

Coolibah – sentinels of the waterways (Eucalyptus coolabah)

These Channel Country stalwarts stand like sentinels along the banks of the Diamantina where water supplies are reliable. Further downstream, where there is less water and more salinity, the tougher coolibahs are dominant.



Coolibahs growing as outliers on floodplains at the base of sand dunes, far away from well-watered river channels, indicate the high water level of previous floods. Seeds that have been carried to the water's edge have subsequently germinated – sometimes in what appear to be surprising locations.



The riparian zone is the most frequently flooded zone and the most heavily vegetated area along arid river channels. Floods, by reducing salinity as they flush out the salts, leave behind the best conditions for trees and shrubs to establish themselves – especially the iconic, dominating coolibah. Coolibahs are regarded as the keystone of riparian species in the Lake Eyre Basin's arid and semi-arid zone river systems.

Long living – slow growing

Coolibahs can live for hundreds of years around permanent fresh waterholes. Carbon dating estimates a growth rate of about 1millimetre per year, so a tree with a diameter of 2m will potentially be 1,000 years old!



Bioengineers of the Channel Country

The coolibah is an 'ecosystem bioengineer'. The trunk blocks wind and captures water flow, trapping soil, moisture and nutrients. Its shady canopy improves microclimate – cooling the soil and providing conditions for other plants to grow in the understorey.

Once established, the coolibah taps into groundwater at depth and, via a process of hydraulic lift during dry conditions, it raises moisture to its upper soil profile where the moisture becomes available not only to its own shallower lateral root system but also to a range of soil biota and other plant life.



Tree hollows are prime spots for birds, bats and reptiles. Birds and insects feed in the canopy. Beneath the bark, spiders, bugs and lizards hunt, take refuge, and reproduce. And under the leaf litter termites and microbes feed and recycle nutrients thus breaking down leaf litter and improving carbon cycling to nearby floodplains, waterholes and channels. This feeds the system to produce forage and sustenance for cattle production and native animals.

Why is the coolibah so special?

Not only is it a great survivor of conditions that eventually defeat most riparian vegetation, on land it provides a myriad of habitats for a wide range of microbes, invertebrates and vertebrate animals. In the water, aquatic fauna benefit from the habitat provided by discarded limbs and branches that fall into waterholes.

So it's vital that new coolibahs are recruited and established. But that depends on widespread flooding – when the soils are saturated and seeds are widely scattered along river channels and across floodplains – over a number of good seasons.

In the arid zone this might be just once in a generation – or every 30 to 40 years.



Coolibah was indispensable during the establishment of the pastoral industry being utilised for the construction of highly durable fences and yards.

