

Lowland subtropical rainforest

A NATIONALLY ENDANGERED ECOLOGICAL
COMMUNITY IN SOUTH EAST QUEENSLAND



Healthy Land & Water has been working with landholders, community groups and governments to protect and restore nationally threatened ecological communities found in South East Queensland.

Lowland subtropical rainforest is nationally threatened and protected under the *Environment Protection and Biodiversity Conservation Act 1999*, Australia's national environment law.

Plants



Bird's Nest Fern
Asplenium australasicum
Epiphytic fern (grows on another plant), often found high in the crooks of trees.



Bangalow Palm
Archontophoenix cunninghamiana
Tall palm growing to more than 20 metres with evergreen foliage. Its pale purple flowers and red fruits attract birds.



Weeping Lilly Pilly
Waterhousia floribunda
An evergreen tree with wavy-edged foliage and clusters of small perfumed white flowers.



Red Lilly Pilly
Syzygium hodgkinsoniae
A rare, small, subtropical rainforest tree, growing on alluvial soils by streams in north-east New South Wales and South East Queensland.



Yellow Satinheart
Bosistoa transversa
A rare rainforest tree that is a member of the citrus family. Its flowers are small and white.



Gympie Nut
Macadamia ternifolia
One of four macadamia species that naturally occurs in South East Queensland. Macadamias are also the only Australian native plant crop that has been globally traded. In the wild they are threatened with extinction.



White Booyong
Argyrodendron trifoliolatum
A tall tree with distinctive buttresses that form on the trunks. It produces creamy bell-shaped flowers.



Lawyer Vine
Calamus muelleri
This is a vigorous climber, with sharp hooks along its leaves and stalks.



Wonga Wonga Vine
Pandorea floribunda
A woody climbing vine with heavy clusters of white tubular flowers.

Animals



Coxen's Fig-parrot
Cyclopsitta diophthalma coxeni
There are very few records of the nationally endangered Coxen's Fig-parrot. It is an attractive, small, predominantly green parrot, often confused with several species of lorikeet.



Grey-headed Flying-fox
Pteropus poliocephalus
The largest bat in Australia, listed as nationally vulnerable. It has a dark-grey body, light-grey head and reddish-brown neck collar of fur.



Large-eared Pied Bat
Chalinolobus dwyeri
The vulnerable Large-eared Pied Bat is a medium-sized insectivorous bat with short, broad wings.

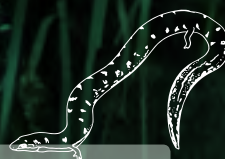


Richmond Birdwing Butterfly
Ornithoptera richmondia
This threatened butterfly is one of the region's largest. The male is very brightly coloured and larvae only feed on Birdwing Vines.



Red-legged Pademelon
Thylogale stigmatica
A small marsupial with brown-grey grizzled pelt and a bright reddish-brown face, side and rear legs. Generally solitary, but may feed in groups.

Giant Barred Frog
Mixophyes iteratus
This frog is the second largest frog in Australia. It has banded legs and a distinctive guttural call. Once common from South East Queensland to the Sydney Basin, it's now restricted to fragments of rainforest.



Three-toed Snake-tooth Skink
Coeranoscincus reticulatus
This vulnerable skink has reduced limbs, each with three digits.

This rainforest is an example of an 'ecological community'. An ecological community is a group of plants and animals that interact with each other in a given location.

Once one of Australia's most extensive rainforests, much of lowland subtropical rainforest has been cleared or degraded. Now only fragmented patches remain, commonly alongside creeks.



Know your forest

Officially known as Lowland Rainforest of Subtropical Australia, this is a nationally listed critically endangered rainforest community only found in low-lying areas of eastern Australia (Queensland and New South Wales).

Lowland subtropical rainforest is home to a wide diversity of animal and plant species. The soils are rich in nutrients and the moist environment supports the growth of many plants with fruits and leaves that have a high nutritional content.

The flora and fauna that make up this forest live in a delicate balance with each other, spreading seeds, breaking down dead material, recycling nutrients and playing a key role in the water cycle. Even small disturbances to the ecosystem can have a large impact to this rainforest community.

Lowland subtropical rainforest occurs from Maryborough, Queensland, south to the Hastings River (near Port Macquarie) in New South Wales. This brochure's map shows where it is found in South East Queensland.

Why it's so special

Rich in plant life

These subtropical forests are usually tall with a closed canopy featuring layers of many tree species, with an understorey of tangled vines, lush ferns and palms.

There is an incredible richness of plant species, including more than 30 native woody species per forest patch. In some areas, one particular plant species can be dominant, so palm forests may be characterised by Bangalow or Cabbage Palms, while forests near creeks may be dominated by the Weeping Lilly Pilly.

Home to threatened animals

Many native animals under threat of extinction rely on these subtropical habitats, including Coxen's Fig-parrot, the Giant Barred Frog, the Three-toed Snake-tooth Skink, the Red-legged Pademelon and the Richmond Birdwing Butterfly.

Culturally invaluable

Lowland subtropical rainforests have long had importance for Aboriginal people, who seasonally gathered food and raw materials, such as macadamia nuts, figs, wild grapes, yams, conjevoi roots, the heart of Bangalow and Cabbage Palms, Black Bean seeds, brush turkeys, bandicoots, pademelons and small wallabies. Fibre from the bark of the Giant Stinging Tree was used to make nets for fishing and hunting.

As traditional ecological knowledge continues to be recorded here in South East Queensland, the understanding of the cultural heritage values this rainforest community has for various traditional owner groups will continue to grow.

What you can do

Whether you are a first-time hobby farmer or a third generation grazier, there are a range of programs and support services to help you protect what remains of this endangered rainforest on your land.

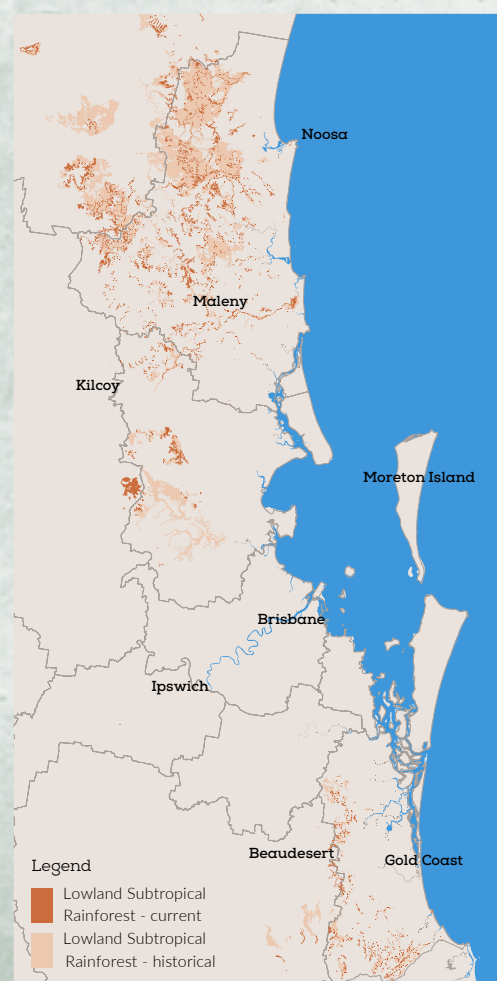
The first step is to work out whether you have lowland subtropical rainforest on your property. The Australian Government has produced a brochure *Lowland Rainforest & Landholders* that provides technical details, but interpreting this can be a tricky step for those not used to identifying native plants. We welcome you to contact **Healthy Land and Water** and speak to one of our friendly community partnership managers.

Working together

As in our personal lives, the importance of relationships cannot be underestimated. Sharing local knowledge, expertise and resources is an effective approach to help achieve good on-ground outcomes. Working with community groups, individuals, local councils and industry is crucial in helping deliver on ground results.

Get in touch with **Healthy Land and Water** or any of the organisations listed on the back of this brochure to connect with people who understand the challenges you face in your area and find out how you can be part of protecting this nationally endangered ecological community.

Lowland subtropical rainforest usually grows more than two kilometres from the coast and at less than 300 metres above sea level in areas of eastern Australia that have more than 1300 mm of rainfall a year.



Current and historical extent of lowland subtropical rainforest in South East Queensland

Mapped areas are potential locations of lowland subtropical rainforest communities based on the best available regional information. The areas are overestimates of this rainforest's extent, and may include other related ecosystems. Further verification is required.

Threats



Weeds



Clearing



Trampling

Why it's under threat

South East Queensland has one of the fastest growing populations in Australia. It is not surprising therefore that this places a lot of pressure on our natural resources, including these fragile forests.

'Connectivity' is important as it allows species to move more easily across the landscape, whilst also recreating a healthy, more resilient ecosystem that is closer to what would have once existed right across the region.

As with many ecosystems that were once connected across a landscape, lowland subtropical rainforest is now found in a highly fragmented state. Managing these areas can help rebuild the connectivity of these remaining patches.

The menace of weeds

All weeds compete with native plants for space, water and nutrients.

Vine weeds smother native plants, preventing flowering, fruiting and regeneration. They can even eventually kill large mature trees. Common vine weeds include Madeira Vine, Asparagus Vine, Cat's Claw Creeper and Morning Glory.

Overstorey weeds, usually trees and other woody weeds, out-compete native species in the overstorey, or canopy, of the forest, such as the invasive Small-leaved Privet and Camphor Laurel.

In the rainforest understorey, **shrub weeds** such as Lantana and Giant Devil's Fig may form dense thickets that can smother native vegetation.

At ground level, Broad-leafed Paspalum, Singapore Daisy, introduced grasses and **other smaller weeds** can prevent native species from growing by forming

a blanket on the forest floor. These plants tend to spread easily and prevent natural regeneration of native species.

How to tackle weeds

Constant vigilance and an ongoing maintenance program is crucial to weed control. As part of long-term management plans, key problem species must be eliminated, natural regeneration promoted and in some cases local native species reintroduced.

Livestock and pest animal issues

Trampling, browsing and grazing by pest animals and livestock, especially along creek lines, is a serious management issue for lowland subtropical rainforests.

Managing animal issues

Creek lines, where this rainforest is commonly found, are best fenced off to manage stock access, reduce erosion and enable natural regeneration.

Pest animal control requires an integrated management approach.

Clearing, disturbance and modification

Sadly, much of this rainforest has been cleared, so it is critical to protect and enhance remnant and regrowth rainforest areas.

Restoring remaining patches

Where rainforest patches are isolated from each other or from other native vegetation, 'buffer zones' can be developed to assist natural regeneration to improve connectivity between patches.

One technique involves planting pioneer local native species around the edges of existing rainforest, or in areas where rainforest used to occur, to facilitate natural regeneration.

Find out more

Healthy Land and Water

If you are interested in finding out more about how to identify or manage lowland subtropical rainforest on your property, our team at Healthy Land and Water can provide advice and information, as well as information on funding available for the South East Queensland region.

Ph: 07 3177 9100 E: info@hlw.org.au
www.hlw.org.au

Land for Wildlife

If you are part of the Land for Wildlife program, or are interested in signing up your property, then get in touch with your local Land for Wildlife coordinator. Please visit www.lfwseq.org.au for more information.

Your local catchment or Landcare group

www.landcareaustralia.com.au

Australian Government

www.environment.gov.au

- Lowland Rainforest & Landholders factsheet
- Conservation status and distribution around Australia
- Ecological communities and the Environment Protection and Biodiversity Conservation (EPBC) Act
- Detailed description of the vegetation in the listing advice to the Minister, pg 2-3, under Vegetation Structure and Fauna

Helpful resources

South East Queensland Ecological Restoration

Framework, 2012
www.hlw.org.au

Weeds of Southern Queensland, 3rd edition,
Weed Society of Queensland

Credits

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The Australian Government invested in the protection of ecological communities such as Lowland Subtropical Rainforest, through its Caring for our Country program. As a result of this funding, between 2012-2013 Healthy Land & Water worked with landholders across South East Queensland to restore and reconnect more than 60 hectares of this rainforest. This was a successful program and much more could be done with more funding to continue this work.