



Dendrology

FORS 2319



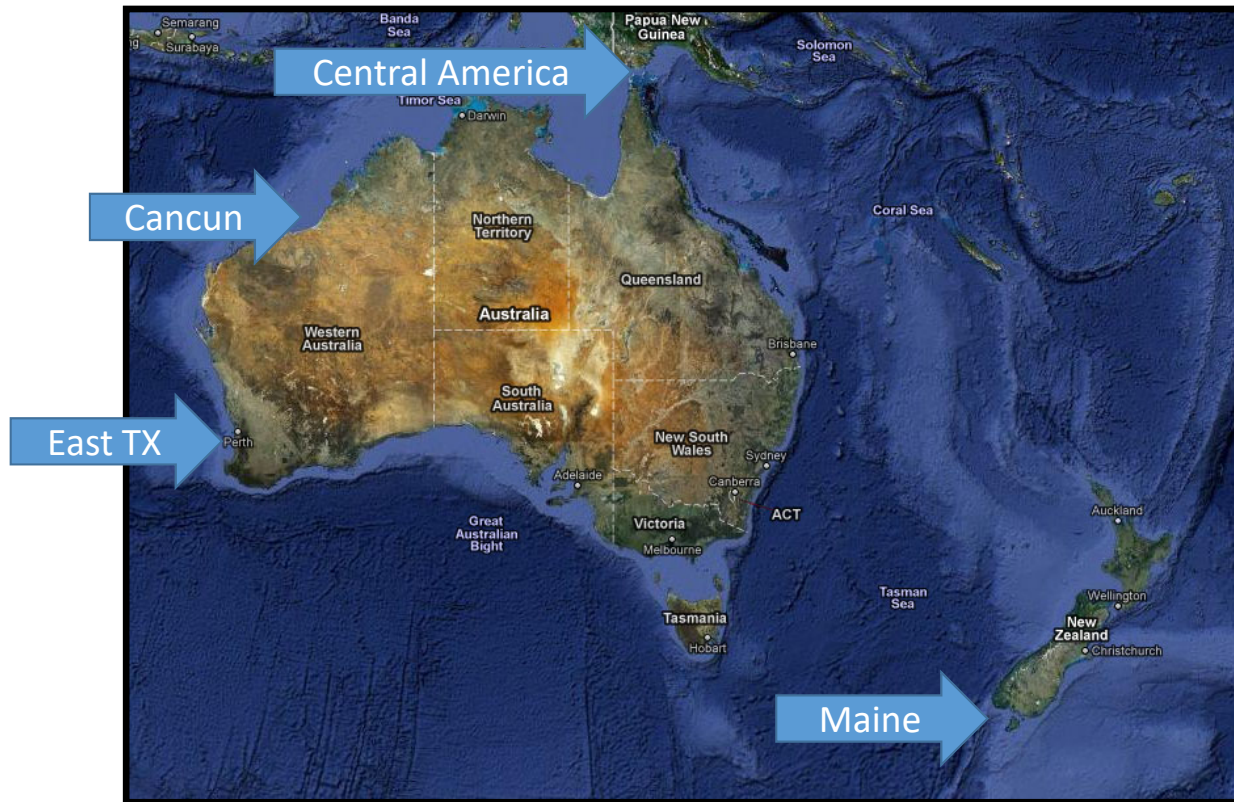
Instructor: Dr. Jeremy Stovall

Lecture 11:

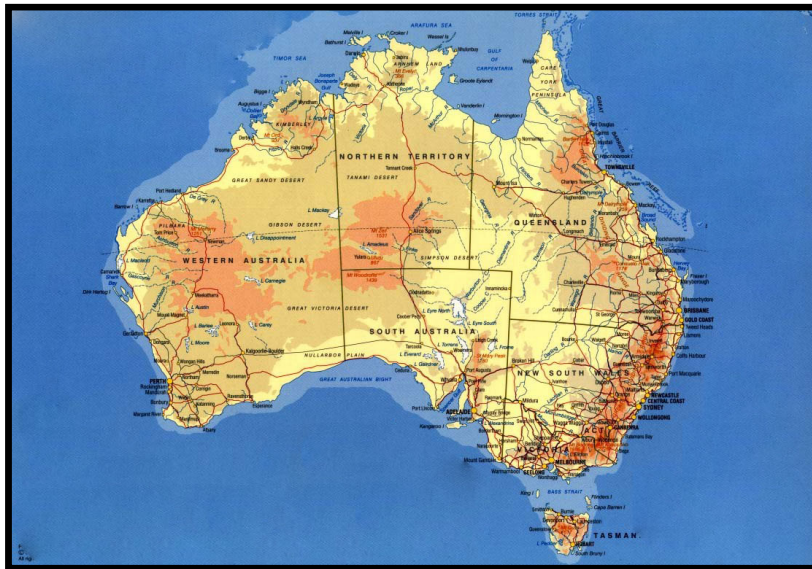
Trees of Australia



Dendro in Australia & New Zealand



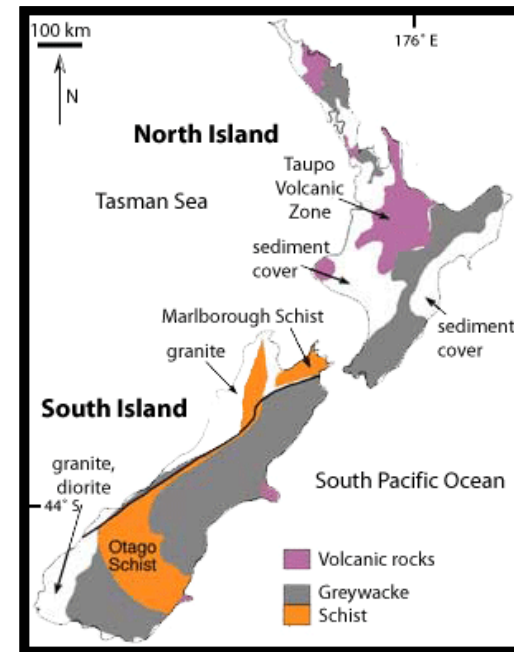
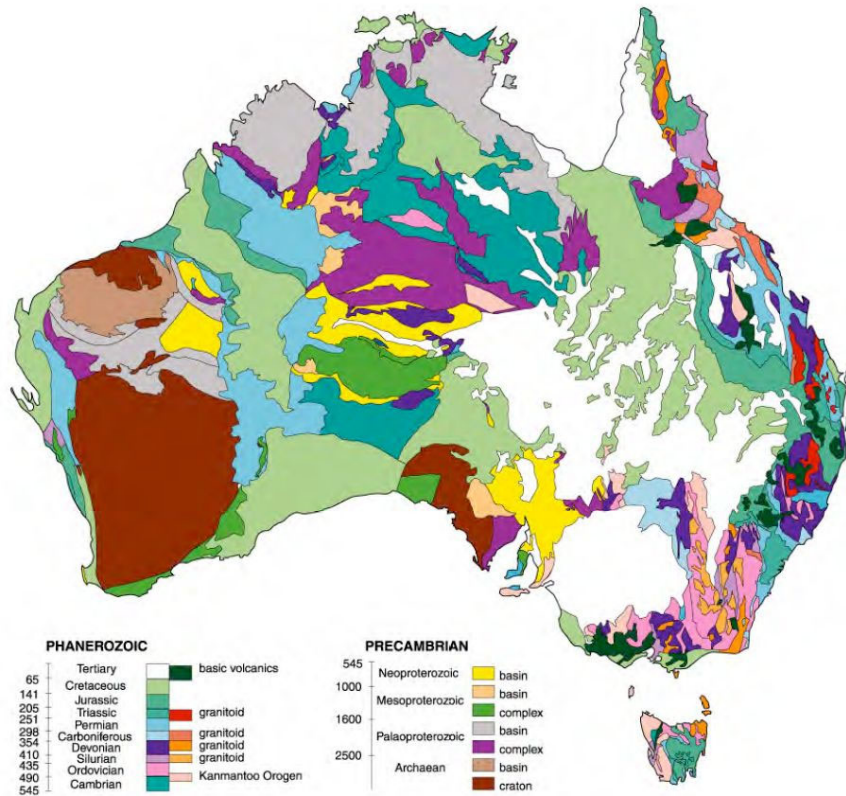
Topography



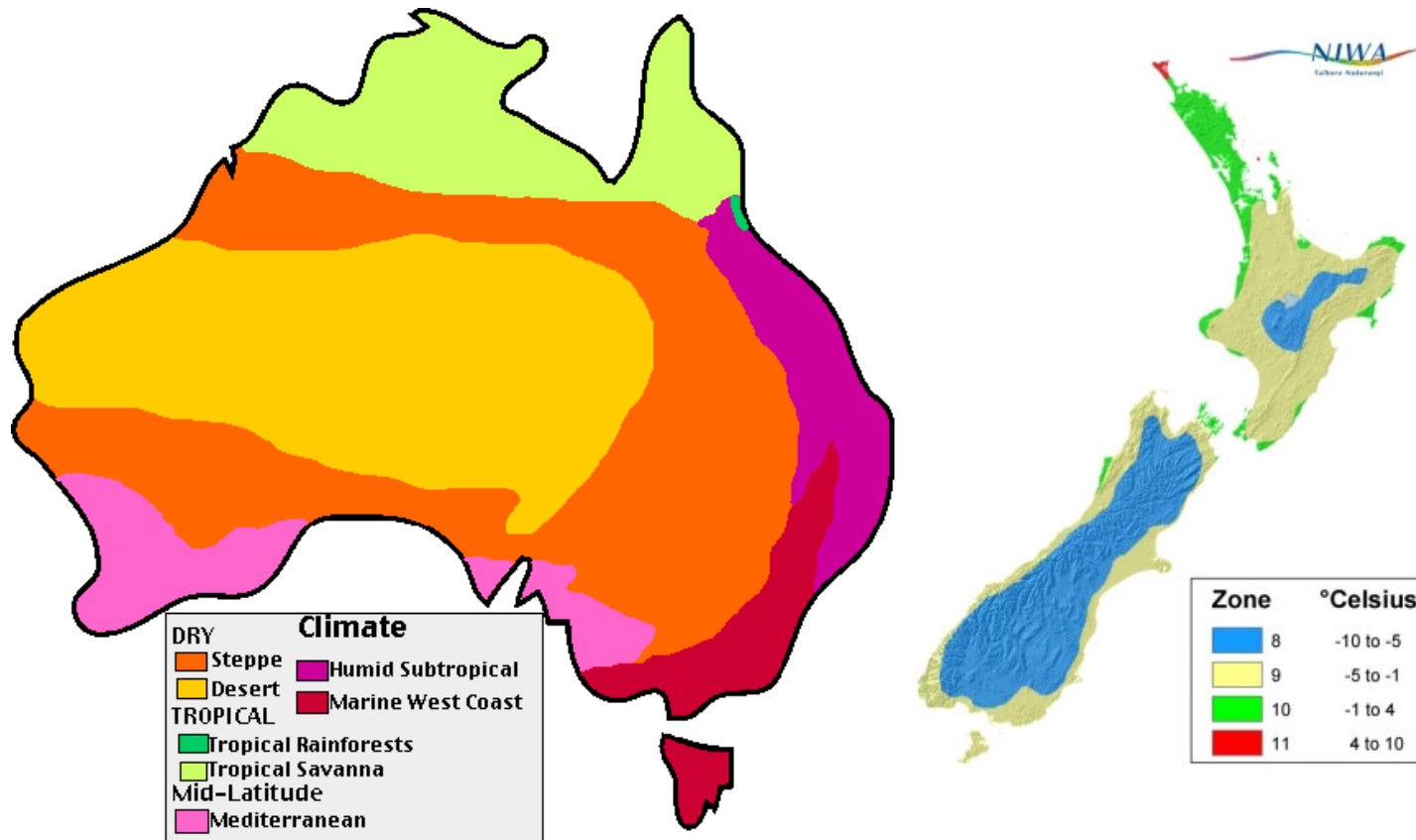
Australia: 0 to 7,310 feet; 11 times size of Texas
New Zealand: 0 to 12,316 feet; size of Colorado



Geology

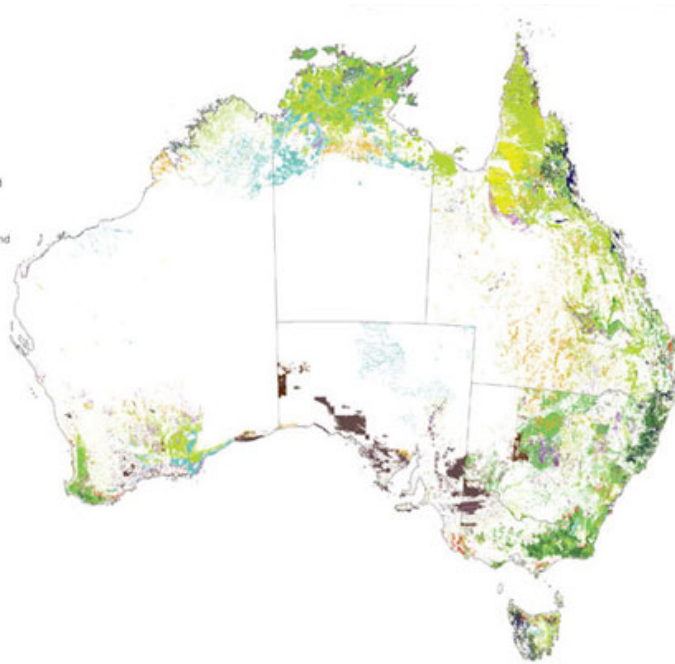


Climate



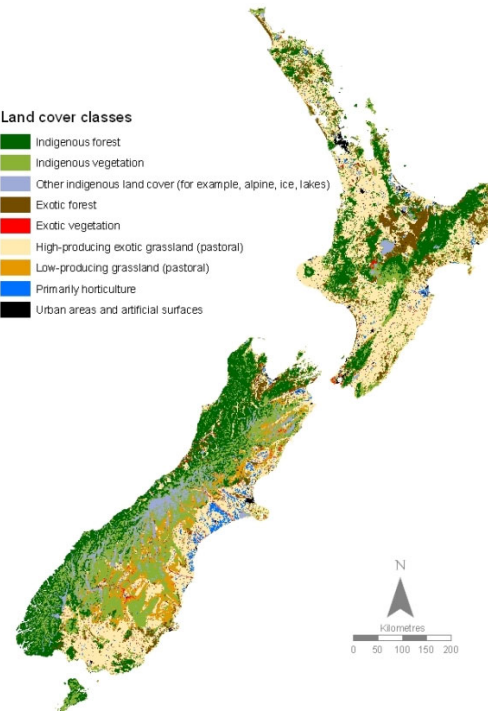
Forests of Australia and NZ

- Legend**
- Acacia
 - Callitris
 - Casuarina
 - Eucalypt low closed
 - Eucalypt low open
 - Eucalypt low woodland
 - Eucalypt mallee open
 - Eucalypt mallee woodland
 - Eucalypt medium closed
 - Eucalypt medium open
 - Eucalypt medium woodland
 - Eucalypt tall closed
 - Eucalypt tall open
 - Eucalypt tall woodland
 - Plantation
 - Mangroves
 - Melaleuca
 - Rainforest
 - Other
 - Non-forest / no data



Land cover classes

- Indigenous forest
- Indigenous vegetation
- Other indigenous land cover (for example, alpine, ice, lakes)
- Exotic forest
- Exotic vegetation
- High-producing exotic grassland (pastoral)
- Low-producing grassland (pastoral)
- Primarily horticulture
- Urban areas and artificial surfaces



Australian Forest Cover Types



Forest Cover Type	Square km	% Total
Acacia	104,000	7
Callitris	26,000	2
Casuarina	22,000	1
Eucalypt	1,164,000	78
Mangrove	10,000	1
Melaleuca	76,000	5
Rainforest	33,000	2
Other	39,000	3

High Arboreal Diversity?

- Ash
- Karri
- Stringybark
- Gum
- Blackbutt
- Tallowwood
- Jarrah
- Bloodwood
- Wandoo
- Tuart
- Box
- Mahogany
- Ironbark

All common names for different members of the genus Eucalyptus



Eucalyptus: Opposite or Alternate?



Eucalyptus: Heterophylly



Eucalyptus: Flowers & Fruits



Eucalyptus: Bark



Eucalyptus: Oil



mountain ash–
Myrtaceae *Eucalyptus regnans*



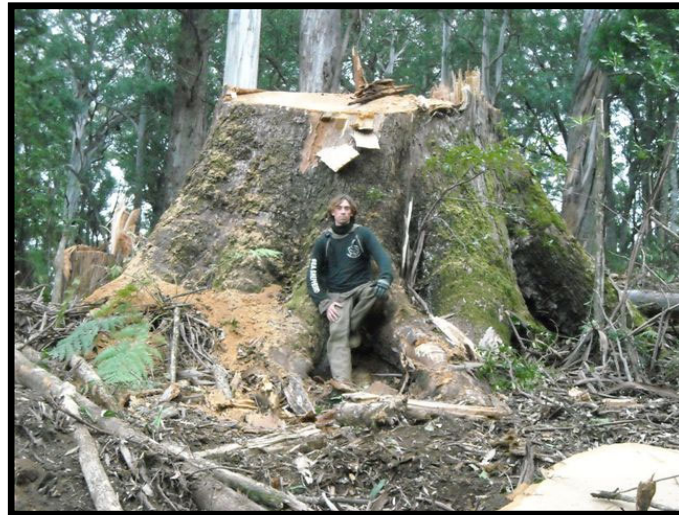
mountain ash— Myrtaceae *Eucalyptus regnans*

- Centurion
 - 101 m (331.3 feet) tall
 - 4 m (13 ft) dbh



mountain ash— Myrtaceae *Eucalyptus regnans*

- One felled in '42
- 65 ft. circumference
- Yielded 6770 CF wood
- Pulped into 75 tons newsprint
- Took 2 axemen 2.5 days to fell



mountain ash—
Myrtaceae *Eucalyptus regnans*



~75 tons

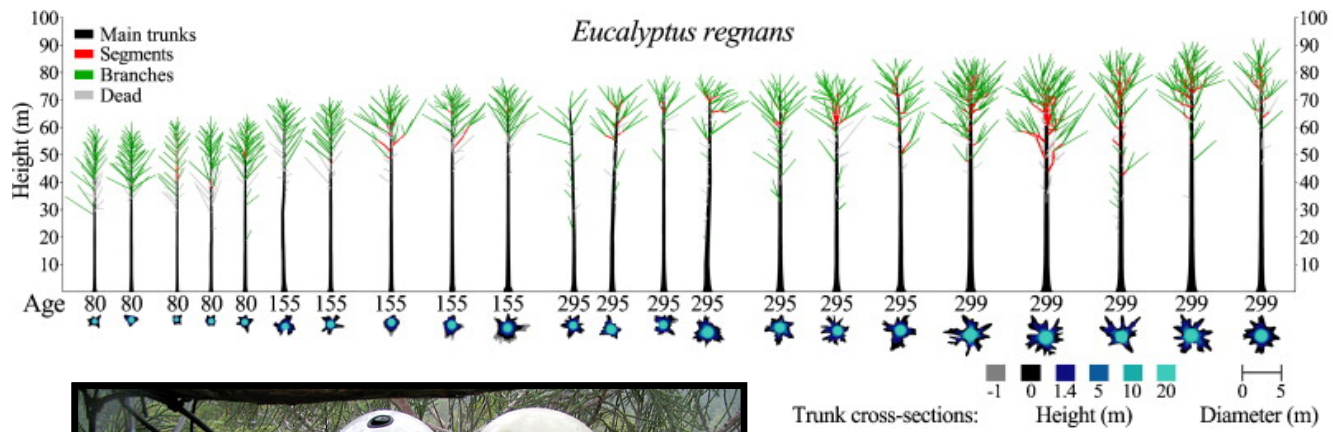


101 m

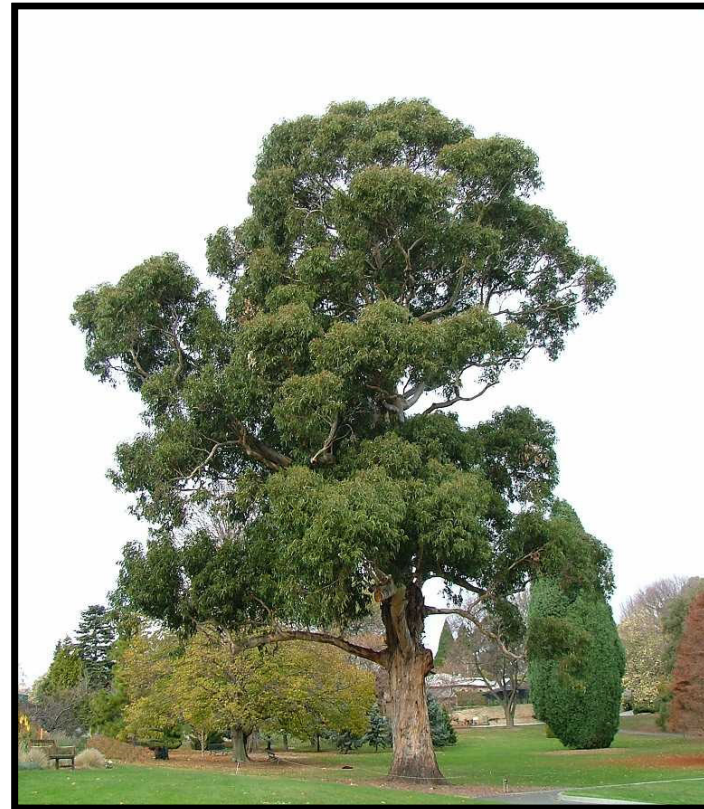
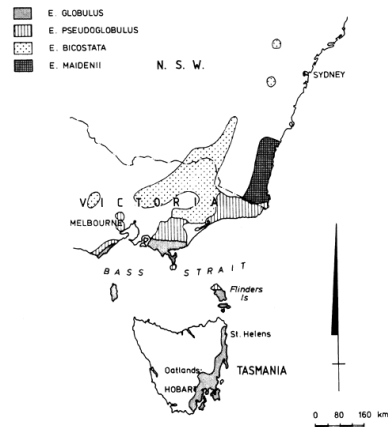
Height to scale
(width not)

31.1 m



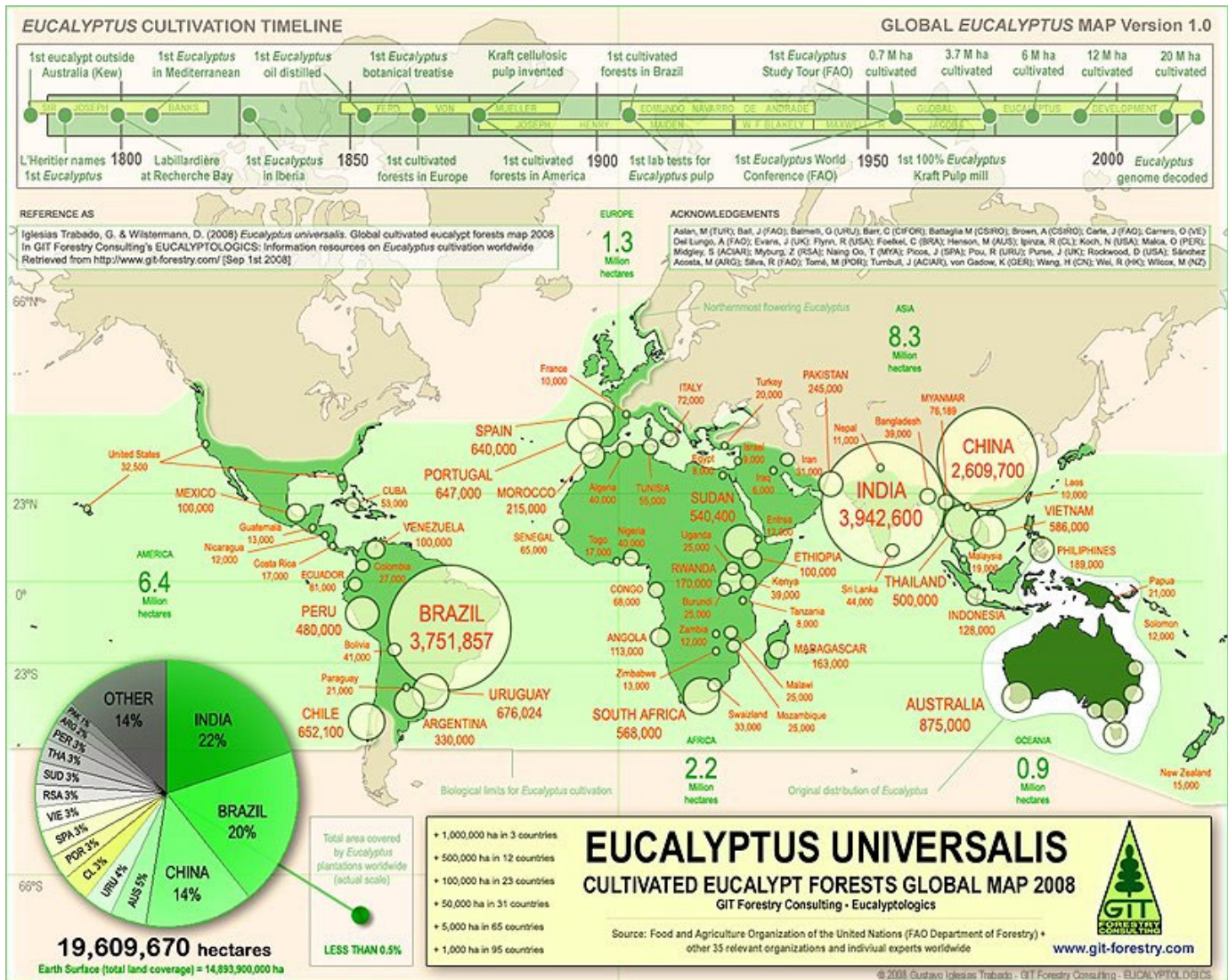


southern blue gum— Myrtaceae *Eucalyptus globulus*



southern blue gum– *Myrtaceae Eucalyptus globulus*





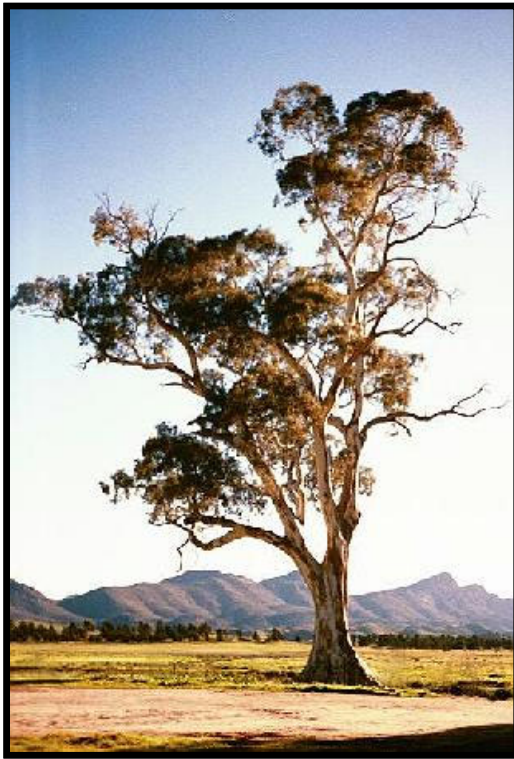
southern blue gum–
Myrtaceae *Eucalyptus globulus*



southern blue gum–
Myrtaceae *Eucalyptus globulus*



red river gum—
Myrtaceae *Eucalyptus camaldulensis*



red river gum–

Myrtaceae *Eucalyptus camaldulensis*



red river gum–

Myrtaceae *Eucalyptus camaldulensis*



- Long-lived (700+ yrs)
- Wood rot resistant
- River blackfish – managing wood in streams



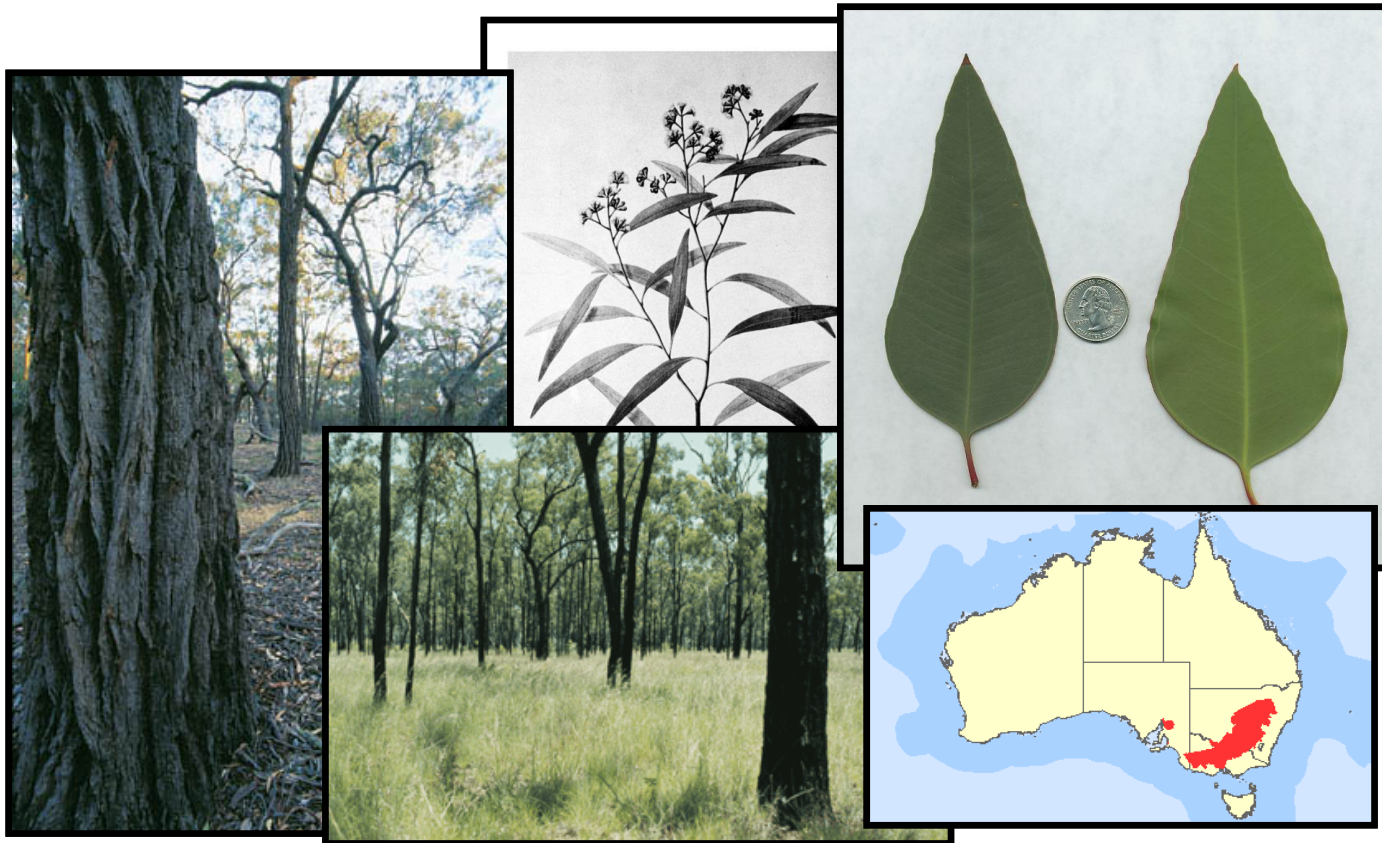
red river gum—
Myrtaceae *Eucalyptus camaldulensis*



red bloodwood—
Myrtaceae *Eucalyptus gummifera*



narrow-leaved red ironbark—
Myrtaceae *Eucalyptus crebra*



grey box—

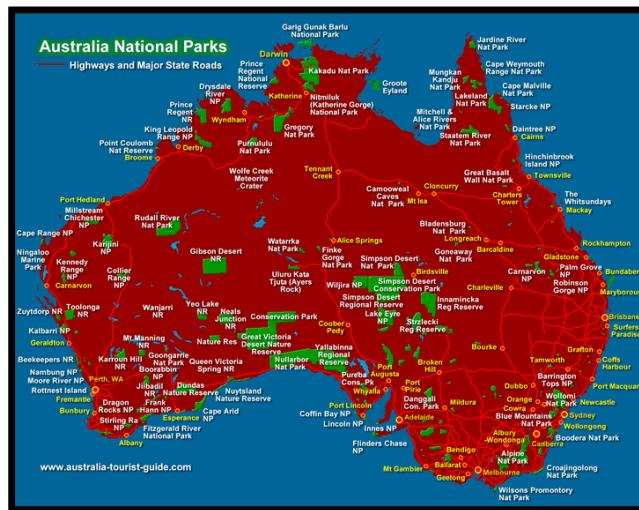
Myrtaceae *Eucalyptus microcarpa*



box-ironbark covertime conservation



box-ironbark coertype conservation



Eucalyptus and wildlife



koala



chuditch

Eucalyptus and wildlife



BUNYIP



**barking
owl**

Eucalyptus and wildlife



barking
owl

Barking owl

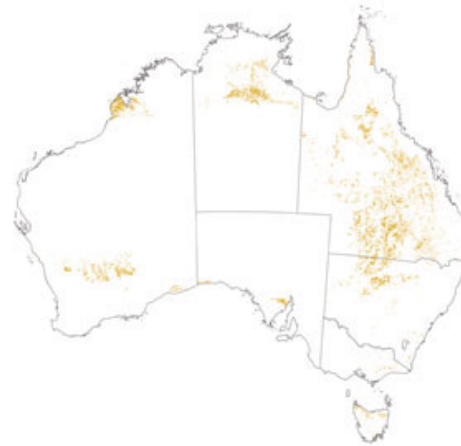
From Wikipedia, the free encyclopedia

The **barking owl** (*Ninox connivens*), also known as the **winking owl**, is a **nocturnal** bird species native to mainland **Australia** and parts of **Papua New Guinea** and the **Moluccas**. They are a medium-sized brown owl and have a characteristic voice with calls ranging from a barking dog noise to a **shrill human-like howl of great intensity**.

The **Red List of Threatened Species** refers to this species as the **barking boobook**. However, this is not used as a common name in Australia or other English speaking areas of the species range.

Acacias— Fabaceae *Acacia* spp.

- 955 species (most diverse)
- 50 arboreal
- Known as ‘wattles’

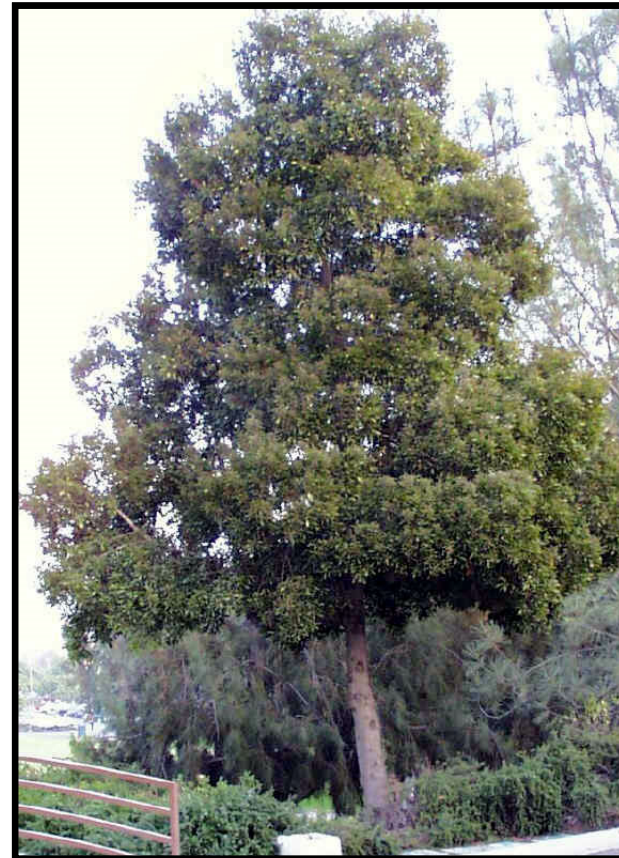


Cootamundra wattle—
Fabaceae *Acacia baileyana*



blackwood—
Fabaceae *Acacia melanoxylon*

Phyllodes



“oaks” –
Casuarinaceae *Casuarina* spp.

- Photosynthetic branchlets
- Conifers
- Colonize poor sites (N-fixers)



river oak—

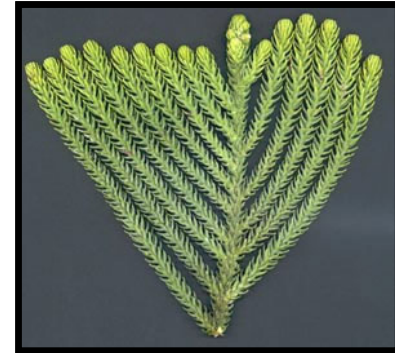
Casuarinaceae *Casuarina cunninghamiana*



“pines” –
numerous families and genera



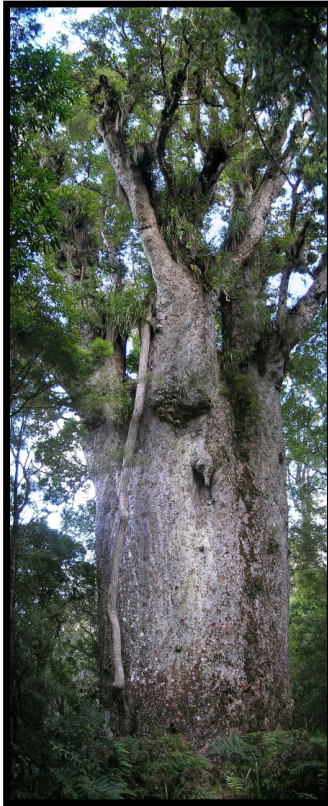
Norfolk Island pine—
Araucariaceae Araucaria heterophylla



white cypress pine—
Cupressaceae *Callitris glauca*



Kauri tree –
Araucariaceae *Agathis australis*



Kauri tree – Araucariaceae *Agathis australis*



Kauri tree –
Araucariaceae *Agathis australis*



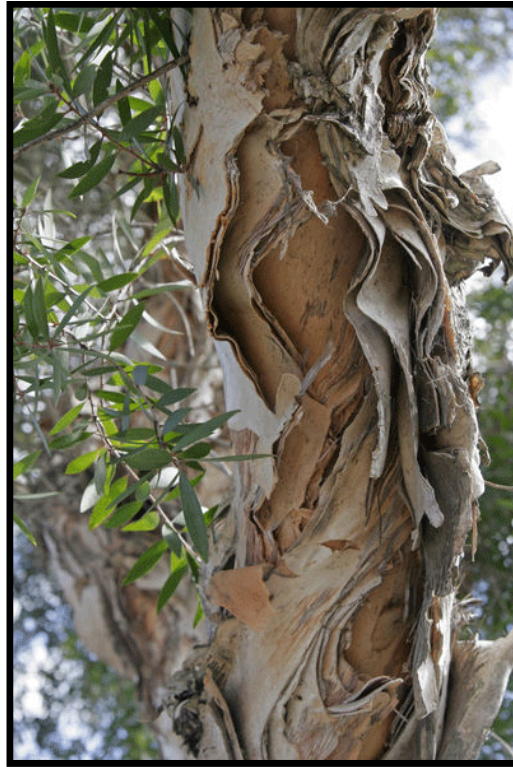
Australian baobab— Bombaceae *Adansonia gregorii*



Prison tree



Melaleuca



five-veined paperbark—
Myrtaceae *Melaleuca quinquenervia*



strangler fig –
Moraceae *Ficus obliqua*



small-stilted mangrove—
Rhizophoraceae *Rhizophora stylosa*

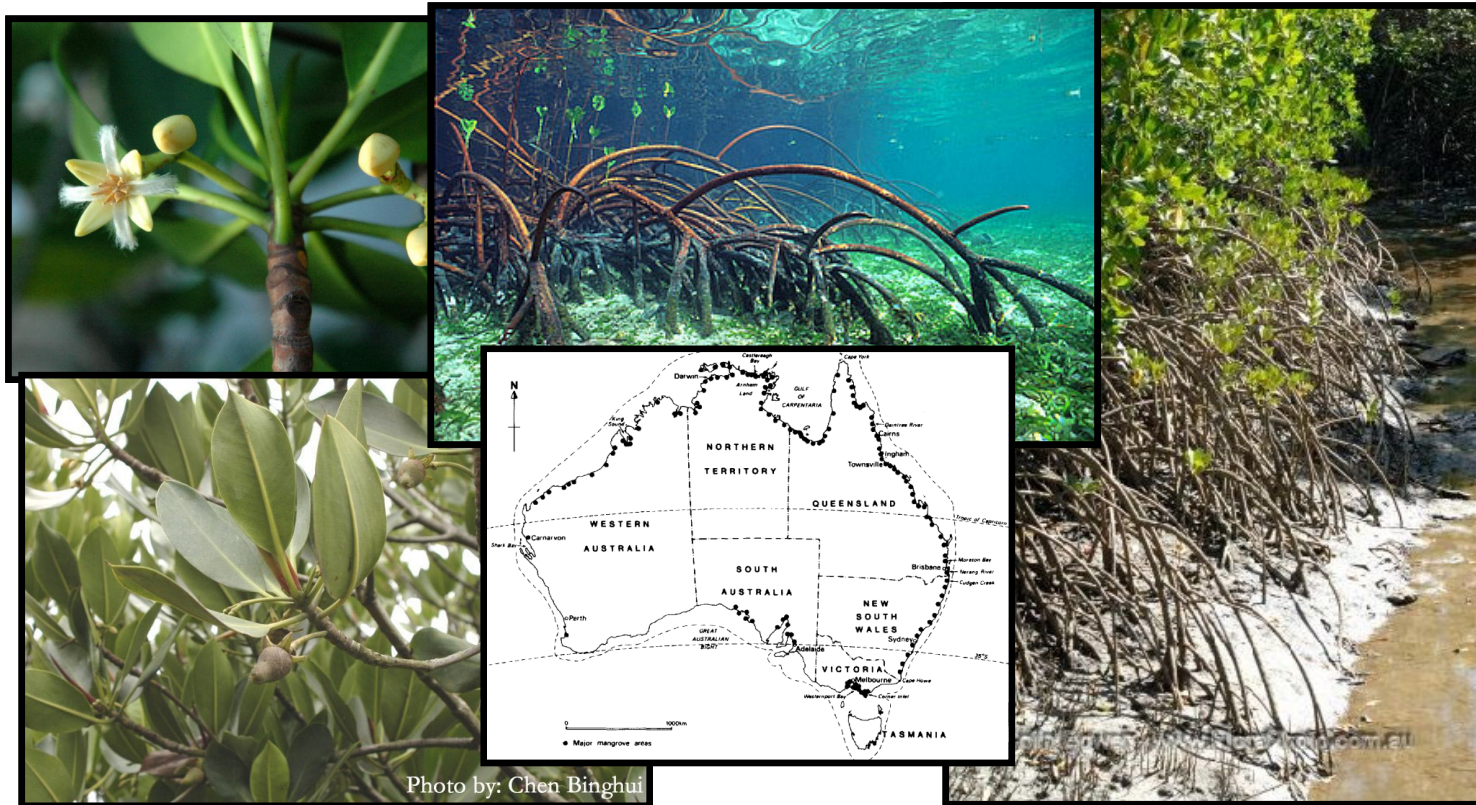


Photo by: Chen Binghui