

November 2011

General Meeting

8.00pm Wednesday
9th November

Community Centre,
Annandale Shopping
Centre

Committee Meeting

7.30pm Monday
30th January 2012

2 Hoya Court
Annandale

Dates to Remember

20th November -
Fairfield Waters,
riverside precinct.
Meet at the 'chimney' off
Stuart Drive/Kokoda St.
at 9am.

Christmas Social
4th December, 2 Hoya
Court, Annandale
RSVP 20th November

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Abelmoschus moschatus
subsp. *tuberosus*

The Native Gardener

Newsletter of the
**Society for Growing Australian
Plants**
Townsville Branch Inc.

PO Box 363, Aitkenvale, Qld. 4814.
sgaptownsville.org.au

| | | | |
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| Committee | | | |

Wednesday 9th November 8pm

John Elliott

will present

The Best of 2011

photos from our many activities this year

plus

Keith's 'tech-spot' on 'Hairs?'

Lagunaria queenslandica

Norfolk Island Hibiscus/Pyramid Tree/Sugarplum Tree/Cowitch Tree

MALVACEAE

A tree to 20m, often with elongated and arching branches. Leaves are simple with both sides clothed in silvery and gold stellate hairs. The inflorescence is a solitary flower, to about 40mm diameter. Fruit a dry, woody capsule, containing several red seeds, which can irritate as "Cowitch". It ranges from Townsville to Aramac in Central Qld., altitude 2-600m.

The original Norfolk Island Hibiscus was named *Hibiscus patersonia* and published by Henry Andrews in London in 1803, having been collected on Norfolk Island by William Paterson, the then Governor. In 1804 it became *Lagunaea patersonia*, and then officially *Lagunaria patersonii* in 1831: the genus in honour of Andreas de Laguna 1499-1560, a Spanish doctor who wrote botanical commentaries.

In that guise it happily reposed as a single species of a single genus, until 2006 when the mainland variety was described as *Lagunaria queenslandica*, owing to a difference in extra-floral nectaries.



Perhaps the long gestation for the naming of this species is explained by the fact that the tree is a relatively uncommon sight in some of our seasonally dry creeks. It can easily be overlooked until it undergoes a major flowering event, when one of its common names, Sugarplum Tree, becomes immediately apparent. The tree is festooned with flowers ranging from bright pink to pale cream as they fade, and the long drooping branches only highlight the brilliant effect.

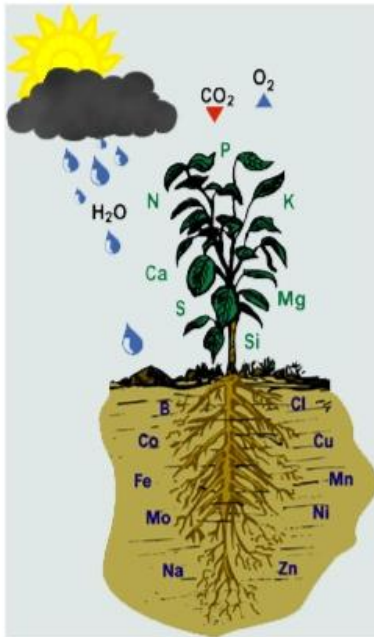
Janice, Keith and I were luck to witness this event on the heights just beyond Mingela at the property of Bill Norton and Margaret Calvert, fellow members of SGAP. They have perhaps 10 trees in the nearby creek, and in the six years that they have lived there this is the first time the trees have flowered so prolifically. It is a most unusual sight to see such luxurious flowers in an essentially arid environment.

Keith has also seen the tree at Oak Valley, I have located one just off the Bruce Highway close to the Billabong Sanctuary and there is one at the entrance to the Bush Gardens. Any reports of other trees would be welcome.

Keith's Tech Spot

Plant Structure and Function - Stem Systems

- The main function of stems is to provide a framework to support the plant in its natural form. This may be anything from a very large forest tree to a small groundhugging herb. The stem has to take the leaves to where they can get sufficient light and air – and in turn to carry the flowers and fruit in the chosen position.



The other prime function is to transport water and nutrients from the roots to the rest of the plant and also transport manufactured food from the leaves throughout the plant.



WATER AND NUTRIENTS MOVE UP WHILE SUGARS MOVE DOWN TO THE ROOTS.

- A number of other functions may be carried out by specialised types of stem –



Some stems are storage organs for water and nutrients – eg. Prickly Pear and the Bottle Tree.

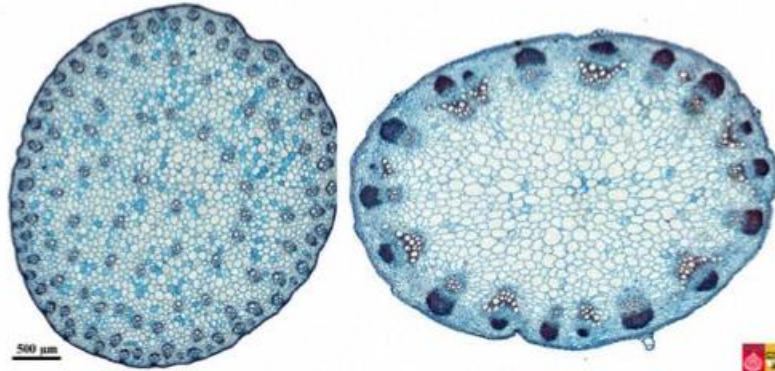
Others are modified to reduce transpiration – eg. She-oaks and Acacias. She-oaks have all but the tip of the leaf fused to the stem, and most Acacias have modified petioles in lieu of leaves, and there is therefore very little loss of moisture through transpiration.



Some stems are developed underground, and are usually capable of storage and reproduction. The rhizomes of Bamboo, Ginger and some Ferns are examples of this.



- The structure of a stem is different to that we saw for a root. Vascular tissue is usually grouped in bundles concentrated toward the outside of the stem. This allows the young stem to be flexible and also allows the formation of strong structural heartwood in the centre, as the plant ages .



A monocot stem showing bundles of vascular tissue spread throughout the stem, but concentrated around the outer edge.

A dicot stem showing the bundles of vascular tissue situated close to the surface. The phloem cells, which conduct nutrients from the leaves back down to the roots, are the dark spots on the outside of the bundle and are usually situated in the bark of trees. It is this structure which allowed the large scale clearing of Eucalypt woodland throughout Australia by ringbarking.

The Role of Xylem

Water and nutrients absorbed through root hairs are carried by the Xylem and distributed throughout the rest of the plant. This is achieved by a process similar to an hydraulic pressure system, ie. An equalisation of pressure throughout the system.

Heating of the leaf, and wind evaporation, reduces the pressure within the leaf – hence wilting occurs – and the hydraulic pressure moves more water to the area to restore normal conditions.

Evaporation is controlled by special cells controlling the stomata (the breathing pores on the leaf) (more on this in a later spot).

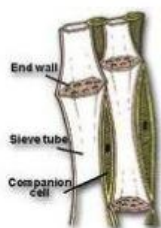


Xylem is usually composed of thick walled cells, which will not collapse under changes of pressure – but a notable exception is the King Fern, *Angiopteris evecta*, which if not watered will collapse to the ground. Subsequent watering within a reasonable time, will see the fronds resume their robust form and stand aloft in their full glory.



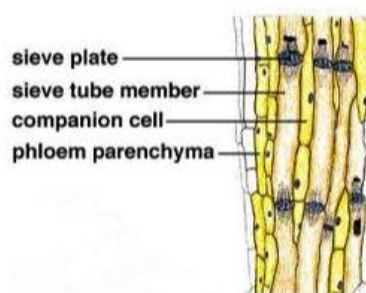
The Role of Phloem

Phloem cells are specially adapted to move nutrients, manufactured by photosynthesis; from the leaves down to other parts of the plant, including the roots.



They are thin-walled cells, and have pores in the ends. In this case the movement is achieved by an osmotic pressure gradient.

Phloem cells are usually short-lived, and are replaced regularly by new cells.



Thinking about Xmas presents

Why not give yourself or a friend a book for Xmas? Financial members of SGAP can buy our books at concessional prices - this makes them very worthwhile presents!

ACROSS THE TOP - to SGAP members - \$20 plus postage if necessary \$10.

FIELD GUIDE - to members - \$16 plus postage if necessary \$7.

Contact Keith - noeltownsend@bigpond.com or phone 4755 2098.



Christmas Social

2 Hoya Court on Sunday 4th December

*All members of Townsville SGAP invited
Please bring your own drinks and
contribution for dessert
RSVP 20th November*



In flower for October 2011

| | |
|--------------|---|
| Acanthaceae | <i>Graptophyllum excelsum</i> |
| Apocynaceae | <i>Alstonia actinophylla</i> |
| Bignoniaceae | <i>Tecomanthe hillii</i> <i>Tecomanthe 'Roaring Meg Creek'</i> |
| Fabaceae | <i>Abarema sp.</i> <i>Indigofera praetensis</i> <i>Lysiphyllum hookerii</i> <i>Swainsona formosa</i> |
| Meliaceae | <i>Turrea pubescens</i> |
| Myrtaceae | <i>Leptospermum 'Lemon Frost'</i> <i>Melaleuca minutifolia</i> <i>Melaleuca pachyphyllus viridis</i> <i>Melaleuca tamarascina (pink form)</i> <i>Melaleuca thymifolia 'White Lace'</i> <i>Syzygium australe</i> <i>Syzygium 'Pink Cascade'</i> <i>Xanthostemon verticillatus</i> |
| Proteaceae | <i>Grevillea banksii fosteri</i> <i>Grevillea 'Flora Mason'</i> <i>Stenocarpus angustifolius</i> |
| Rubiaceae | <i>Gardenia psidioides</i> <i>Attractocarpus fitzalanii</i> |
| Rutaceae | <i>Melicope rubra</i> |
| Verbenaceae | <i>Vitex ovata</i> |



Society for Growing Australian Plants, Townsville Branch Inc.
P.O. Box 363 Aitkenvale, Qld. 4814

Membership Application or Renewal Form

Membership Year is from 1st April to 31st March
(Initial half yearly membership is available for those joining around October)

Name: _____

Address: _____

Email address: _____

Fee: \$ _____

If claiming full time student fee please quote Student No.....

Additional household members may be registered for a nominal fee
of \$2.00 per person but they will not receive newsletters or magazines.

Society for Growing Australian Plants Townsville Branch Inc ABN 32 302 397 597
Membership Fees:

| | |
|---------------------------------------|---------|
| New Ordinary Member | \$45.00 |
| New Student Member | \$35.00 |
| Renewal Ordinary | \$40.00 |
| Renewal Student | \$30.00 |
| New Member (Half Year from Oct.) | \$25.00 |
| Additional Household Member | \$ 2.00 |
| Queensland Bulletin subscription only | \$30.00 |

If paying electronically please quote 'Membership and your name'
Bendigo Bank BSB 633-000 A/C 113462386

The Society for Growing Australian Plants promotes
the conservation of Australian native flora
by encouraging its introduction into gardens.

