

Life and Death in a City of Trees: How did we get here?



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Birth ...just as a tiny seed grows

Walter and Marion Griffin's Plan with urban plantings in parks and gardens



Charles Weston set about developing a *garden city* ...but Canberra was hard on the trees.... 'overplanted' for quick effect



Lindsay Pryor with active management and experimentation, ...including thinning



Griffins Did not provide species preferences, but clearly saw the need to use native species for symbolic reasons

Weston concluded Canberra was “Half as wet, twice as cold as Sydney ...”; “In a drought year, like the edge of a desert” “Not a place for big trees...” So, a pragmatic approach to choosing trees: emphasis on ‘known’ exotics

Under Weston:

- Street plantings in the first suburbs
 - Telopea and Haig Parks
 - Reafforestation with native trees on the hills
 - Redwood forest of 250k trees at Pialligo
 - Trials of Cork Oak, Canary Island and Monterey Pines and Atlantic Cedar
- Pryor has really defined the landscape character of modern Canberra

Weston's exotics and Pryor's experimentation

- Experimental work for:
An increased use of native vegetation;
Improvement of all plant material, native & exotic, for city use by breeding & selection”
(Pryor 1952)

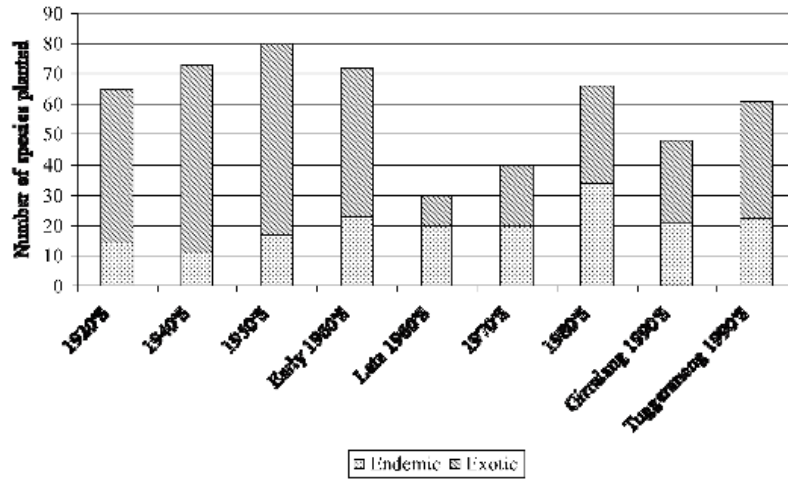


ANBG (1935) 1949; 1967+

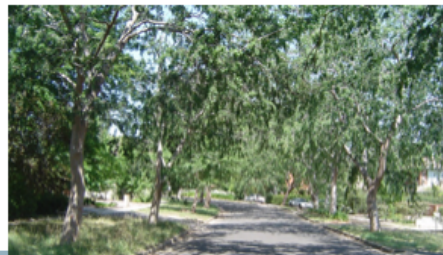
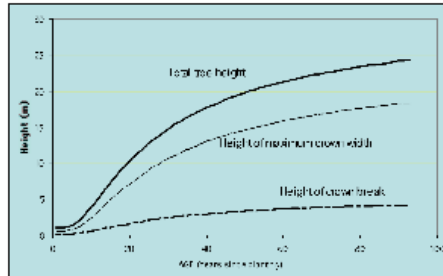


Lindsay Pryor Arboretum 1952+

Experimentation and diversity



Little trees grow and grow...



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Although Weston concluded (rightly) that we'd never have really tall trees in Canberra...

With the streets becoming the major factor in determining the identity of our city ...” (King et al 1979)

So much so, that although Canberra is often referred to as a garden city. In fact, nothing could be further from the truth. It is a 'treed' city.” (Bryant 1990)

Canberra boasts about 2 planted trees per person!

- \$15 M pa environmental services (C sequestration, energy saving, stormwater management)
- unpriced biodiversity, aesthetics ...
- Inflate property prices $\geq 5\%$

Until...

- “Surely though, Trees don’t die ...but they can be killed!”
- What Pryor called “thinning”:
 - “Large sums of money are spent in planting trees and large sums in rooting the majority of them out” (Minister for the Interior 1940)
 - “... wanton destruction ... unless the citizens of Canberra rise in their wrath, Canberra will soon look as it did ...” (Letter, CT, 1946)



...look as it did – a largely treeless plane with a few scattered almost shrubby native trees on the planes and lightly timbered on the hills...

Or maybe, post farming, when even those few trees had been removed and the degraded land largely covered in blackberries and rabbits!



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Densification in Turner:

Public trees (here, Haig Park, but also street trees) becoming more important as trees on leasehold lands are replaced by hard surfaces

It isn't actually dead...



When is a tree actually dead?

Are they still doing what we wanted them to do if they look like this?

A few standing dead trees are good for the environment anyway aren't they?

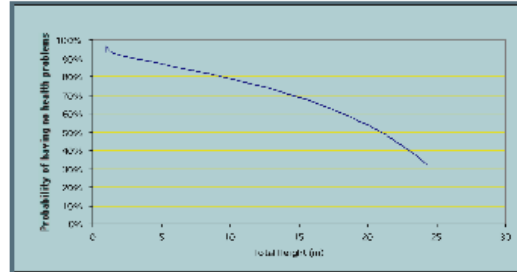
What about entire streets?



Remembering in Canberra, most streets were planted at the same time, with the same species ...sometimes even clones of the same tree. So, if one dies... without significant investment, last decade, we estimated 30% unhealthy by 2017 and that maintaining 80% healthy trees will cost 7x current budget

A diabolical problem

- Green infrastructure delivers many benefits proportional to canopy volume but largely unpriced / public benefits; maintenance costs money – more as trees age and become bigger
- Trees are dynamic but mortal, and have:
 - Biological lives
 - Useful lives
 - Safe lives



Residents vary in opinion about ‘their’ trees

How many trees are useful, safe,...

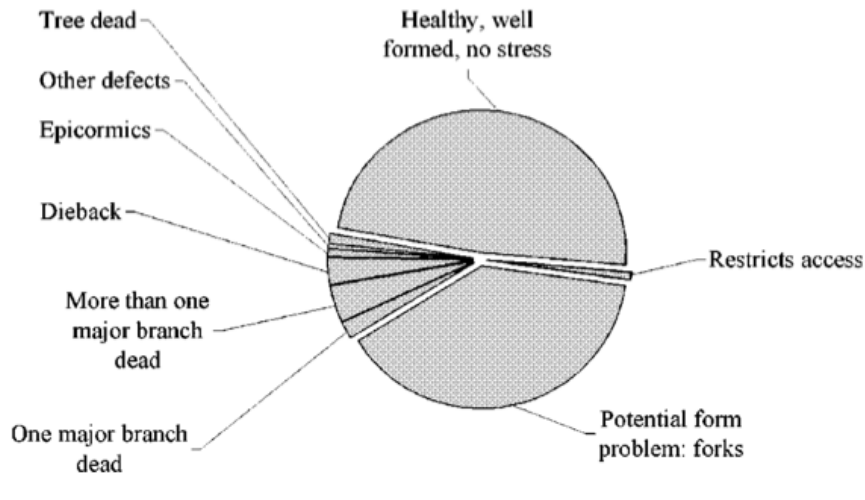


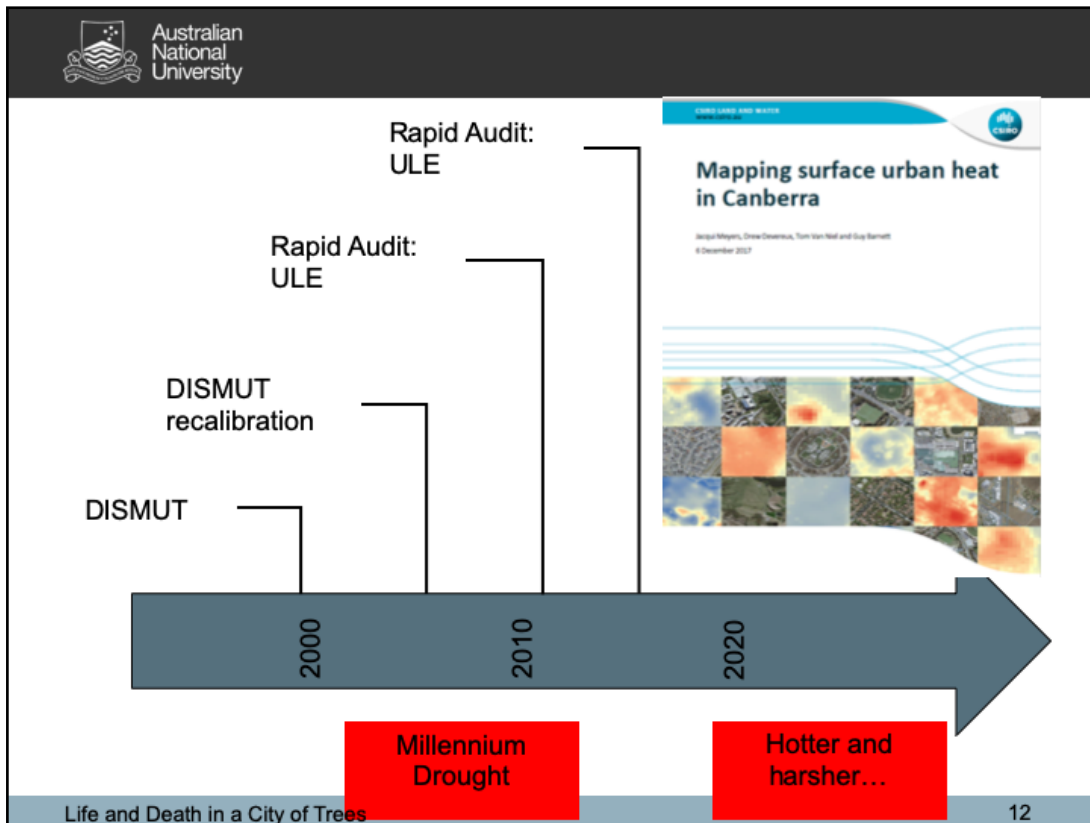
Fig. 3. Summary of health and problem status for 400,000 trees recorded during DISMUT census of the Canberra.

DISMUT first comprehensive audit (of suburbs > 10 years of age).

Recalibration – generally fine, although canopies a little smaller and replacements a little more than predicted

ULE: change is approach getting contract arboriculturalists to assess: 0-5+0-10 = 10%; 10-20 = 30% ; 20-40 = 15%; 40+ = 45%

ULE2: More trees moved from 20-40 into 10-20 than expected. However increase is appearance of health (poor-fair less with more in fair)



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Getting hotter and harsher ...many of our trees may be from provenances unsuited to these new conditions – replacement with new species or new provenances?

In conclusion

- Weston's / Lindsay's legacy is fundamental to Canberra; but it has only a 'safe/useful life', & the clock is ticking.
- We have to make choices that will also leave profound legacies.

Policy choices may be diabolical, but the consequences of inaction are worse

We should be able to articulate goals, & agree principles to guide decisions & actions.

- Whatever we do, & however we do it, we need to:

Find (quite a bit) more money;

Do something positive with all those trees nearing their end of live

