with all its foliage burnt by frost and we thought we had lost it. However, it made a complete recovery.

We did not want to have it regularly damaged by frosts, so we used anti-transpirants for the next winter and also planted 'nurse' plants, two *Acacia fimbriata* and two *Alphitonia* sp. alongside it. These fast growing plants now provide the *Thespesia* with good protection from frosts.

I had been unsure of how *Thespesia* would cope with our conditions as I had only seen references to it as a tropical plant. When the first book of 'Mangroves To Mountains' became available in 2002 (W1), I was delighted to find that one of my favourite Malvaceae was described as an "uncommon small tree to 4 m on islands in Moreton Bay". I had not previously seen a reference to it growing in a sub-tropical climate.

This plant can be propagated by seed or by cuttings. Last season, we found three seedlings growing underneath the tree. All were potted up to be given away. However, care needs to be taken when considering whether or not to grow *Thespesia* species as *T. populnea* is listed as an invasive plant in Florida, U.S.A. (W2).

The flowers occur in late summer and autumn, giving colour through the hottest weather. It makes an attractive plant when grown in a pot but our plants in pots have not flowered. This is definitely one plant that I would always grow, providing I could be sure it would not become invasive and that it could be provided with protection from frost in frost-prone areas.



Fig 1 i



Fig 1 ii



Fig 1 iii



Fig 1 iv

REFERENCES:

P1: Adams, B. The Flowering of The Pacific. Being an account of Joseph Banks' travels in the South Seas and the story of his Florilegium. Collins British Museum (Natural History), Sydney, 1986

W1: <http://mangrovestomountains.com/>

W2: <http://www.invasive.org/species/subject.cfm?sub=6525>

Invisible Flowers



By Rosemary Opala

“It would seem that very few of our Native Hibiscus are being grown in a garden situation and probably this is because of the tremendous range of colour, size and form developed in exotic plants



Pavonia hastata



H. insularis



H. geranioides



H. heterophyllus 'Kenilworth'



H. radiatus 'Burgundy'

Sometime ago I was invited to “give a talk” at a local Hibiscus Club meeting. While Guest Speakership was never my thing, here was surely the ideal opportunity to promote one of my botanical favourites: the rather unappreciated Native Hibiscus. It baffles me that so many dedicated gardeners – even bush walkers – seem unaware of the many delightful forms of the Malvaceae tribe tucked away – or even highly visible around S.E. Qld.

Unfortunately most local wild species close up their petals by mid-afternoon. Many types (wastefully, I always think) discard their spent flowers daily as neatly rolled balls, and start all over next morning. In the absence of blooms for my afternoon Show and Tell, I painstakingly gathered and pressed an interesting range of leaf forms, and added live stems, including (from my small yard) a sample of the winter-flowering Philip Is. Hibiscus (*H. insularis*). While technically not a local, this hardy species (endangered on its native island, where only a few plants exist) has the advantage of retaining its attractive flowers for up to three days, and with a colour change from cream to pink in the process. I also took along sundry paintings, amateur “in the field” snaps, and – as back up – a couple of Keith William’s and Kathleen McArthur’s invaluable books. All of which modest collection was quite outclassed by the other tables chock-a-block with gorgeous exotics, flaunting every colour but blue! Proud growers

had even pinned prized blooms *en masse* to the end wall.

My low-key presentation was politely received by an audience who – I suspect – were mostly waiting for the meeting’s main topic: on grafting exotics. But I did get a nice afternoon tea, and one convert: a member who asked if she could have the Philip Is. cutting to try to strike. I wished her luck, never having managed this process myself.

And all of which started a train of thought, a fantasy involving ownership of a largish piece of land somewhere, and on this might be grown as many species of Australian Native Hibiscus as possible. We’d begin with (perhaps in the middle?) the largest family member the Cotton Tree (*H. tiliaceus*); with, out on the periphery, such small, slow-growers as the dainty Geranium Hibiscus (WA’s *H. geranioides*).

Not being a botanical purist (to the disapproval of more dedicated friends) I’d also include in their own corner, two African native species whose company I’ve enjoyed for many years. One is *H. calyphylla*, a smallish, sprawling shrub noteworthy for its lemon yellow, dark-eyed blooms - almost look-alikes for Cotton Tree flower. (To the horror of a neighbour, who thought I’d planted one of those big beach trees in my miniscule garden). The other emigrant is, it seems, of some botanical interest. Some of you may have noticed *H. acetosella* in a garden or occasionally growing as an escapee in a damp area. It’s readily

identified by long, reddish canes, dark purplish leaves and pretty pink flowers. (And no, it's not the Jam Rosella; an upright shrub with yellow blooms).

It seemed so common that I was apologetic about asking Qld. Herbarium to identify it, after finding some specimens in a drain on Coochiemudlo Island. But to my surprise – it's certainly not endangered! The Herbarium said they'd had no record of it growing in the wild in S.E. Qld. Though my plants produce seedlings quite freely, I'd say its preference for moist areas, plus seasonal dieback, would make it an unlikely environmental threat.

AND, while on the subject of *H. acetosella*, one only of my umpteen self-sown seedlings had atypical "dirty green" foliage and delightful yellow/apricot flowers. It's long gone and I'd be delighted to get a replacement!

Having set up our "virtual" Malvaceae refuge, we'll start with the most visible and surely best known of the family. Or, is it? A surprising number of admirers of 'those trees with the big yellow flowers' along beach, roadside or in parkland have no idea that Cotton Tree is even a hibiscus, and a member of 40 or so species native to Australia.

H. tiliaceus is found from across N.T. and down the Qld. coast into northern NSW. Salt tolerant, it flourishes back of sandy beaches and among mangroves from just above high water mark. In times gone by, Aborigines had many uses for Cotton Tree: outer bark for nets and fishing line cord, inner bark a remedy for boils and headaches: buds and shoots for food. Unaware of History, kids of my formative years made a vertical playground of that old timer for which Maroochy's popular picnic area is named. This geriatric tree isn't in bad shape today, considering the generations of juvenile bodies that abused its tolerant branches. An added visual attraction of the species is the "yesterday and today" effect in the flowering period, with a carpet of spent, orange-tan blooms



H. heterophyllus

beneath the new day's yellow canopy.

NB: An adult beachgoer once asked me – with genuine interest – "How do they get the cotton down from those big trees?"

And while we're on the subject, occasionally a lucky tidal-edge explorer may spot a Stranger on the Shore among the Cotton Trees. This is *Thespesia populnea* (Indian tulip), a pantropical hibiscus relative sometimes co-existing with the far less exciting *H. tiliaceus*. Rare specimens have been reported from as far south as Macleay I. (Moreton Bay). Once found, the plant is readily distinguished by a smoother leaf than Cotton Tree, and in season has beautifully textured, large yellow flowers; often with a rich pink flush. These are followed by dangling green seedpods that look a bit like small, unripe tomatoes.

(I must mention, with all modesty, that it was your writer who found Coochiemudlo Island's presumably lone specimen – but only because the unusual flowers caught my eye. I'd passed it, unknowing, for years.) So keep your eyes peeled, when in out of the way "twixt land and sea" zones. And perhaps we can try a specimen in our Hypothetical Park? A friend, ex-resident of South Africa, tells me a closely related species did well in cultivation. Its popular name was Snot Apple – for the gelatinous content of immature fruits!!

Well, back to dry land. First there's a poorly drained patch in our Park that would suit another of the "pretty but prickly" local natives. This is Swamp Hibiscus (*H. diversifolius*), sometimes overlooked because of sprawling growth and modest height (less than 2 m). Apart from swamp edges, you might see the pale lemon, dark-eyed blooms along open roadside drains or cane field edges, even on the border of salt marshes. And it does very well in a damp garden situation, though is admittedly not for the Tidy Landscaper. Perhaps better left in its natural habitat round some Melaleuca wetland, where the massed flowers show to best effect.

Most popular native hibiscus has to be the Hollyhock Tree (*H. splendens*), well summed up by admirer Keith Williams as 'a large shrub or small tree of great beauty'. The big, delicate rose pink blooms are nicely enhanced by velvety foliage of silver grey.

They certainly contribute to *Splendens*' popularity as a garden plant, though (as with related Bush Hibiscus) the prickly stems can be off-putting. I saw my first *H. splendens* decades back, on Mt. Tinbeerwah slopes and along

Boreen Point roadsides; and found room for it in a Brisbane garden. Typical of related species, it's fast growing, fast flowering habit tends to shorten a plant's life so, a good idea is to watch for the appearance of seedlings.

A common native hibiscus of east coastal regions is *H. heterophyllus* (Wild Rosella or Qld. Sorrel). While its distinctive, large white flowers are a feature of open forest, gully and country roadside, the species is often disregarded. As a Rambling Group participant, I often (and I know tediously) had to nag fellow members to see the beauty in a 5 m high tree in full Spring display beside the track.

No doubt my own fondness for Wild Rosella goes back to first schooldays, when I assumed there was only one plant called hibiscus. These flourished in the dense bush back of Palmwoods School paddock, and had at the time an undeserved reputation for breeding Scrub Ticks! While *Ixodes* were prevalent in the area, they were probably confused with the myriad tiny beetles that magically appear when Wild Rosella petals open.

Each short-lived bloom unfurls soon after sun-up, to reveal a dark throat and "whiter than white" petals backed with pink veins. By next morning the flowers have become peppermint-striped balls on the ground below, with the new day's crop opening above.

A less common yellow form of Wild Rosella can be found in the Sunshine Coast hinterland: gullies round Kenilworth being one habitat. Natural hybrids can occur between both types, producing hues from almost white to soft apricot in a cluster of plants. There was a similar, unplanned effect in our Caloundra back garden, where *H. heterophyllus* and *H. splendens* "got together", resulting in a Conversation Piece colony of assorted flower colour and leaf types. Which reminds me: my idea of sneakily introducing a Wild Rosella into the overgrown Communal Garden of my present residence caused some concern when the flourishing plant was mistaken for *marihuana*! Admittedly the leaves do have a somewhat similar look.

Also in our hypothetical Park we'll include with the larger species a Norfolk Island Hibiscus (*Lagunaria patersonii*). This hardy, salt-tolerant small tree is admired for its late Spring bounty of soft pink flowers: from a distance sometimes mistaken for camellias. Not so innocent, though! The plant has an antisocial trick of shedding fine, irritating spicules from dead seedpods. While not everyone

is affected, the reputation once gave Norfolk I. Hibiscus the alternative name of Cow Itch Tree!

Having established a few larger starter plants in our Park, we'll tuck some smaller Malvaceae representatives round the edges. Already mentioned is pretty *H. geranoides*, with its face-down, pink bells. It's a very slow grower, though quite unlike another small-flowered type, *Pavonia hastata*. This species seems to have no "friendly name", for all its interesting background. *Pavonia* is also found in South America and for many years was rather denigrated as being "introduced". However, record of its appearance in Queensland, as early as 1836 has made the pretty plant accepted as "one of us". I first came across it decades back, in a drain beside a disused dirt road, and took it for a garden-escapee *Cosmos*. But, no human habitation in the area, and a close up provided the unmistakable "hibiscus look". The 4-5cm, prolific flowers are whitish to pale pink, striped with darker veins on backs of the petals, and having an appealing dark "eye". After losing my own *Pavonia* in my last house move. I had difficulty in finding a replacement. Till - would you believe? - The day I spotted those familiar pink dots in a boggy new development at the end of my own street (Now drained and built over).

It has to be admitted that tough little *Pavonia hastata* is hardly an endangered species, but in the wild does mysteriously come and go. Its one drawback as a garden plant is perhaps over-enthusiastic seedling production, small price for even the Tidy Gardener, for a crop of summer through autumn flowers.

Perhaps not recommended for the home garden - though I admit to having grown it - is the Pink Burr, *Urena lobata*. A pest weed in parts of our State for its tenacious seed, Pink Burr does have



H. acetosella



Hibiscus Burgundy

an appealing, hibiscus-in-miniature flower. And is nicely painted in Kathleen McArthur's out of print *Queensland Wildflowers*.

Now, can someone track down a Mystery Hibiscus that I haven't grown - or even seen around - for a decade. Even the ever-helpful Queensland Herbarium seems stumped. This plant, recorded only as Burgundy hibiscus, is a sprawling annual noteworthy for its canes bearing gorgeous, dark crimson flowers. (See painting in Kathleen McArthur's *Looking at Australian Wildflowers*, and a photo in Vol.1 of Keith Williams's *Queensland Native Plants*. NB: The accompanying B. and W. illustration is from my own small painting of my first ever flower.)

So, imagine, back in the 1950's (I never saw it) the ground space of Kathleen McArthur's beloved *Midyim* taken over by a breathtaking display of Burgundy hibiscus in full flower. And then regret this dedicated lady's drastic action, on learning that the plant might possibly originate in India and thus negate her *Natives Only* policy, to banish it from her garden. And to remove its portrait from her Wildflower Room collection! Twenty years later, noting Keith Williams' report of collecting seed from specimens found in the wild in N.W. Qld, Kathleen reinstated her painting and gave the species a page in her book. And at the time of going to press in 1986, awaited "a final chapter

to its story and a substantive name of its very own". (By the way, don't confuse the plant with the introduced *H. acetosella* mentioned earlier in this article).

And before we go, some timely words from our indefatigable Keith Williams (*Vol.4, Queensland Native Plants*). "It would seem that very few of our Native Hibiscus are being grown in a garden situation and probably this is because of the tremendous range of colour, size and form developed in exotic plants One day we may see them (natives) as popular as exotics."



Lagunaria patersonii

SURVEY AND SEED COLLECTION OF HIBISCUS AND RELATED GENERA

**Geoff Harvey – Study Group Leader
Hibiscus and Related Genera.**

Introduction

The costs for this trip were mostly covered by the Geoff Simmons Bequest providing for the “Collection and Distribution of Seeds from Plants Native to Queensland”.

Seed was collected mainly from the Hibiscus genus and some genera where perceived attributes warranted collection. Other species within the various genera including Abutilon, Malvastrum, Sida, Urena, Lagunaria and some exotic introductions such as Abelmoschus manihot were noted and/or pressed as herbarium specimens.

Quite a few of the Queensland Hibiscus are under ‘botanical review’ eg the section Bombicella, therefore an expansive dialogue has been maintained with Study Group member, Lyn Craven of the ‘Australian National Herbarium, CSIRO, Division of Plant Industry, Canberra’. He has kindly reviewed most of what has been written in this report (see attachments) and changes have been made where necessary. He thinks that the genera Pavonia, Urena, Decashtia etc will be included under Hibiscus as the DNA analysis is too convincing. He also advises that the ‘Cotton Tree’, *Talipariti tiliaceum* should be *Hibiscus tiliaceum* as the genetic data shows that this group of species belongs in Hibiscus.

Not included in this report are the species *H. tozerensis*, *H. macilwraithensis* and *H. propulsator* that were transferred from Macrostelia to Hibiscus in 2004. They are grown by David Hockings and myself in south-east Queensland, where they fail to set seed. Specimens seen under cultivation on the Atherton Tablelands seemed to have immature seed capsules that could mature and produce viable seed. Should people wish to grow them, plants can be obtained from Fairhill Native Plant Nursery at Yandina and Yuruga Native Plant Nursery on the Atherton Tablelands.

Also not included here is *Hibiscus burtonii* previously collected by Study Group member, Dr. Dion Harrison near Windorah in Western Queensland. According to a contact (P. Hermann) who lived at Pentland, it can be found there on Brookdale Station. One look at the long grass convinced us that it probably couldn't be located this season. It grew well at Buderim (see Newsletter images and write-up) and seed is available from our Seed Bank. Dion also collected *Hibiscus solanifolius* (a real arid zone plant) on this trip, being a new record for Queensland. Seed germinated at Buderim, but plants failed to bloom.

A very large tree of *Lagunaria patersonius* was seen beside the Tooan Tooan Creek at Hervey Bay on 4/5/09 with last season's seed capsules empty of seed. Seed was collected

on Lord Howe Island by David Hockings during late April, 2009 and some of it will be added to our Seed Bank.

Forms of (Aibica) *Abelmoschus manihot* were seen in vegetable garden cultivation at Taylor's Beach and seed will be obtained later for members who may be interested. It is commonly grown by people of Pacific Islands/Torres Strait descent and Europeans who have lived in the Melanesian tropics. The Queensland Herbarium include 2 *Abelmoschus manihot* species in their listings as naturalized in Queensland. The coarse plant from the Cape as grown by Garry Sankowsky (see attachments) is possibly a variety of *Abelmoschus manihot* or perhaps *A. moschatus*.

A search was to be continued near Bowen for *Hibiscus elsworthii*, however Lyn Craven believes that it is a form of section Lilibiscus, *H. rosa-sinensis*, probably introduced by early settlers in the Edgecombe Bay vicinity where it was once recorded.

Recording of Information

A good supply of forms were printed and held in a stiff covered file for use at each collection site. In all 45 sites were recorded, some extending to sub-sites where warranted. (Where one species of Malvaceae is found there is invariably another one near-by). On each form the following was recorded – Botanical Name, Date, Location, Latitude, Longitude, Altitude, Photographic Record, Record of specimens to be pressed for identification and herbarium records, plus Plant Description, Estimated Population, Soil Type, Vegetation etc.

Collection envelopes supplied by the Regional SGAP contained similar information to the above, therefore the 'Site Number' was used on the envelope to save duplication.

As digital camera images are automatically numbered with dates included, it was reasonably simple to correlate the site details.

In practice it is best to simplify recording as much as practicable. It takes considerable time to collect seed and plant material, take photographs and record GPS details.

Source of Seed Supply

Most of the seed came from the road corridor (a haven for Hibiscus), where fencing excluded cattle. Unfenced roads are generally a waste of time as Malvaceae plants are on the whole, palatable to livestock. Usually, a colony of Malvaceae plants cease abruptly at a fence line containing livestock

The difficulty with roadside collecting is finding a safe place to park and avoiding vehicles that always seem to be in a hurry. Some interesting plants were not examined at all where parking was impossible.

Seed was also obtained from private properties. It is a good idea to have contacts arranged before the trip commences.

Itinerary/Accommodation

It is best to avoid having to be at a particular place on a given day. We kept in touch with contacts etc by using a satellite phone. Also it is highly recommended for emergencies such as breakdowns, accidents etc.(normal mobile phones are unreliable in remote localities). Plenty of spare batteries for cameras, GPS and phone should not be overlooked.

It is a good idea to check out accommodation in advance and confirm bookings if possible before arrival. Overnight stops in mining towns can cost double the normal rate. If you decide to drive on where accommodation is booked out or too expensive, valuable inspection sites will be missed.

We preferred to stay in Caravan Park Cabins, where all the end of the day sorting and recording could be done in reasonable comfort and good lighting.

Timing of Field Trip

As of the end of March and early April we had no problems with rainfall interruptions.

The main problem was excessive growth of grasses, which concealed small Hibiscus or prevented them from growing.

Protection from mosquitoes, ticks and grass seeds is important.

Seed of most species was ready to collect, whilst others tended to be immature or spent. For Hibiscus it is desirable to see the blooms for identification purposes and to be able to find them.

The very excessive wet season this year would prevent entry to the Cape York Peninsula and parts of the Gulf until July. We were unable to complete our northwards travel through the Porcupine Gorge Road due to inundation, but some important species were seen in the lower Hughenden section.

Planning and Organizing

A great deal of pre-trip planning took place to determine sites where Hibiscus had previously been collected. The Herbarium records were searched methodically and coordinates transferred to a double A4 sized map of Queensland. Australia's Virtual Herbarium was the best source with latitude and longitude references for each species being entered on the map grid. Once this had been done for most species of interest, it

was then possible to draw up a route to bring us into contact with the most likely locations. This seems to have worked very well for the part of Queensland that was covered. (In hind-site we may have traveled too far, though this is debatable) Experience will help identify the habitats where different species may occur.

Field trip equipment, from collecting gear to food, tools, spares etc etc, must be double checked to make sure all necessities and untold emergencies are covered. Extra fuel, water, gas cookers and the like may or may not come into use. It is best to be prepared on the safe side.

Number of Personnel

Two is the ideal number – one to look and navigate and one to drive. Having David Hockings on this trip added immensely to our success. I think that one person would need nearly double the time to achieve the same result.

Costs

People in the 'know' thought that 70 cents per kilometer is a reasonable estimate to cover fuel, wear and tear, servicing etc.

We covered 6385 km between 23/3/09 and 2/4/09 and the supplementary trip to Hervey Bay and Maleny was a further 561 km- a total of 6946 km in all.

The total cost of fuel was \$878-10 for the first leg and \$90-00 for the Hervey Bay section, a total of \$968-10. Additional vehicle costs including servicing amounted to \$360-00, a grand total of \$1328-00. This works out at 19.1 cents per km.

Accommodation for 11 nights @ \$80-46 average was \$885-50.

We stayed with friends for 5 nights'

Fuel + accommodation amounted to \$2213-06.

This leaves \$96-00 from the total grant of \$2280-00 to cover computer, printing ink and paper, camera, packaging of botanical specimens, visa card charges, etc. There is probably a short-fall of about \$100-00.

Please note that the second person increased accommodation costs by about \$10-00 per night ie \$110-00 overall.

Subsistence costs at about \$28-00 per day were paid for by ourselves and have not been costed against the grant.

The estimated distance for the field trip was 4,300 km, about 2,000 km short of the actual distance covered. Having to double-back due to road closure, investigating a reported sp. at Collinsville and the extra leg to Hervey Bay accounts for about 1530 km of the extra distance.

Summary

The seed has been properly dried and stored in paper envelopes.

When the list is made known to Study Group members (see attachments) the demand for the rarer species will be heavy

All pressed herbarium specimens have been mailed to Lyn Craven and feed-back will take place in due course. This may determine a few changes to the content of this report. Some of the specimens, such as Hibiscus species (Emerald S.L. Everist 2124) have not been formally named and there are others that should result in new names eg three possible varieties to be segregated from *Hibiscus forsteri*.

Propagating material for several varieties was brought home in an ice box and the strike rate looks like being about 90%, with roots showing at the bottom of the pots.

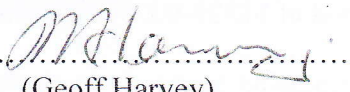
As collections were made from most of the best species that occur in this section of Queensland, the Field Trip in my opinion could be gauged as a success. Also records kept on this trip are as complete as possible thus allowing for any follow-up work in the future

Suggested follow-up

I would be quite keen to apply for an additional grant to investigate western Queensland and the Gulf. This would undoubtedly obtain several more species of Hibiscus, Gossypium, Abutilon etc and add to our knowledge of these plants.

If approved, a second person should come on such a trip with the provision of possibly collecting seed of other plant families.

The timing of the proposed trip would need to be no later than early to mid July before the effects of the dry monsoon take place to any great extent. Apart from the inevitable fires that will occur, plants deteriorate quickly as the dry season progresses.

Signed ... 

(Geoff Harvey)

Attachments :

- Day to Day Itinerary.
- List of Packet Seed Collected.
- Summary of Collection Records – Including Pressed Specimens
- List of Pressed Specimens for National Herbarium, Canberra
- Map of Field Trip
- Hibiscus, Which are Known to Occur in Queensland
- Map of Field Trip
- Hibiscus Species Found on Field Trip with Images and Comments.

LIST OF PACKET SEED COLLECTED

MARCH/APRIL FIELD TRIP – 2009

- Hibiscus divaricatus 4 kilometers from Childers Site 1 22/3/09
Unknown Malvaceae (pressed – no seed) Site 2 23/3/09
Hibiscus species unknown near Dawson River Site 3 24/3/09
Gossypium sturtianum nandewarensis Site 4 24/3/09
Hibiscus sturtii species mauve flowers. Site 5 24/3/09
Gossypium australe Springsure Lookout Site 6 24/3/09
Hibiscus meraukensis Springsure Lookout Site 7 24/3/09
Hibiscus sturtii species Arcturus Rd. Site 8 25/3/09
Hibiscus trionum var. vesicarius Edge of Cultivation Site 9 (a) (b)
Hibiscus unidentified. One plant only – pressed for later identification. Site 9
Gossypium australe Comet Road Site 10 25/3/09
Hibiscus divaricatus Between Comet and Blackwater Site 11 25/3/09
Hibiscus divaricatus Excellent specimens Site 12 (a) 25/3/09
Hibiscus unidentified, possibly H. sp. (Emerald S. L. Everist 2124). Site 12 (b)
Abutilon calyphyllum nth. of Blackwater Site 13(a) 25/3/09
Abutilon calyphyllum nth. of Blackwater Site 13 (b) 25/3/09
H. sturtii spp (2) nth. of Clermont Site 14 26/3/09
H. meraukensis Clermont/Charters Towers Rd. Site 15 26/3/09
H. sturtii sp. Small mauve flowers Site 16 26/3/09
Hibiscus unidentified. Possibly H. sp. (Emerald S.L. Everist 2124) Site 17 26/3/09
Hibiscus Furcaria section (Euri Creek Form) Sites 18(a) + 18(b) 27/3/2009
Hibiscus trionum var. vesicarius. Edges of cultivated land and fallow. Site 19 27/3/09
Hibiscus vitifolius Inkerman Lookout Site 20 (a) 28/3/2009? H.meraukensis site 20 (b)
Hibiscus meraukensis Large flowers. Yellow buds. Site 21 27/3/09
H. meraukensis Large flowers. Site 22 28/3/09
Hibiscus trionum var vesicarius Yellow petal spot Site 23 29/3/09
Hibiscus pentaphyllus Porcupine Gorge Road Site 24 (a)
Hibiscus panduriformis nth. of Charters Towers Site 24 (b) 30/3/09
Hibiscus meraukensis nth of Charters Towers Site 25 (a) 30/3/09
Hibiscus meraukensis nth of Lynd Site 25 (b) 30/3/09
Hibiscus meraukensis Good pink bloom Site 25 (c) 30/3/09
Hibiscus panduriformis Ch. Towers/Lynd Rd. Site 26 30/3/09
Thespesia sp. variegated form Willcox Property, Bowen No site no. 2/4/09
Abelmoschus moschatus tuberosus Atherton Tablelands Site 27 31/3/09
Hibiscus forsteri Off Woodstock Rd. Site 28 3/4/09
Abelmoschus moschatus tuberosus John Valenta Property, Tolga No site no. 1/4/09
Hibiscus forsterii From s/w of Townsville grown at Tolga by Garry Sankowsky 31/3/09
Abelmoschus “Giant Form” from Iron Range Rd. grown at Tolga G. Sankowsky 31/3/09
Hibiscus divaricatus ‘form’ from Rocky River, Silver Plains grown at Tolga “ 31/3/09
Gossypium australe On highway sth. of Palmer River No site no.1/4/09

- Hibiscus sabdariffa Unusual form possibly a hybrid grown at Hermann's property at Taylors Beach No site no. 2/4/2009
- Talipariti tiliaceum 'Cotton Tree' Kurrimine Beach No site no 3/4/2009
- Hibiscus heterophyllus 'yellow form' Mt. Charlton Rd. Calen Site 29. 4/4/2009
- Hibiscus heterophyllus 'yellow form' 5 km north of Camilla Site 30. 5/4/09
- Hibiscus heterophyllus 'yellow form' Bruce Hw. 4 km north of Camilla Site 31. 5/4/09
- Hibiscus section Furcaria hybrids 8 km from Marlborough Site 32 5/4/09
- Hibiscus divaricatus Old Marlborough/Sarina Rd. Site 33 5/4/09
- Hibiscus section Furcaria hybrid Nickel Rd. Glen Geddes Site 34 5/4/09
- Hibiscus splendens Atkinson Rd. Glen Geddes Site 35 5/4/09
- Hibiscus splendens hybrids Atkinson Rd. Glen Geddes Site 36 5/4/09
- Hibiscus section Furcaria hybrids Atkinson Rd. Glen Geddes Site 37 5/4/09
- Hibiscus divaricatus 'orange form' Rockhampton/Mt. Morgan Rd. Site 38 6/4/09
- Hibiscus divaricatus 'giant form' Biloela/Gladstone Rd. Site 39 6/4/09
- Hibiscus divaricatus Biloela/Gladstone Rd. Site 40 6/4/09
- Talipariti tiliaceum 'Cotton Tree' Merv. Lingard Rd. Site 41
- Hibiscus splendens River Heads, Hervey Bay Site 42
- H. heterophyllus Tooan Tooan Creek, Hervey Bay Site 43
- H. normanii Hocking's Property at Maleny Site 45
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OTHER PACKETS OF QUEENSLAND SEED COLLECTED PRIOR TO THIS FIELD TRIP

- Abelmoschus ficulneus nth of Hughenden near turnoff to Basalt Range Rd.
- Hibiscus burtonii Collected by Dr. Dion Harrison and grown at Buderim
- Hibiscus divaricatus ex Fairhill Nursery from Biggenden origin.
- Hibiscus sp. 'Barambah Creek' cultivated plant at Buderim 2009
- Hibiscus heterophyllus 'yellow form' from Mackay
- Hibiscus trionum var. vesicarius from Buderim Cricket Grounds
- Hibiscus normanii ex Hockings where cultivated plants grow well at Maleny.
- Hibiscus radiatus – 2 distinct forms. One came from the SGAP Seed Bank under the name of Hibiscus zonatus. The other is a cultivated form commonly grown in coastal Queensland.
- Abelmoschus esculentus. Known as Okra or 'Ladys Fingers' this species is often grown by people of Asian and Indian descent.
- Hibiscus divaricatus. This seed came from a site on the Gayndah/Munduberra road that follows the River. On our Field Trip no living plants were found at this site.
- Hibiscus heterophyllus form 'Rosie' X self. This is a natural hybrid or form believed to have originated from near Yepoon.
- Abelmoschus moschatus tuberosus A white form collected by David Hockings from near the tip of Cape York Peninsuls.

Abelmoschus moschatus. This is the upright form grown by many SGAP members. It comes from south/east Asia and possibly reaches northern Australia. Sold in recent years by a well known seed company.

NB – other seed packets contain duplicates of varieties mentioned above.

RECORD OF MALVACEAE SEED COLLECTED IN WESTERN QLD. FROM 10/4/2002 TO 4/5/2002

- Abutilon sp. with large yellow flowers to 1.7 m ref. 248015 (Q155)
- Gossypium australe West of Boulia ref. 247955 (Q154)
- Gossypium sp probably bickii ref. 247052 (Q153)
- Abutilon sp. with large yellow flowers. Ref. 247887 (Q152)
- Gossypium australe Near Herbert Downs Turn off ref. 247868 (Q151)
- Sida platycalyx Adavale ref. 246946 (Q150)
- Gossypium cultivated cotton Chinchilla ref. 246157 (Q1)
- Sida platycalyx Adavale ref. 246962 (Q2)
- Abutilon 2 species. West of Adavale Ref. 246962 (Q3)
- Abutilon species Adavale Rd. Ref. (Q4)
- Sida platycalyx Adavale Rd. Ref 247015 (Q5)
- Gossypium species 2 km from Windora Ref. 247193 (Q6)
- Sida species sub shrub North of Windora Ref. 247203 (Q7)
- Sida to 1 m. North of Windora Ref. 247204 (Q8)
- Gossypium sp. Ref. 247327 and 247531 (Q9 a and b)
- Sida sp. Quite showy 75 km north of Bedourie Ref 247613 (Q10)
- Gossypium sp. probably bickii Ref 247997 (Q11)
- Abutilon many large yellow flowers Ref 248027 (Q12)
- Gossypium sp. .5m and smaller Donohue Highway Ref. 247876 (Q13)
- Sida small species Ref. 247968 (Q14)
- Gossypium species probably bickii 247991 (Q15a)
- Gossypium australe Ref. 248016 (Q15b)
- Gossypium australe Between Cloncurry and Mt. Isa Ref. 253528
- Hibiscus sturtii Approaching Mackinley Drought stricken Ref. 253661
- Abutilon sp. Elrose Station Fullarton River Fef. 253696
- Malvaceae species Fullarton River Drought stricken Ref. 253727
- Gossypium cultivated cotton. Isolated from commercial plantings. 10 km from Winton Ref. 254046
- Gossypium australe 40 km from Longreach Ref. 254180.