Local Land Services

Koala

Phascolarctos cinereus

Credit: Kelly Coleman

An icon of the Hunter and Mid Coast

Koalas are a tree dwelling, leaf-eating marsupial; its closest relative is the wombat.

The koala's diet consists of about 70 eucalypt species and 30 non-eucalypt species. Koalas have a specialised digestive system to break down and absorb nutrients from the large quantities of leaves they consume.

They are mostly nocturnal, sleeping up to 18–20 hours each day to conserve the energy they must use to digest their food.

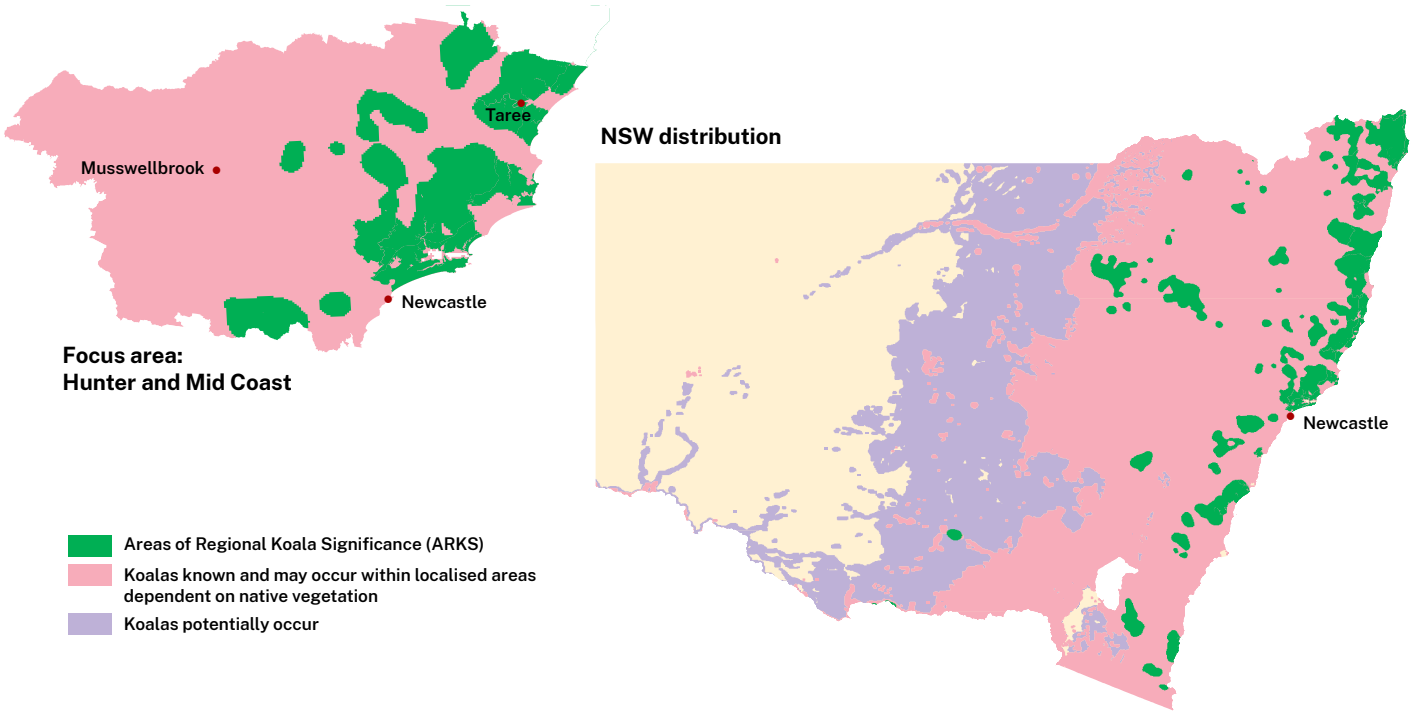
Koalas hold significant Cultural importance to Aboriginal communities in the Hunter region. They are often seen as totemic animals, representing ancestral connections, and are integral to spiritual beliefs and Dreamtime stories.

Additionally, koalas are often depicted in Aboriginal art, symbolising the connection to the land and its native fauna. However, it's important to note that the relationship between Aboriginal Culture and koalas varies among different Indigenous groups across Australia. Overall, koalas play a vital role in the Cultural heritage and traditions of Aboriginal peoples in the Hunter region.

Early European settlers hunted koalas for furs, which drastically affected koala numbers and led to localised extinction in some areas.

Koala populations are fragmented across much of NSW and are in danger of population decline, towards extinction.

NSW GOVERNMENT



Are koalas found near you?

Koalas are found in a variety of habitats both sides of the Great Dividing Range from the Atherton Tablelands west of Cairns in Queensland, to the Mount Lofty ranges in South Australia. Populations have become very fragmented since European settlement.

In the Hunter and Mid Coast regions, this species is mainly found within 40 kilometres of the coastline, with significant populations located between Nelson Bay and Newcastle, north through Medowie, and between Upper Myall and Smiths Lake. A significant population is located around Taree, Kiwarrak and nearby Hallidays Point. There are also clusters of recent records around Clarence Town, northwest of Bulahdelah and around Wollombi–Laguna.

Why they are important?

Each day a koala can eat around 500 grams of toxic eucalyptus leaves, which most other animals cannot tolerate. This helps to trim back trees and recycle nutrients back to the soil.

They are an iconic species that benefit Australia's economy. It has been estimated that they create over 9,000 jobs and contribute between 1–2.5 billion dollars per year to tourism.

Koala's conservation status is currently listed as **Endangered** by both the New South Wales and Australian Governments.

Habitat

Koalas have a complex social system and hierarchy, and individual home ranges overlap extensively. The size of each koalas range depends on the quality of habitat.

Within healthy forest on good soil and with adequate moisture, breeding females often dominate better quality habitat so energy is conserved when rearing young whilst males are often pushed into poorer quality habitat. In poor quality habitat a koalas range may be several hundred hectares. Under most conditions, koalas move between trees a few times each day. Dispersing individuals, mostly young males, may cover distances of ten kilometres.

Shade trees across their distribution are important, especially in areas that experience consistently higher temperatures, such as the Upper Hunter. Trees with dense canopies, that offer cooling micro-climates, known as shade trees, are important for koalas as they provide protection from dehydration during the summer months. When planting koala food trees, mix in shade trees too as this will keep koalas healthy. Koalas are known to feed on shade trees too, such as *Casuarina*, *Exocarpus*, *Acacia*, *Melaleuca* and *Hakea* species.

Credit: Kelly Coleman

Threats

In the 1890s to 1930s, hunting decimated koala populations, with more than 4 million koalas killed for their fur, including 800,000 in Queensland during August 1927. In NSW, the decline in koala populations between 1990 and 2010 was estimated at 33%.

Koalas prefer forests growing in better soils due to the better nutritional value within tree leaves. As this forest was cleared to make way for development and agricultural pursuits, koalas have struggled within small isolated patches of forest.

Threats include:

- loss and fragmentation of habitat
- predation or attack from wild and domestic dogs as well as livestock, such as cattle and horses
- low genetic diversity in isolated populations
- mortality due to vehicle collision
- malnutrition
- climate change
- heat waves, drought and dehydration
- intense/hot or canopy fire
- disease.

Stress from multiple threats can cause koalas to be more susceptible to disease. Chlamydia is a highly infectious bacterial disease that is severely affecting koala health. Infections of the respiratory tract, eyes, urinary tract and reproductive tract can lead to blindness, infertility in female koalas and may be fatal. Visible symptoms include discharge from the eyes and wet bottoms.

Climate change is expected to lead to increased frequency of high temperatures, changes to rainfall, increasing frequency and intensity of droughts, and increased large scale wild fires over much of the koala's range. As koalas have no ready means of avoiding weather extremes, it is thought they are more susceptible to these changes.

Planting koala feed and shade trees, preferably near water sources, provides valuable habitat for this species enabling them to move between remaining vegetation patches and ensuring their ongoing survival. For more information download: **Planting your patch** (click the QR code).

Above: Owen the koala was found in the burnt forest and released the same day after he was checked by a vet and tagged.
Credit: Murraya Lane via ABC News

Left: Koala walking along a road.

Below: Koala revegetation in progress. A partnership project between Mid Coast Council and Local Land Services.

Identification

Koalas can live up to 14 years in the wild. The largest koalas found in this area reach about 10 kg in weight. They communicate with their young by making soft clicking, squeaking sounds or gentle murmuring. They are also capable of making loud screams. They make low grunting growls to defend home range, particularly during the breeding season in spring-summer.

Breeding season in the Hunter and Mid Coast area is August–April depending on weather. Mature breeding males can be easily identified by a brown scent gland on the centre of their chest, which is used to mark their home trees.

Koalas thick and woolly fur helps to protect them from winter and summer extreme temperatures while also serving to repel moisture when it rains. Colouration of their coats varies from light grey to brown. Koalas in the southern areas of Australia are larger and tend to have a darker, thicker coat than those in the north. White patches of fur usually occur inside the ears, on their chin, neck and chest, inside front limbs, occasionally on the hind limbs and in various patterns on their rump.

The koala has front and hind limbs of nearly equal length. Although it has no tail, the koala has a great sense of balance and is an excellent climber. Long claws and rough pads on palms and soles assist in gripping tree trunks and branches. The koala's large, leathery nose has a highly developed sense of smell that can differentiate between types of eucalyptus leaves and the levels of toxicity contained within them.

Look for the signs

Scratches

Scratch marks can be seen on visited trees. Other animals also leave scratches, such as possums. Koala marking include long, evenly-spaced scratches surrounded by multiple 'pin-pricks' from the tips of the claws. This is best seen on smooth-barked trees.

Scats

Pellet-shaped droppings (scats) can be found at the base of trees koalas have visited. Features include:

- about 2–3 cm long
- thin chocolate brown coating
- fresh scat is pale green
- may smell like eucalyptus oil
- ridge or vertical stripes along the pellet
- will have a clean 'break' with no signs of fur or insects.

Top: Strong claws.
Above left: Male koala in a tree.
Above right: Scratch marks left on trees show claw signs.
Right: Koala scat.

Credit: Kelly Coleman

Main koala food trees

Mid Coast and Lower Hunter

Primary food tree species

Tallowwood	*Eucalyptus microcorys*
Parramatta red gum	*E. parramattensis*
Forest red gum	*E. tereticornis*
Orange gum	*E. bancroftii*
Small-fruited grey gum	*E. propinqua*
Swamp mahogany	*E. robusta*
Cabbage gum	*E. amplifolia*

Secondary food tree species

Narrow-leaved red gum	*E. seeana*
Craven grey box	*E. largeana*
Slaty red gum	*E. glaucina*
Grey gum	*E. biturbinata*
Large-fruited grey gum	*E. canaliculata*
Red mahogany	*E. resinifera*
Steel box	*E. rummeryi*
Mountain mahogany	*E. notabilis*
Rudder's box	*E. rudderi*
Grey box	*E. moluccana*
White-topped box	*E. quadrangulata*
Yellow box	*E. melliodora*

Stringybarks/supplementary species

Stringybark	*E. tindaliae*
Blue-leaved stringybark	*E. agglomerata*
Thin-leaved stringybark	*E. eugeniodes*
Diehard stringybark	*E. cameronii*
White stringybark	*E. globoidea*

Upper Hunter

Primary food tree species

Ribbon gum	*Eucalyptus viminalis*
Cabbage gum	*E. amplifolia*
Forest red gum	*E. tereticornis*

Secondary food tree species

Forest ribbon gum	*E. nobilis*
Large-flowered bundy	*E. nortonii*
Yellow box	*E. melliodora*
Snow gum	*E. pauciflora*
Monkey gum	*E. cypellocarpa*
Fuzzy box	*E. conica*
Bundy	*E. goniocalyx*
White box	*E. albens*
Apple-topped box	*E. bridgesiana*
Dwyer's red gum	*E. dwyeri*
Blakely's red gum	*E. blakelyi*
Mountain gum	*E. dalrympleana*
Tumbledown gum	*E. dealbata*
Grey box	*E. moluccana*
River red gum	*E. camaldulensis*

Stringybarks/supplementary species

Silver-topped stringybark	*E. laevopinea*
Red stringybark	*E. macrorhyncha*

Left: *Eucalyptus tereticornis*
Credit: Geoffrey Sinclair CC-BY

Middle: *Eucalyptus melliodora*
Credit Nick Lambert CC-BY-NC-SA

Right: *Eucalyptus microcorys*
Credit: Martin Bennett CC-BY-NC

You can help koalas

Keep vegetation on your block. Maintain and protect eucalypts and other native vegetation. Control invasive weeds that inhibit the growth of natives.

Plant feed and shelter trees for koalas which are native to your area. Your local Landcare and koala networks can help you identify appropriate species.

You can help improve habitat and connectivity through revegetation. See your local contacts below to see what support is available.

Carry the phone number for your local wildlife rescue group with you in case of sick or injured koalas – see below.

Provide water sources, like bowls, of clean and shallow water in known koala habitat in times of drought or extreme heat.

Watch for koala signs on the roads. They have poor eyesight and seem to be oblivious to the threats posed by motor vehicles, trucks and trains.

Keep dogs, cattle and horses out of known koala habitat.

Install wildlife friendly fencing on your property. Click the QR code for more information.

Report any sightings. Click the QR code and follow the instructions.

Access information on what you can do to help koalas at: www.koala.nsw.gov.au

NSW GOVERNMENT

Landcare New South Wales

MIDCOAST council

For more information

Hunter Local Land Services
1300 795 299
admin.hunter@lls.nsw.gov.au
lls.nsw.gov.au/regions/hunter

Department of Climate Change, Energy, the Environment and Water (DCCEEW)
1300 361 967
info@environment.nsw.gov.au
environment.nsw.gov.au

Koala Country NSW
koala.nsw.gov.au

MidCoast Council
02 7955 7777
council@midcoast.nsw.gov.au
midcoast.nsw.gov.au

Hunter and Mid Coast Landcare
hunterlandcare.org.au
midcoast2tops.org.au

Regional Landcare Coordinator
Henrietta Mooney — 0418 399 281
regionalhunterlandcare@gmail.com

Mid Coast 2 Tops Landcare Connection
Local Landcare Coordinator — Great Lakes
Joel Dunn — 0401 932 533
joel.kgl.landcare@gmail.com

Local Landcare Coordinator — Manning
Lyn Booth — 0427 530 681
lyn.manninglandcare@gmail.com

Local Landcare Coordinator — Coast
Helen Kemp — 0401 606 463
helen.manningcoastcare@gmail.com

Hunter Region Landcare Network Inc.
Local Landcare Coordinator — Lower Hunter
Stacy Mail — 0429 444 305
lowerhunterlandcare@gmail.com

Local Landcare Coordinator — Upper Hunter
Paul Melehan — 0408 499 838
upperhunterlandcare@gmail.com

Atlas of Living Australia
ala.org.au

Rescue groups

Koalas In Care Inc.
24hr Koala Rescue
Mid Coast LGA area — 0439 406 770

Port Stephens Koalas
1800 775 625

Native Animal Trust Fund/Hunter Wildlife
Lower Hunter area — 0418 628 483

Wildlife In Need of Care
Port Stephens area — 1300 946 295