

## August 2011

### General Meeting

8.00pm Wednesday  
10<sup>th</sup> August

Community Centre,  
Annandale Shopping  
Centre

### Committee Meeting

7.30pm Monday  
29<sup>th</sup> August 2011

2 Hoya Court  
Annandale

### Dates to Remember

#### Future Outings

**Ben Watts garden - Aug  
14<sup>th</sup>** - Outing to at 9am.  
23 Bowden Rd. Black  
River.

**Burra Range - Sept 18<sup>th</sup>**  
to the Burra Range (for  
the ones we miss in July)

### This Issue

Keith's Tech spot  
– Secondary  
growth in woody  
plants 2  
Burra Range  
Outing 4  
In flower for July 6



*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](http://sgaptownsville.org.au)

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<b>Committee</b>			

Wednesday 10<sup>th</sup> August 8pm

***Paul Slatter***

*from AQIS (Australian Quarantine and Inspection Service) will  
give us a presentation*

***plus***

***Keith's 'tech-spot' on 'Root Structure'***

**Outing to Ben Watts garden**

**14<sup>th</sup> of August at 9am.**

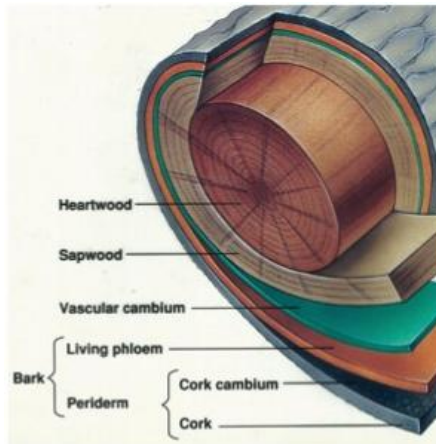
23 Bowden Rd. Black River.

Travel North across the Black River bridge on the Bruce Hwy and  
take the first right.

## Secondary Growth in Woody Plants

- ✧ After the initial body structure of a plant is formed, many woody plants undertake a secondary stage of growth which is independent of the initial root and shoot growing tips.
- ✧ Secondary growth forms wood and bark in both stems and roots, and results in extra anchorage and support, giving strength and protection to the rapidly growing organism.

Contrast the structural needs of a large tree, such as the *Corymbia tessellaris* pictured – with an annual trailer such as *Abelmoschus moschatus* – which will die back at the end of the wet season.

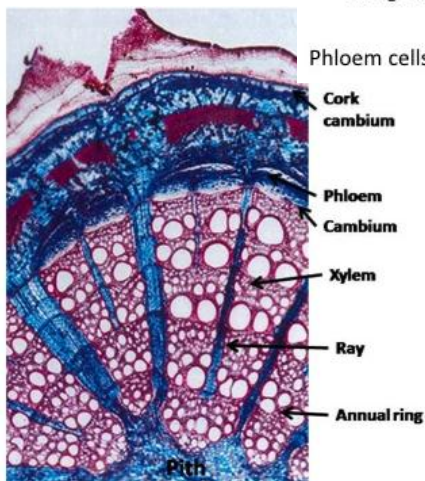


In dicots secondary growth cells are situated in the cambium layers – The inner layers divide to produce new xylem cells, outside this new phloem cells are made and outside again is the cork cambium which produces new bark cells.

As well as these, other cells form rays which allow movement and twisting in the stem.

There is therefore a continual process of cell division and replacement in the area, with pressure exerted by increases in the number of xylem cells (to carry sufficient water and nutrient for the growing plant).

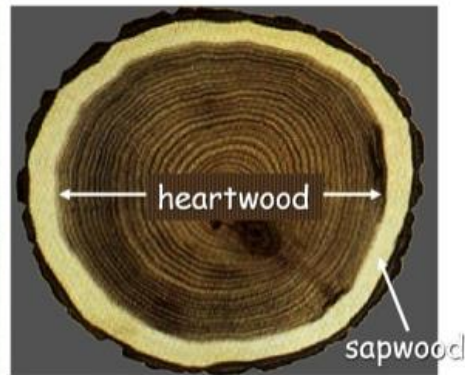
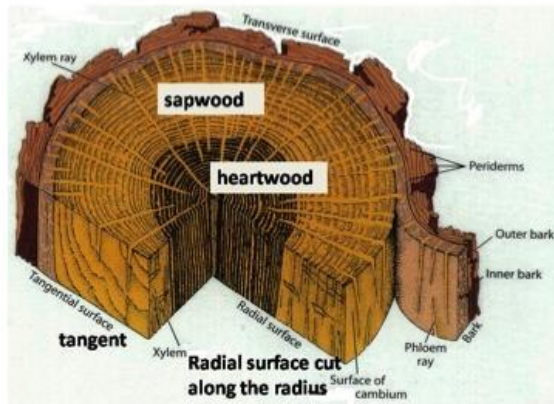
Phloem cells tend to be crushed by this pressure, and are replaced regularly, usually seasonally.



Cross section of a vine stem, showing many rays of flexible cells which allow the stem to flex and twine as required for support.

Annual growth rings are also visible.

These growth rings are usually less prominent in tropical plants – temperate climates cause plants to have a greater difference between summer and winter growth patterns, making the rings more visible.



Diagrams showing typical structure of woody plant stems.

Heartwood is in effect dead xylem tissue, and provides strength to the plant structure.

Sapwood contains living and active xylem conductive tissue. Most plants need around four times as much xylem (for water movement) as phloem so there is continual pressure on the outer conductive structures as the xylem grows to cater for the needs.



The cork cambium, or bark, is continually pressured by the growth of the inner layers of xylem and phloem cells, and the pressure is relieved by the regular death and replacement of cells.

The pattern of bark formation is dependent on the way in which the dead cells fissure, flake or are regularly deciduous.

## Timber Features

- **Heartwood** – the inner, now dead, xylem tissue. Usually dark due to the storage of waste tannins, gums and resins.
- **Sapwood** – the area of living and functional xylem cells.
- **Annual or Growth Rings** – Indicate the difference in cell size due to growth variations on a seasonal basis. Usually not as prominent in tropical areas.
- **Grain** – The direction of the xylem elements with respect to the longitudinal axis.
- **Texture** – The relative size of the xylem cells.
- **Pliability** – If wood is flexible the fibres are long and straight, with little overlapping. Moisture content is also relative.
- **Durability** – affected by the density of fibres, and the concentration of resins and tannins which resist rot.



## Burra Range Trip – 17<sup>th</sup> July, 2011

A small but enthusiastic group made the trip to the Burra Range and were rewarded with possibly the best display of Grevilleas and Wattles seen for many years. We were a little apprehensive on the way out – leaving Townsville in fine conditions we encountered some patchy fog but later this turned to a mixture of fog and patchy showers, with low cloud threatening to disrupt our day.

The rain lifted on arrival however and the day remained fine. Wattles were very evident on the way out, particularly *Acacia leptostachya* on the hills near Thalanga and before Campaspe River. Our first impressions (apart from the Wattles) on reaching the Burra however were of a very prolific flowering of *Grevilleas* – *sessilis*, *pteridifolia* and *decora*.

A quick cuppa at the lookout (I had to crack the whip or we would have still been there at lunchtime – and I knew that there was so much to see elsewhere), and we ventured into the area past the microwave tower. Some of this had been burnt two years ago, and the regrowth with two good years of rainfall has been marvellous.

Pieter was very vigilant in spotting a good example of the *Grevillea* hybrid (*G. pteridifolia* x *G. sessilis*). We stopped at several spots to view slightly different scenarios and then made what has become our obligatory stop to see the large *Homoranthus thomasi* which never fails to put on a good display for us.

Several members were very keen to examine the flower minutely and we spent an enjoyable time confusing ourselves as we seemed to have too many parts!!! However we got very close to the answer – and a short consultation with my friend Dr. Google on arriving home seemed to tie the matter up.

The two pink, papery structures at the base of the flower are bracts which protect the bud in the early stages.

The next layer is the calyx tube - fused for about 2/3 of its length, and divided into 5 for the distal third. The hypanthium forms the base of this - (Myrtaceae = hypanthium).

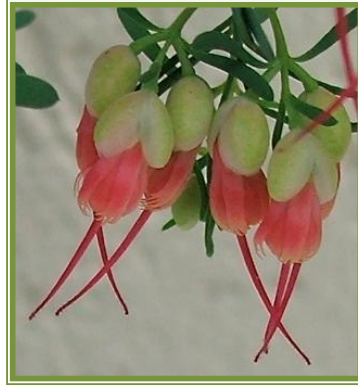


*Grevillea* Hybrid and the two parents



© John Elliott

The tiny pink teeth on the distal tips of the calyx lobes are actually awns. If you Google *Homoranthus* you will find that some species actually have quite prominent awns. These are not visible on *Homoranthus thomasii* without a lens, but the second photo on the right of the closely related *H. porteri* clearly shows the larger awns on this species.



Petals were the 5 small, saucer shaped discs deep in the base of the flower. These were folded (like a tulip) in the early stages but opened to expose the inner workings at a later stage.

Outer whorl is the calyx tube. Inner whorl is the petals which are deep within the calyx tube. The 10 anthers appear to be set into the base of the flower – they do not have visible filaments. Tiny thrips no more than 1mm long were visible with a lens.

So what we see when looking at the flower casually is the calyx tube and the style - the rest is hidden deep within the structure.

Following a restful lunch break at a quiet spot away from the main road (someone objected to a short quiz about the identity of a nearby *Corymbia* – I can't imagine why), we keyed out an *Acacia* as *Acacia burdekensis*. Two more stops found us at Bungaree Creek, where we found a number of smaller plants including *Boronia bipinnata*, *Dampiera adpressa*, *Prostanthera parvifolia* and even a few early flowering *Calytrix microcoma*.



*Boronia bipinnata*



*Dampiera adpressa*

It was then time to make our way home and look forward to our second trip this year which we hope to coincide with the mass flowering of *Calytrix microcoma*.

On the way I noticed this nice specimen of *Hakea lorea* a little to the east of Campaspe River. Unfortunately it had commenced to rain, which made photography difficult.



*Hakea lorea*

Keith

## In flower for July

Acanthaceae      *Graptophyllum excelsum*  
*Graptophyllum ilicifolium*

Labiatae          *Westringea fruticosa*

Mimosaceae      *Acacia gracillima*  
*Acacia holosericea*  
*Acacia leptostachya*

Myoporaceae    *Eremophila maculata*

Myrtaceae        *Leptospermum* 'Pink Cascade'  
*Melaleuca* 'Pink Champagne'  
*Melaleuca pollandii*  
*Syzygium* 'Pink Cascade'  
deep red new foliage`

Proteaceae      *Grevillea banksii* (red)  
*Grevillea* 'Lana Maree'  
*Grevillea* 'Pink Surprise'  
*Grevillea pracina*  
*Grevillea pteridifolia*  
(local & NT form)  
*Grevillea venusta*

Rubiaceae        *Gardenia psidiodes*



*Acacia*  
*leptostachya*



*Grevillea pteridifolia*

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

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**Membership Application or Renewal Form**

Membership Year is from 1<sup>st</sup> April to 31<sup>st</sup> 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.**

