



Integrating Timber Production with Landcare Practices for Conservation and Profit

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Bambra Agroforestry Farm



I'm a Forester

A Forest Scientist

B.For.Sci. M.For.Sci.



Teaching
Agroforestry
Since 1990



Native Forestry!



Monoculture Plantations!





**Forestry
for profit**

**Forestry for
conservation**

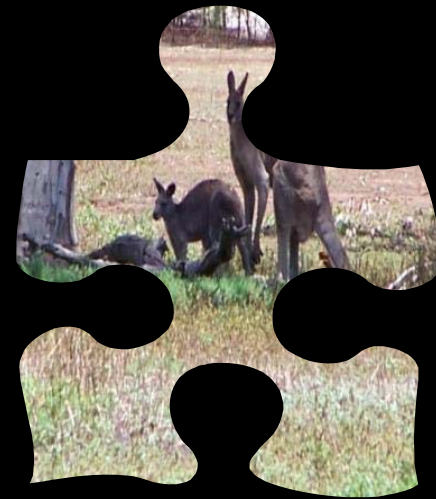
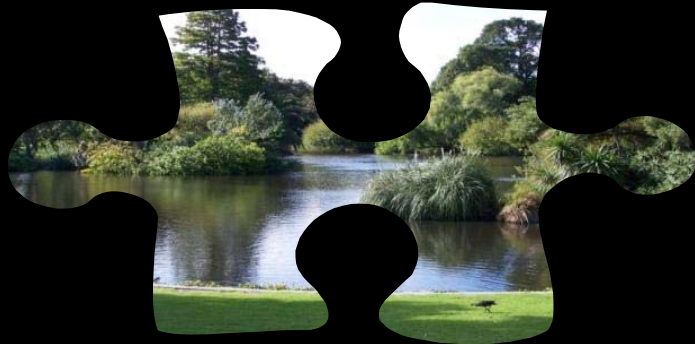
**Forestry for
conservation
and profit**



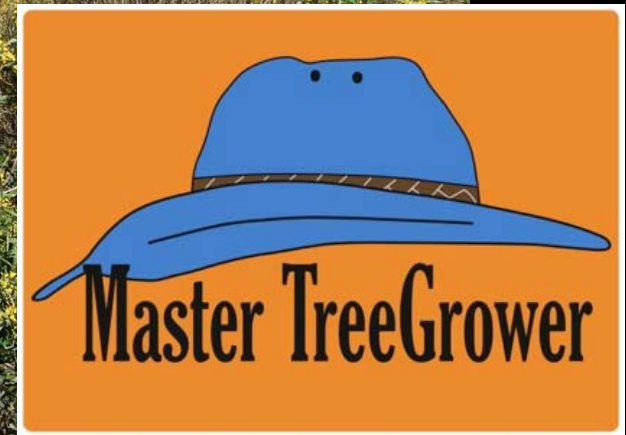
The real conservation issue = family farming



Trees on farms for multiple values



What might forestry on family farms look like?



Bambra Agroforestry Farm

Make *forestry*
attractive to
family farmers

1987



Plant for Conservation & Agriculture



Manage to create opportunities (\$)



After 14 years

Active Management





Timber is a by-product
of growing and
managing trees for

- Soil and Water
 - Biodiversity
- Shade and shelter
 - Aesthetics









Mark Tuckey Furniture, Melbourne

How the growing & harvesting trees for profit ...



... can be an act of conservation



Wood is good

Volume of the block	1000 cm ³
Weight of the block	850 grams
Moisture content of wood	12%
Bone dry weight of the block	760 grams
Carbon content of dry eucalypt wood	50%
Carbon weight in block	380 grams
CO ₂ Equivalent (multiple by $\frac{44}{12}$)	1.4 kg
Volume of CO ₂ (1kg = 0.55m ³)	0.8 m ³
Diameter of a ball containing the CO ₂ gas locked up in the block of wood	1 metre

There is still a forest – growing and locking up carbon



Riparian Strips

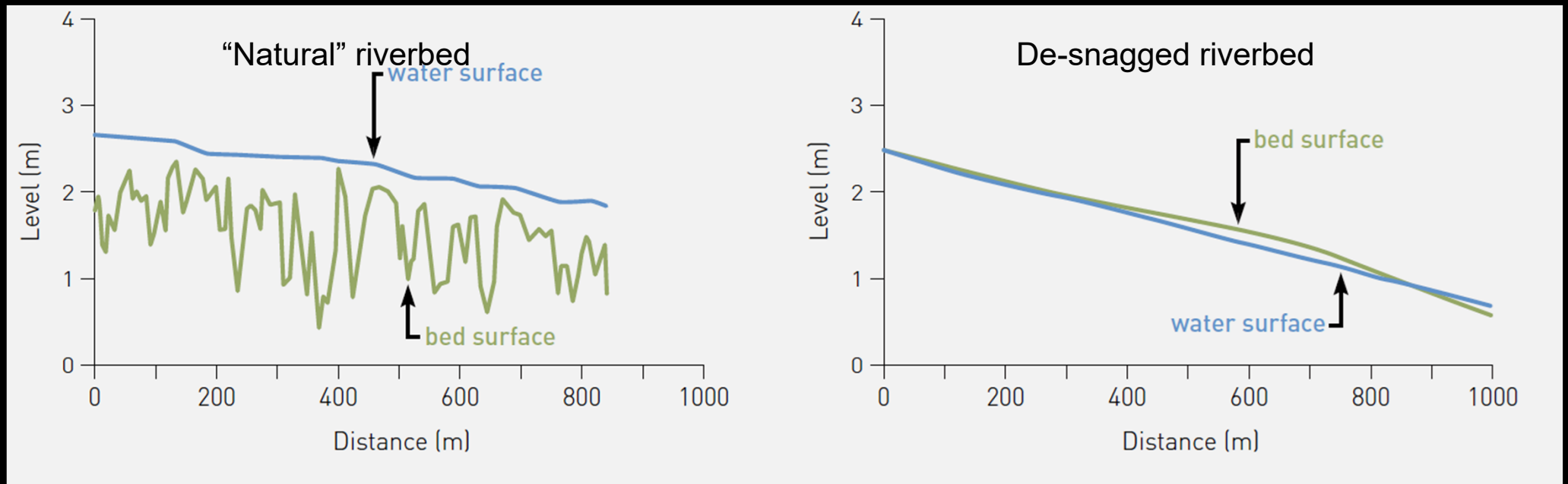




Wood in Waterways

Logs in Waterways

Comparison of 2 Gippsland rivers



In:

Design guideline for the reintroduction of wood into Australian streams

Wood on the ground





Brown Antechinus
Antechinus stuartii

*“During the day it can be found in large communal nests in tree hollows, crevices or **logs on the ground.**”*

<https://australian.museum/learn/animals/mammals/brown-antechinus/>



Stumps

Dead

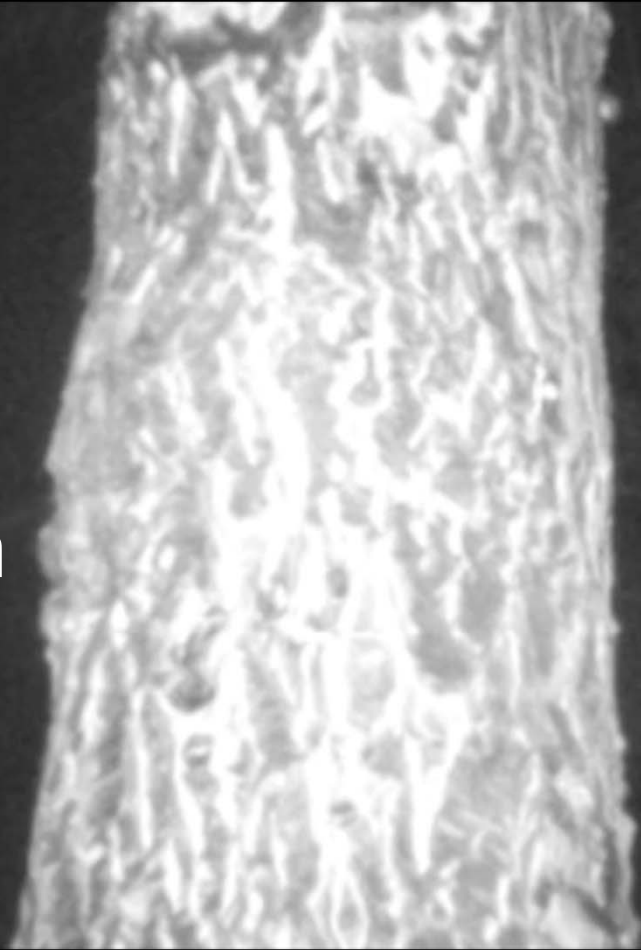
OR

Alive



Feed Trees

Sugar
Glider
feeding on
Silky Oak in
winter



Yellow-tailed Black Cockatoo - Pines



Red-tailed Black Cockatoo
(Sheoak and Banksia)



Drooping Sheoak

Allocasuarina verticillata



Hollows





Hollow formation requires

Dead branches on rapidly growing healthy trees

- Thinning promotes diameter growth
- Branches can be killed



A place for exotics

Coast
Redwood
Sequoia
sempervirens

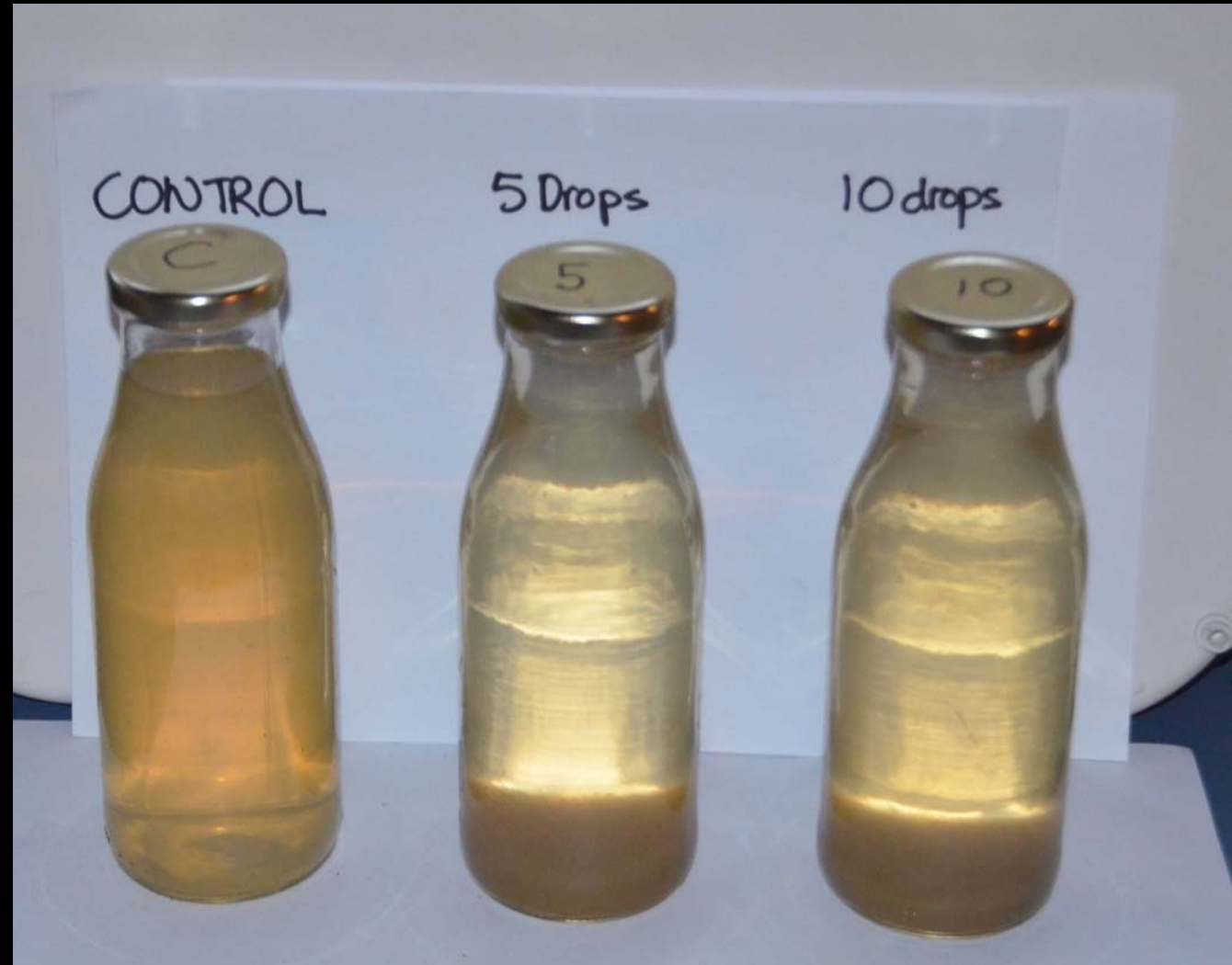
Salt
(NaCl)

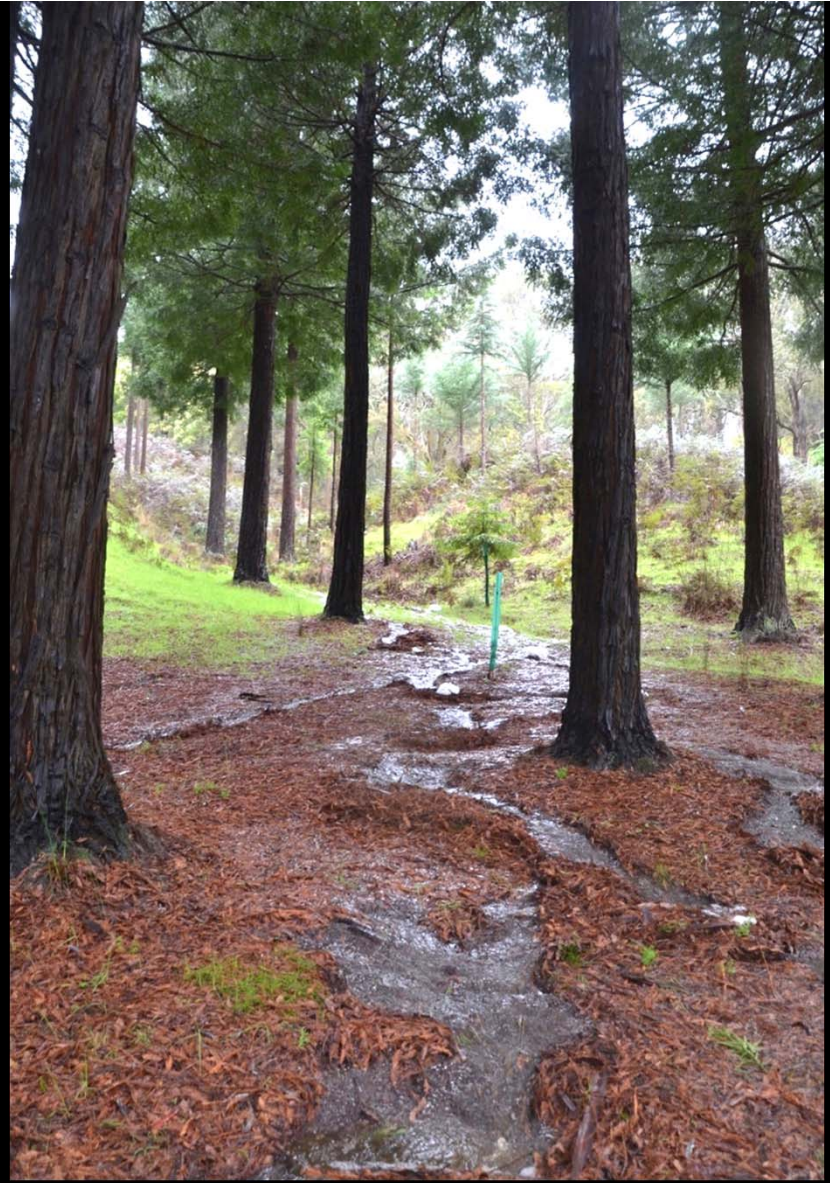


Na^+ CLAY



Aluminum Sulphate





We grow oaks for fire protection: A conservation practice





Andrew Stewart

Bob Hawke Landcare Award
Finalist

18% of the farm under trees

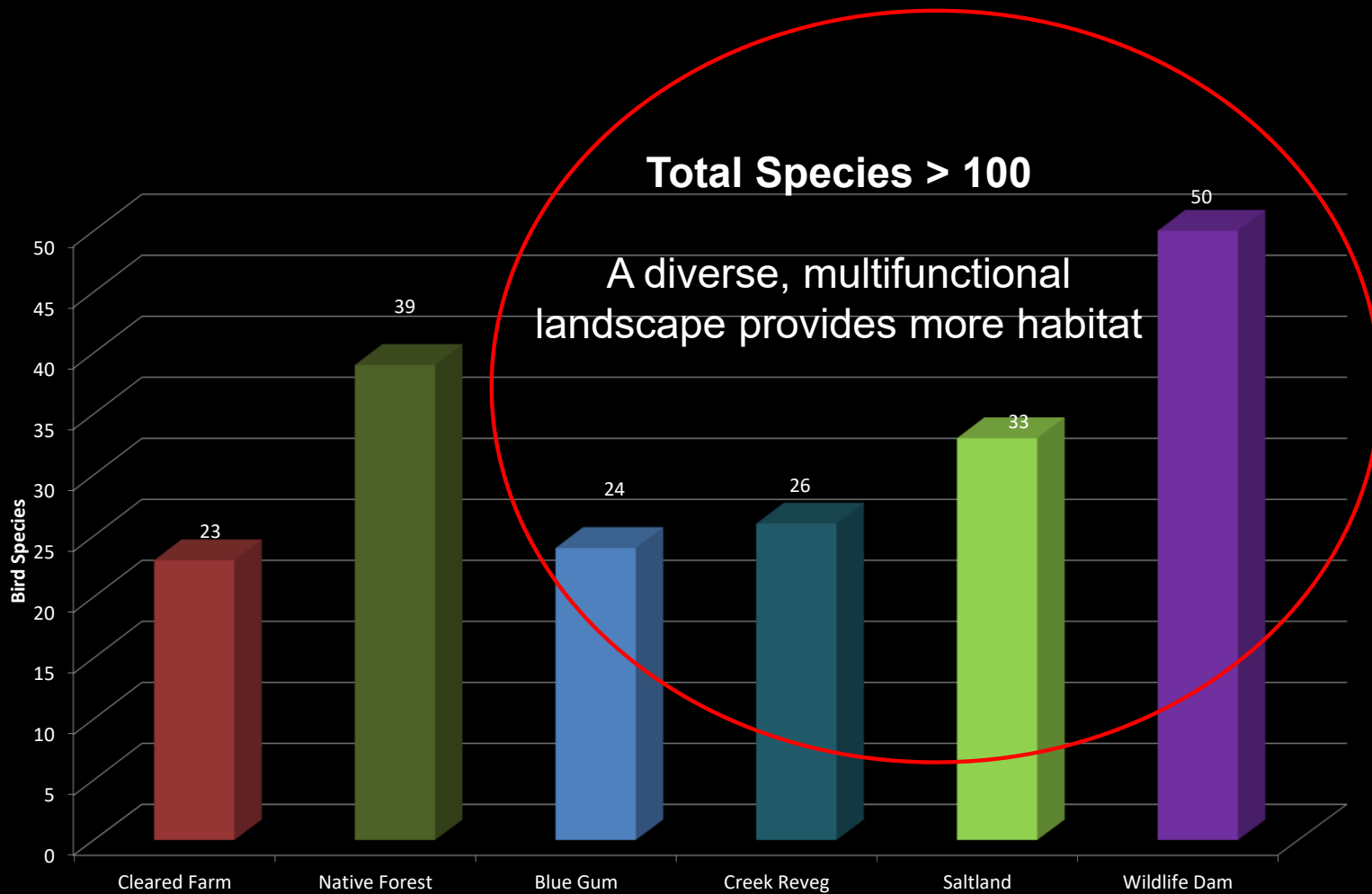


Many forests for many reasons integrated into
the family farming landscape



Biological Infrastructure





We are many – changing landscapes



Image © 2019 CNES / Airbus

Google Earth

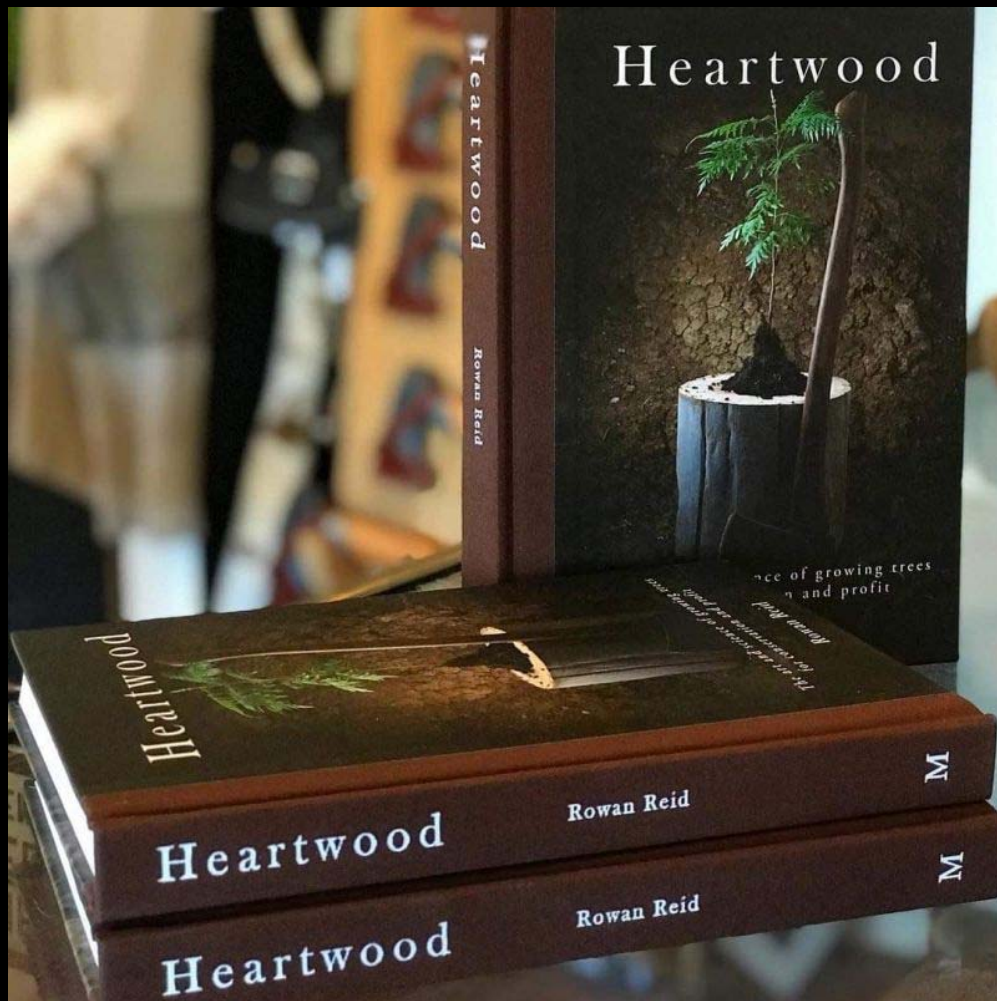
**Farmer engagement in Agroforestry
diverse landscape change = more
biodiversity**

TapesTREE



A diversity that reflects the inherent diversity
within our community





Heartwood

*The art and science of growing trees
for conservation and profit*

Facebook/Instagram

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