

July
2011

General Meeting

8.00pm Wednesday
13th July

Community Centre,
Annandale Shopping
Centre

Committee Meeting

7.30pm Monday
1st August 2011

2 Hoya Court
Annandale

**Dates to
Remember**

Future Outings

Burra Range - July 17th

- Meet at Annandale
Shopping Centre at 6.45
for 7am departure.

Burra Range - Sept 18th
to the Burra Range (for
the ones we miss in July)

This Issue

Keith's Tech spot
- Seed formation
and germination 2

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In flower for
June 7

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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 13th July 8pm

Ben Watts

will complete his talk on

The Canning Stock Route

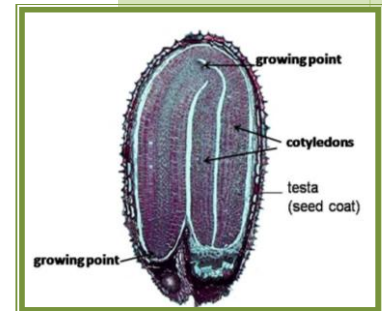
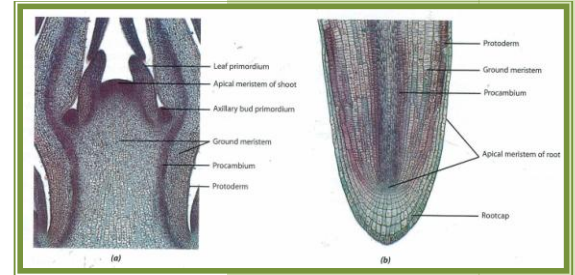
plus

Keith's 'tech-spot' on 'Secondary Growth'

How do plants grow? – Seed formation and germination

Seed Formation

- ❖ The single cell formed by fusion of sperm and an egg cell (zygote) carries the full complement of chromosomes for the plant and undergoes division to become the embryo. Further division sees the embryo growing in size, and groups of cells will take on specific roles.
- ❖ These initially will be those of a shoot apex (a) and a root apex (b).
- ❖ Other cells will develop into endosperm or cotyledons, both of which contain nutritive tissue to sustain the growth of the germinating plant until it is able to access nutrition from the soil.



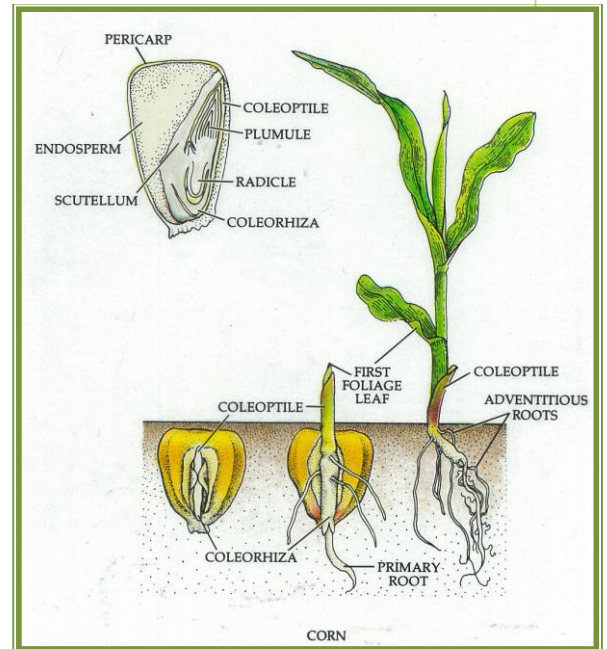
- ❖ Once fertilisation has taken place, the ovary becomes the centre of all development and superfluous organs such as petals and stamens usually fall. The style and stigma sometimes remain attached for some time.
- ❖ The fertilized ovule becomes the seed and the surrounding ovary develops into the fruit. This may be a fleshy fruit, dry capsule or pod etc. The fruit is basically a dispersal vehicle or is designed to attract a suitable dispersal agent.
- ❖ A seed usually has a hard outer skin or testa to protect it in the event of needing to survive for a long time until conditions become right for germination.
- ❖ The point where the ovule was attached to the placenta (see ‘carpels’ in a previous Tech Spot) is known as the hilum, and is usually the point where water can most easily enter to stimulate germination.

- ❖ Within the testa is the embryo – which by this time has two growing points – one to develop into a root system and one to a shoot system.
- ❖ The balance of the space is taken up by cotyledons or endosperm tissue – both of which provide nutrition to sustain the plant until it can obtain sustenance from the soil.



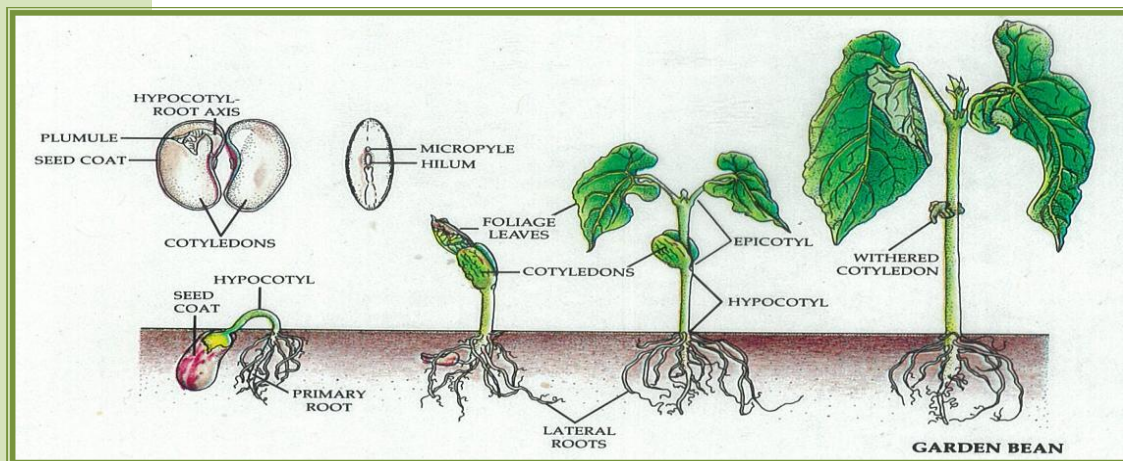
Germination of a Monocot seed

- ❖ Monocots are plants with only one cotyledon or 'first leaf' – such as grasses or lilies. We will look at these differences in a later segment.
- ❖ Germination of a seed is governed by a number of factors, including temperature and light, but the single most important factor is the presence of sufficient water absorbed through the seed coat.
- ❖ When this happens the seed coat ruptures and a radicle or primary root grows quickly and is followed by the first foliage or shoot leaf.
- ❖ Monocots usually have fibrous roots, where more primary roots grow from the same area as the initial primary, not as branches of the primary root.



Germination of a dicot seed

- ❖ Note that with dicots the cotyledons are the first two leaves which appear. They are usually quite thick and succulent as they contain nutrient to start the plant off.
- ❖ The root system usually consists of a primary tap root and further branching roots.

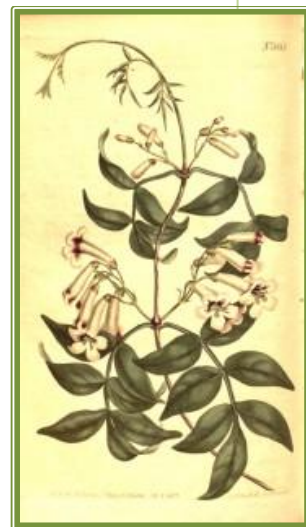


An Historical Note on *Pandorea pandorana*, BIGNONIACEAE Wonga Vine

This extravagantly flowering vine can be seen in a variety of habitats, but often in dry inland scrubs and creeks, where it displays large panicles of white bell shaped flowers, with purple throats.

No less extravagant than its showy flowers is the origin of its name. *Pandorea* is a genus of 6 species, restricted to Australia and Malesia, so it is interesting to learn that Henry Charles Andrews first described the plant in 1800 from a living specimen in England. In *Andrew's Botanical Repository* he named it *Bignonia pandorana*:

"Although naturally climbing, by the twisting of its stalks round whatever support comes in its way, is capable like the Honeysuckle of forming a bushy shrub that can support itself. Blossoms freely and its foliage is lively and agreeable, but the flowers are apt soon to drop off, and with us it never produces fruit. It may however be easily propagated by cuttings. Requires the protection of a greenhouse. Is a native of Norfolk-Island, in the South-Seas, whence the seeds were brought to this country by Governor Patterson, from whose information it appears that a very destructive blight generally makes its first appearance upon the young shoots of this shrub, and spreads from thence over the whole vegetation of the island; from this relation the name we have adopted derives its origin. Our drawing was taken from a fine plant received from Mr. Loddiges in April."



The specimen itself had been raised from seed originally collected by William Paterson, who commanded the Norfolk Island garrison between 1791 and 1793, and supplied to the Lee and Kennedy nursery in Hammersmith.

Pandora, in Greek mythology, is the first woman, and is entrusted with a 'box' which out of curiosity she opens, and releases evils upon the world. Hope alone remained inside. The analogy to this myth can clearly be traced to the description above, and The Flora of Australia suggests that this could have been a mealy bug infestation.



In 1840 the French botanist Edouard Spach created the genus *Pandorea* reportedly because he was reminded of Pandora's Box by the fruit; a capsule containing numerous winged brown seeds. The history of the nomenclature for this species is complicated (see here http://www.cpbr.gov.au/cgi-bin/apni?taxon_id=37117) but suffice to say CGJ van Steenis finally brought the genus and species names together in 1928, as *Pandorea pandorana (Andrews) Steenis*. and seemingly brought together the two entirely different sources for the myth of Pandora's Box.

Paluma/Taravale Outing – June 2011

It was a great pleasure to see so many people turn up for our inaugural outing to Paluma/Taravale, despite the cold and wet conditions, which prevailed. Judging from the happy people in the photograph this did not stop our enjoyment one bit, and we hope to be able to offer this as an annual outing from now on.

Many thanks to Betsy for all the planning and preparation that went into the outing, and also to Keith and Sarah for their contributions. Several people have contributed to the plant list but further additions are welcomed.



SGAP Townsville Paluma Outing 12th June 2011

See you at the Burra Range on the 17th July!

Janice Lough.

Plants of Paluma/Taravale

| Botanical Name | Family | Common Name | R/f, Ecotone |
|---|----------------|---------------------------|---------------------|
| <i>Acacia aulacocarpa</i> | Mimosaceae | Hickory Wattle | E |
| <i>Acacia calyculata</i> | Mimosaceae | | E |
| <i>Acacia leptostachya</i> | Mimosaceae | Townsville Wattle | E |
| <i>Acacia melanoxylon</i> | Mimosaceae | | E |
| <i>Acacia whitei</i> | Mimosaceae | | E |
| <i>Acmena smithii</i> | Myrtaceae | Lillypilly | R |
| <i>Acrotriche aggregata</i> | Ericaceae | | E |
| <i>Allocasuarina littoralis</i> | Casuarinaceae | Black She-oak | E |
| <i>Allocasuarina torulosa</i> | Casuarinaceae | Forest Oak | E |
| <i>Banksia aquilonia</i> | Proteaceae | | ER |
| <i>Bertya polystigma</i> | Euphorbiaceae | | R |
| <i>Bursaria spinosa</i> | Pittosporaceae | Sweet Bursaria | ER |
| <i>Bursaria tenuifolia</i> | Pittosporaceae | | ER |
| <i>Callitris intratropica</i> | Cupressaceae | Northern Cypress Pine | E |
| <i>Cassinia subtropica</i> | Asteraceae | | R |
| <i>Conyza bonariensis</i> | Asteraceae | Fleabane | E |
| <i>Coronidium rupicola</i> ¹ | Asteraceae | | E |
| <i>Corymbia citriodora</i> | Myrtaceae | Lemon-scented Gum | E |
| <i>Corymbia dallachiana</i> | Myrtaceae | Dallachy's Gum | ER |
| <i>Corymbia leichhardtii</i> | Myrtaceae | Leichhardt's Rusty Jacket | E |
| <i>Corymbia tessellaris</i> | Myrtaceae | Moreton Bay Ash, Carbeen | ER |
| <i>Cyanthillium cinereum</i> | Asteraceae | Vernonia | E |

Plants of Paluma/Taravale (continued)

| Botanical Name | Family | Common Name | R/f, Ecotone |
|--|-------------------|--------------------------|-------------------------|
| <i>Cynoglossum suaveolens</i> | Boraginaceae | | ER |
| <i>Dianella caerulea</i> | Hemerocallidaceae | Paroo Lily | ER |
| <i>Dodonaea lanceolata</i> | Sapindaceae | Hop bush | E |
| <i>Dodonaea uncinata</i> | Sapindaceae | | E |
| <i>Drosera spathulata</i> | Droseraceae | | E |
| <i>Embelia australiana</i> | Myrsinaceae | | R |
| <i>Emilia sonchifolia</i> | Asteraceae | | E |
| <i>Emmenosperma cunninghamii</i> | Rhamnaceae | Northern Yellow Ash | R |
| <i>Eucalyptus grandis</i> | Myrtaceae | Rose Gum, Flooded Gum | ER |
| <i>Eucalyptus mediocris</i> | Myrtaceae | Inland White Mahogany | E |
| <i>Eucalyptus reducta</i> | Myrtaceae | Stringybark | E |
| <i>Eucalyptus shirleyi</i> | Myrtaceae | Shirley's Ironbark | E |
| <i>Eucalyptus tereticornis</i> | Myrtaceae | Forest Red Gum, Blue Gum | E |
| <i>Eupomatia laurina</i> | Eupotamatiaceae | Bolwarra | R |
| <i>Gahnia aspera</i> | Cyperaceae | Saw Sedge | E |
| <i>Grevillea sessilis</i> | Proteaceae | | E |
| <i>Hakea plurinervia</i> | Proteaceae | | E |
| <i>Hibbertia lepidota?</i> | Dilleniaceae | Scaly Guinea Flower | E |
| <i>Hibbertia longifolia</i> | Dilleniaceae | Guinea Flower | E |
| <i>Hibbertia sp.</i> | Dilleniaceae | | E |
| <i>Hovea sp.</i> | Fabaceae | | E |
| <i>Jacksonia thesioides</i> | Fabaceae | | E |
| <i>Leptosema oxylobioides</i> | Fabaceae | | E |
| <i>Leptospermum amboinense</i> | Myrtaceae | tea tree | E |
| <i>Leptospermum neglectum</i> | Myrtaceae | tea tree | E |
| <i>Leptospermum polygalifolium</i> | Myrtaceae | tea tree | E |
| <i>Lomandra longifolia</i> | Xanthorrhoeaceae | Spiny-headed Mat Rush | E |
| <i>Lomandra multiflora</i> | Xanthorrhoeaceae | Many-flowered Mat Rush | E |
| <i>Lophostemon suaveolens</i> | Myrtaceae | Swamp Mahogany | E |
| <i>Maesa dependens</i> | Myrsinaceae | | R |
| <i>Melichrus urceolatus</i> | Ericaceae | Urn Heath | E |
| <i>Mitrasacme polymorpha</i> | Loganiaceae | | E |
| <i>Monotoca scoparia</i> | Epacridaceae | | E |
| <i>Petalostigma pubescens</i> | Picrodendraceae | Quinine Bush | E |
| <i>Phebalium squamulosum</i> | Rutaceae | Scaly Phebalium | R |
| <i>Pimelea linifolia</i> | Thymeliaceae | Rice Flower | ER |
| <i>Poranthera microphylla</i> | Euphorbiaceae | | E |
| <i>Rostellularia adscendens</i> | Acanthaceae | | E |
| <i>Stenocarpus angustifolius</i> | Proteaceae | | E |
| <i>Stylidium eriorhizum</i> | Stylidiaceae | Trigger Plant | E |
| <i>Syncarpia glomulifera</i> | Myrtaceae | Turpentine | ER |
| <i>Synoum glandulosum var. paniculatum</i> | Meliaceae | | R |
| <i>Thysanotus tuberosus</i> | Laxmanniaceae | Fringe Lily | E |
| <i>Trema tomentosa</i> | Ulmaceae | Poison Peach | R |
| <i>Utricularia caerulea</i> | Lentibulariaceae | | E |
| <i>Wahlenbergia sp.</i> | Campanulaceae | Bluebells | E |
| <i>Wedelia spilanthisoides</i> | Asteraceae | | E |
| <i>Xanthorrhoea johnsonii</i> | Xanthorrhoeaceae | Grasstree | E |

1 *Coronidium* was *Helicrysum*

In flower for June

MIMOSACEAE *Acacia leptostachya*

MYRTACEAE *Melaleuca pollandii*

PROTEACEAE *Grevillea 'Golden Lyre'*
Grevillea pteridifolia
Grevillea venusta

RUBIACEAE *Gardenia psidiodes*



*Acacia
leptostachya*

Burra Range Trip - Sunday 17th July 2011

Please note that our annual day trip to the Burra Range is scheduled for Sunday, 17th July, 2011. I visited the range last week and found that two good seasons have resulted in lush foliage growth and prolific flowering. Some areas are well advanced with flowering and some need a couple of weeks to reach their best so our outing should be quite fruitful.

We will meet at the Annandale Central Shopping Centre (in front of our normal meeting rooms) at 6.45am ready for 7.00am departure. Cars will travel independently to the lookout at the Burra Range and meet there at 10.00am for a cuppa. Travel time is around 2hours 45 mins. We will not be going to areas which require 4WD so conventional vehicles are quite suitable. We normally leave to return by around 3.00pm in order to arrive back in Townsville in daylight.

You need to be self sufficient with food and water, and to take the usual precautions of hat, sunscreen if needed and good walking shoes etc. If you are intending to car pool, please make your own arrangements. If anyone needs a lift and has been unable to arrange it - please contact Keith at noeltownsend@bigpond.com Sor phone 4755 2098.



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. 2010) | \$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.

