

Listed below are species recorded from the project areas of Goonengerry Landcare and Wilsons Creek Huonbrook Landcare groups. Additional species are known from adjacent National Parks.

E = Endangered V = Vulnerable

BCA - Biodiversity Conservation Act 2016

EPBC - Environment Protection and Biodiversity Conservation Act 1999

SOS - Saving our Species

Scientific name	Common name	TSC Act status	EPBC Act status	SOS stream
PLANTS				
<i>Corokia whiteana</i>	Corokia	V	V	Keep watch
<i>Davidsonia johnsonii</i>	Smooth Davidson's Plum	E	E	Site managed
<i>Desmodium acanthocladium</i>	Thorny Pea	V	V	Site managed
<i>Diploglottis campbellii</i>	Small-leaved Tamarind	E	E	Site managed
<i>Doryanthes palmeri</i>	Giant Spear Lily	V		Keep watch
<i>Drynaria rigidula</i>	Basket Fern	E		Partnership
<i>Elaeocarpus williamsianus</i>	Hairy Quandong	E	E	Site managed
<i>Endiandra hayesii</i>	Rusty Rose Walnut	V	V	Data deficient
<i>Endiandra muelleri</i> subsp. <i>bracteata</i>	Green-leaved Rose Walnut	E		Data deficient
<i>Floydia praealta</i>	Ball Nut	V	V	Site managed
<i>Hicksbeachia pinnatifolia</i>	Red Boppel Nut	V	V	Keep watch
<i>Macadamia tetraphylla</i>	Rough-shelled Bush Nut	V	V	Site managed
<i>Ochrosia moorei</i>	Southern Ochrosia	E	E	Site managed
<i>Owenia cepiodora</i>	Onion Cedar	V	V	Site managed
<i>Senna acclinis</i>	Rainforest Cassia	E		Site managed
<i>Syzygium hodgkinsoniae</i>	Red Lilly Pilly	V	V	Site managed
<i>Syzygium moorei</i>	Durobby	V	V	Site managed
<i>Tinospora tinosporoides</i>	Arrow-head Vine	V		Site managed
<i>Uromyrtus australis</i>	Peach Myrtle	E	E	Site managed

VEGETATION COMMUNITITES	CLASSIFICATION AND RELEVANT ACT
Lowland Rainforest in NSW North Coast and Sydney Basin Bioregion	Endangered Ecological Community - BC Act
Lowland Rainforest on Floodplain in the NSW North Coast Bioregion	Endangered Ecological Community - BC Act
Lowland Rainforest of Subtropical Australia	Critically Endangered - EPBC Act

For more information on individual threatened species in NSW visit

www.environment.nsw.gov.au/threatenedspeciesapp/

For more information on the Saving our Species program visit

www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species/saving-our-species-program

For more information on threatened species under the EPBC Act visit

www.environment.gov.au/biodiversity/threatened

Locations of individual species can be explored at the Atlas of Living Australia www.ala.org.au

Information for this leaflet is sourced from The Office of Environment and Heritage, Saving our Species, Birds in Backyards, Birdlife Australia, WIRES Northern Rivers, The Australian Museum, and the Atlas of Living Australia.

Bush Connect Project "Regeneration and Linkage of Wilsons and Coopers Creeks"

This project has been assisted by the New South Wales Government through its Environmental Trust.



Threatened Species of Wilsons and Coopers Creek

Wilsons Creek and Coopers Creek are tributaries of the Wilsons River on the Far North Coast of New South Wales. Within the South East Queensland Bioregion, the native flora and fauna of this region are among the most diverse in Australia. In the catchment areas of the Wilsons and Coopers Creek 50 threatened species of flora and fauna can be found and 2 endangered ecological communities.

What is a threatened species?

Plants and animals are assessed on the threats that face them and the level to which they are at risk of extinction. If the risk is high they are listed in legislation and conservation actions are developed for their protection. There are almost 1000 animal and plant species at risk of extinction in NSW.

A species is considered threatened if:

- there is a reduction in its population size
- it has a restricted geographical distribution, or
- there are few mature individuals.

There are 2 legislations that apply to threatened species:

■ The Biodiversity Conservation Act 2016 (NSW)

The new NSW Act began on 25 August 2017 replaces the *Threatened Species Conservation Act 1995* and is administered by the Office of Environment and Heritage. A species may be listed under the NSW Biodiversity Conservation Act 2016 as:

- vulnerable
- endangered
- critically endangered, or
- presumed extinct.

Saving our Species is a statewide program that aims to secure threatened plants and animals in the wild in NSW. The *Saving our Species* program has 9 management streams:

- Site managed species
- Landscape managed species
- Iconic species
- Threatened Ecological Communities
- Data deficient species
- Threatened populations of a species
- Key Threatening processes
- Partnership Species
- Keep Watch Species

■ Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)

The EPBC Act is the Australian Government's key piece of environmental legislation which provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places.

On the following pages you will find information on some of the species and on the back pages are a full list of the threatened species found in the Wilsons And Coopers Creek catchments.

Bush Connect Project "Regeneration and Linkage of Wilsons and Coopers Creeks"



Albert's Lyrebird *Menura alberti* is a large, long-tailed, mostly ground-dwelling bird with rich chestnut brown plumage, which is slightly paler and greyer below. The male has a long and beautiful tail combining ribbon-like plumes, filamentary feathers, and broad 'lyrates'. The female has a shorter and more simply structured tail which appears more pointed. Albert's Lyrebirds are much more often heard than seen; they are shy and wary and difficult to approach. The males call is a far-carrying *caw-cree-craw-craw-wheat* or similar phrases. Both sexes mimic other species. Alarm call, piercing *whisk-whisk*. To hear their call visit <http://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10525>. In display, the male spreads its tail forward over its head and body and shivers it, while calling loudly. Mainly occur in the wettest rainforests or wet

sclerophyll forests with a wet understorey, often of rainforest plants. They feed on the ground, usually where there is a deep, moist layer of leaf-litter, and fallen logs. They eat invertebrates that live in soil and leaf-litter, particularly insects and their larvae, but, fairly surprisingly, they have not yet been observed to eat earthworms. Albert's Lyrebirds are solitary birds, and at least the males are territorial and it is likely that the females are too. They breed over winter, with clutches found between late May and mid-August. The nest is built on a rocky ledge, in fissures in rocks, between rocks, or occasionally in caves on steep rock faces or cliffs. Females lay a single egg, and do all the parental care, with the male taking no role.

Photo: www.forksound.blogspot.com/2009/10/lyre-bird-species-list



Masked Owl *Tyto novaehollandiae* is a medium-sized owl to 40 - 50 cm long, with dark eyes set in a prominent flat, heart-shaped facial disc that is encircled by a dark border. The feet are large and powerful, with fully feathered legs down to the toes. The owl exists in several colour forms, with wide variation in plumage. The upperparts are grey to dark brown with buff to rufous mottling and fine, pale spots. The wings and tail are well barred. The underparts are white to rufous-brown with variable dark spotting. Extends from the coast where it is most abundant to the western plains. Overall records for this species fall within approximately 90% of NSW, excluding the most arid north-western corner. There is no seasonal variation in its distribution. Lives in dry eucalypt forests and woodlands from sea level to 1100 m. A forest owl, but often hunts along the edges of

forests, including roadsides. The typical diet consists of tree-dwelling and ground mammals, especially rats. Other prey animals include possums, reptiles, birds and insects, with hunting taking place in the early hours of night. The birds sit on low perches listening for prey which, once detected, is taken from the ground or from the tree branches. Pairs have a large home-range of 500 to 1000 hectares but are territorial and will remain in their home range all year round. Roosts and breeds in moist eucalypt forested gullies, using large tree hollows or sometimes caves for nesting. The call is a deep rasping screech. To hear their call visit <http://www.birdsinbackyards.net/species/Tyto-novaehollandiae>

Photo: www.wikimedia.org JJ Harrison

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Scientific name	Common name	BCA Act status	EPBC Act status	SOS stream
INSECTS				
<i>Phyllodes imperialis southern subspecies</i>	Southern Pink Underwing Moth	E	E	Data deficient
AMBHIBIANS				
<i>Assa darlingtoni</i>	Pouched Frog	V		Keep watch
<i>Philoria loveridgei</i>	Loveridge's Frog	E		Landscape
REPTILES				
<i>Hoplocephalus stephensii</i>	Stephens' Banded Snake	V		Landscape
BIRDS				
<i>Amaurornis moluccana</i>	Pale-vented Bush-hen	V		Partnership
<i>Atrichornis rufescens</i>	Rufous Scrub-bird	V		Landscape
<i>Calyptorhynchus lathamii</i>	Glossy Black-Cockatoo	V		Landscape
<i>Carterornis leucotis</i>	White-eared Monarch	V		Partnership
<i>Coracina lineata</i>	Barred Cuckoo-shrike	V		Landscape
<i>Ixobrychus flavicollis</i>	Black Bittern	V		Landscape
<i>Menura alberti</i>	Albert's Lyrebird	V		Landscape
<i>Pandion cristatus</i>	Eastern Osprey	V		Landscape
<i>Podargus ocellatus</i>	Marbled Frogmouth	V		Landscape
<i>Ptilinopus magnificus</i>	Wompoo Fruit Dove	V		Landscape
<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V		Landscape
<i>Ptilinopus superbus</i>	Superb Fruit-Dove	V		Partnership
<i>Tyto novaehollandiae</i>	Masked Owl	V		Landscape
<i>Tyto tenebricosa</i>	Sooty Owl	V		Landscape
MAMMALS				
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	V	V	Site
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V	E	Landscape
<i>Kerivoula papuensis</i>	Golden-tipped Bat	V		Landscape
<i>Miniopterus australis</i>	Little Bentwing Bat	V		Landscape
<i>Myotis macropus</i>	Southern Myotis Bat	V		Landscape
<i>Nyctimene robinsoni</i>	Eastern Tube-nosed Bat	V		Partnership
<i>Petaurus norfolcensis</i>	Squirrel Glider	V		Landscape
<i>Petauroides volans</i>	Greater Glider		V	
<i>Phascolarctos cinereus</i>	Koala	V	V	iconic
<i>Planigale maculata</i>	Common Planigale	V		Partnership
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	V	Landscape
<i>Syconycteris australis</i>	Common Blossom-bat	V		Partnership
<i>Thylogale stigmatica</i>	Red-legged Pademelon	V,P		Site

Bush Connect Project "Regeneration and Linkage of Wilsons and Coopers Creeks"

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Smooth Davidson's Plum *Davidsonia johnsonii* is a bushy, well-branched small tree 5 – 12 m tall, with a dense crown. The smooth, glossy leaves are large and divided into 7 - 9 toothed leaflets. Small, pinkish flowers are borne in loose clusters. The plum-like deep burgundy coloured fruits are prized bush food and usually occur between February and May. Plants take at least six years to produce fruit. This species is clonal and habitually occurs in clumps consisting of numerous root suckers. Reproduction is only known to occur through root suckering and where there has been soil disturbance this is particularly prolific. The plant has infertile seeds it can only be propagated from cuttings. It is found in Lowland subtropical rainforest and wet eucalypt forest at low altitudes (below 300m) with many trees isolated in paddocks and on roadsides in cleared land. Recognised as distinct species from *Davidsonia jerseyana*. Photo: www.en.wikipedia.org/wiki/Davidsonia_johnsonii John Moss and Australian Botanic Garden M Fagg



Southern Ochrosia *Ochrosia moorei* is a small tree, sometimes crooked with several stems, growing up to 11 m tall. The bark is very dark brown, finely wrinkled and rough. The opposite leaves are 8 – 20 cm long, arranged in twos or threes, varying in shape but tapering to a long point at the tips and gradually narrowing at the base. They are green and shiny, paler beneath, and thin in texture. Over 40 lateral veins join the midrib, joining at nearly 90 degrees to the midrib. At the other end, the lateral veins form into an intramarginal vein, which circles the leaf. Veins clearly seen on both surfaces. Mid rib raised below the leaf, but sunken above the leaf. When picked, the leaf-stalk exudes a milky sap. Small white flowers are held in small clusters at the ends of branchlets and are recorded from November to February. The shiny scarlet fruit is oval-shaped and 4 – 8 cm long in December to February. Inside is a woody centre, with seeds in cavities on either side of the central groove. Fruit may be dispersed by frugivorous birds and/or mammals. The Southern Ochrosia is often found on hillsides near drainage lines, in warm subtropical rainforest or complex notophyll vineforest, at elevations of 100–1000 m above sea level. Soils are deep, alluvial or basalt derived, well-drained and reddish-brown to dark-brown. The generic name *Ochrosia* refers to the yellow colour of wood.

Photo: www.en.wikipedia.org/wiki/Ochrosia_moorei Peter Woodward and www.flickr.com Phelipi Ramos

Sooty Owl *Tyto tenebricosa* A medium-sized owl to 45 cm long, with dark eyes set in a prominent flat, heart-shaped facial disc. Dark sooty-grey in colour, with large eyes in a grey face, fine white spotting above and below, and a pale belly. The plumage of the fledglings is similar to the adult, but has tufts of down on the head and underparts. Occupies the easternmost one-eighth of NSW, occurring on the coast, coastal escarpment and eastern tablelands. Territories are occupied permanently. Occurs in rainforest, including dry rainforest, subtropical and warm temperate rainforest, as well as moist eucalypt forests. Roosts by day in the hollow of a tall forest tree or in heavy vegetation; hunts by night for small ground mammals or tree-dwelling mammals such as the Common Ringtail Possum (*Pseudocheirus peregrinus*) or Sugar Glider (*Petaurus breviceps*). Nests in very large tree-hollows. Greater Sooty Owls make a number of different vocalisations. The typical call is a short, descending screech which can sound like a whistle if heard from a distance. This call is often called the 'falling-bomb whistle'. Heard up close, it sounds more like a shriek or scream. They also make a harsh scraping call, not unlike a Barn Owl. Another commonly heard call is a loud wavering, trill. While near the nest, softer chirruping calls can sometimes be heard. Some of their calls can be heard at <https://wildambience.com/wildlife-sounds/greater-sooty-owl/> Photo: www.owlkingdom.wordpress.com



Wompoo fruit dove *Ptilinopus magnificus*, also known as **wompoo pigeon** is identified by its large size, rich purple throat, chest and upper belly, and yellow lower belly. It has mostly green underparts, with a paler grey head and a conspicuous yellow wing-bar. Both sexes are similar in plumage. Birds from this area are smaller than those in the south. Young Wompooos are duller and greener than the adults. The call is a deep resonant "wollack-a-woo" and, occasionally, a more abrupt "boo". A sound clip can be heard here: http://www.birdlife.org.au/images/uploads/audio/wompoo_fruit_dove.mp3.

Wompoo Fruit-Doves feed on a variety of rainforest fruits. The birds are hard to see when feeding, and are best located by their calls or the sound of falling fruit. They may form large feeding flocks where food is plentiful, and the birds acrobatically pluck the fruit from trees and vines high up in the canopy area. Both sexes share the construction of the twig nest, which may be placed quite low down in a tree. A white egg is laid, and both sexes share the incubation and care of the chick. Only one chick is raised in a season, but birds may breed a second time if the first attempt fails. Two other similarly coloured pigeons are the Rose-Crowned Fruit-Dove, *P. regina*, and the Superb Fruit-Dove, *P. superbus*. While both are mostly green, they are both considerably smaller, measuring around 20 cm - 24 cm. Photo: www.birdlife.org.au/bird-profile/wompoo-fruit-dove





Common Planigale *Planigale maculata* are tiny marsupials with a body length of about 8 cm and a tail as long again. They differ from the common house mouse in having a long, pointed snout with sharp teeth and large rounded ears. The head has a flattened appearance. Their fur is grey-brown above, sometimes with tiny white spots, and paler below. Common Planigales inhabit rainforest, eucalypt forest, heathland, marshland, grassland and rocky areas where there is surface cover, and usually close to water. They are active at night and during the day shelter in saucer-shaped nests built in crevices, hollow logs, beneath bark or under rocks. They are fierce carnivorous hunters and agile climbers, preying on insects and small vertebrates, some nearly their own size. They breed from October to January.



The female constructs a nest of grass or Eucalyptus leaves beneath bark or in hollow logs and four to twelve young are born approximately 20 days after mating. The female gives birth to 6-10 young which are carried in a kind of pouch. Mortality is high as the young grow and find it difficult to fit, even though as they grow the "pouch" will become more open. Another good way to tell the difference between these and mice is their droppings which are small and pointed about 4 mm long by 1 mm wide. Mice droppings have rounded ends like a cigar.

Photo: www.qm.qld.gov.au and www.wiresnr.org/Commonplanigale Melanie Barsony

Peach Myrtle *Uromyrtus australis* is a shrub or small tree growing up to 12 m tall, the trunk often crooked and covered in brown scaly or flaky bark. It often forms clumps of plants as it grows from root suckers and coppice shoots. Its opposite entire leaves are 2.5 – 4.5 cm long, gradually tapering to drawn-out tips. The upper surface of the leaf is shiny, dull beneath. Young leaves are at first reddish and covered in white silky hairs. Only the midrib is prominent on both surfaces, lateral veins obscure, raised above but sunken below. There is no intramarginal vein. Flowers appear in November and December, are small and white, maturing to deep pink. Round black berries, 5 – 8 mm in diameter, containing two to four seeds are ripe in April to July. Found only in the far north-east of NSW in Nightcap and Mount Jerusalem National Parks and Whian Whian State Conservation Area, west of Mullumbimby. Warm temperate rainforest on less fertile soils derived from rhyolite rock at an altitude of 400 to 770 metres above sea level. Often associated with Coachwood (*Ceratopetalum apetalum*) and very high rainfall. Peach Myrtle is susceptible to Myrtle Rust (photos on left).

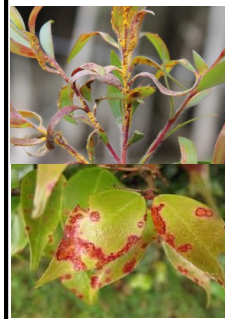


Photo: Australian National Botanic Gardens M Fagg and www.en.wikipedia.org/wiki/Uromyrtus_australi Peter Woodard



Red-legged Pademelon *Thylogale stigmatica* is a small, compact wallaby with soft, thick fur, grey brown above, pale grey below and rufous brown on the face, fore-arms, flanks and hind legs. The tail is short and thick. The nose is usually speckled pink and black and pointed compared to the Red-necked Pademelon. Weight – males 3-9kg (7kg) males continue growing throughout life reaching up to 9 kg. and are larger and more muscular in the forelimbs and chest than females that weigh from 2- 4.2 kg. Inhabits rainforest adjacent to wet sclerophyll forest with a dense understorey and ground cover. Wet gullies with dense, shrubby ground cover provide shelter from predators. They are usually solitary but may group together when feeding. They disperse from dense shelter areas to feed from late afternoon to early morning, favouring native grasses, herbs and ferns on the edge of the forest. Also known to feed on fruits, young seedling leaves and stems, fungi and insects. Breeding in the North is continuous with birth peaks in the autumn and spring. Pademelon's thump their back foot in alarm warning others of danger.



Photo: <http://www.wiresnr.org/RedLeggedPademelo> Sue Ulyatt

Red Lilly Pilly *Syzygium hodgkinsoniae* also called **Smooth-barked Rose Apple** is a small tree to about 11 m tall. Its paired leaves are oval shaped or slightly elongated, 8 - 15 cm long, with a short blunt point at the tips. The leaves are dark green above and paler beneath. The flowers are off-white, fluffy and honey scented, about 25 mm in diameter, and are held in clusters at the ends of stems. The flowers are recorded from January through to May and are known to be pollinated by the Richmond Birdwing Butterfly. The fruit are 4 cm in diameter, round and bright red. A thin layer of flesh, with a distinctive smell like that of an ashtray, encloses a single large seed. Usually found in riverine and subtropical rainforest on rich alluvial or basalt soils at altitudes of up to 300m above sea level. The species is considered rheophyte (adapted to growing along or sometimes within fast-flowing streams).

Photo: www.en.wikipedia.org/wiki/Syzygium_hodgkinsoniae Peter Woodard and www.brushturkey.com.au Spence Shaw and Lui Webber





Hairy Quandong *Elaeocarpus williamsianus* is a small tree up to 15 m tall, with creamy brown bark. The leaves measure 9 – 18 cm long and 2 – 5 cm wide, and are glossy green above and covered in rusty hairs below. The leaves have rounded tips, and may have a few shallow teeth and a joint where the leaf-blade meets the leaf-stalk. Small clusters of greenish-white flowers are borne amongst the leaves. The fruits are blue, shiny and round, and about 2 – 3 cm in diameter. The Hairy Quandong is currently only known from nine populations between Goonengerry and Burringbar and Broken Head in north-east NSW. The species is typically found on steep and eroding slopes at low altitude in gullies, toe slopes, steep drops adjacent to creeks and the headwater areas of creeks in Subtropical to warm temperate rainforest, including regrowth areas where it has apparently regrown from root suckers after clearing. Soils are derived from metasediments. Flowering occurs between November and December. The flowers are likely to be mostly insect pollinated, however, flying foxes have also been observed feeding on the Hairy Quandong's blossoms. Bats and native pigeons consume the Hairy Quandong's drupes and are thought to be major seed dispersers. Fruit is ripe from April to July and occasionally November to December. Photo: Lui Webber and Alison Ratcliffe

Photo: Lui Webber and Alison Ratcliffe



Onion Cedar *Owenia cepiodora* is a tall evergreen tree, up to 30 m, with a dense glossy dark-green crown. Its bark is dark brown with vertical fissures. If the bark is cut, a pink-red underbark is exposed, and the tree exudes a red sap with a strong onion odour. The leaves are composed of 13 – 19 glossy dark green leaflets 10 – 15 cm long. Flowers are white, in clusters at the ends of branchlets, usually in November and December. The globular red fruit are 15 – 20 mm wide, with white pulpy flesh surrounding a stone with one or two seeds. Fruit matures from November to January. The timber resembles that of Red Cedar but has a characteristic onion odour. Occurs in

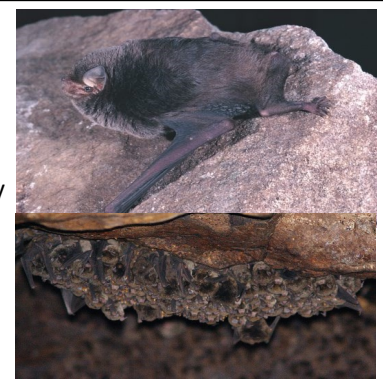
subtropical and dry rainforest on or near soils derived from basalt.

Photo: www.en.wikipedia.org/wiki/Owenia_cepiodora and www.floragreatlakes.info B M Ralley and Lui Webber



Little Bentwing-bat *Miniopterus australis* are small dark chocolate brown insectivorous bats with a body length of about 45 mm. The tip of the wing is formed by a particularly long joint of the third finger, folded back and bent under the wing while the bat is at rest. The fur is long and thick, especially over the crown and around the neck, and is slightly lighter in colour on the belly. They have distinctly short muzzles, and short, rounded roughly triangular shaped ears. Distinguished from the Common Bentwing-bat by its smaller size. Generally found in well-timbered areas in moist eucalypt forest, rainforest, vine thicket, wet and dry sclerophyll forest, Melaleuca swamps, dense coastal forests and banksia scrub. Little Bentwing-bats roost in caves, tunnels, tree hollows, abandoned mines, stormwater drains, culverts, bridges and sometimes buildings during the day, and at night forage for small insects beneath the canopy of densely vegetated habitats. They often share roosting sites with the Common Bentwing-bat and, in winter, the two species may form mixed clusters. In NSW the largest maternity colony is in close association with a large maternity colony of Eastern Bentwing-bats (*Miniopterus schreibersii*) and appears to depend on the large colony to provide the high temperatures needed to rear its young. Maternity colonies form in spring and birthing occurs in early summer. Males and juveniles disperse in summer. Only five nursery sites /maternity colonies are known in Australia.

Photo: www.en.wikipedia.org/wiki/Little_bent-wing_bat Glenn Fergus and www.australianmuseum.net.au/little-bent-wing-bat G Little



Eastern Tube-nosed Bat *Nyctimene robinsoni* are small relatives of the flying-foxes, with raised tubular nostrils and large chocolate-brown eyes. They are fawn to rich brown in colour, grading to grey on the head. A distinctive feature of this bat is the sparse yellow to green spotting on the wings and ears, and a distinct narrow black stripe along the spine. At night they fly rapidly and with great manoeuvrability just above or below the forest canopy, making a distinctive, high-pitched whistling call which can be heard here <https://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10566>. Common in coastal areas of north-eastern Australia from Cape York south to the Queensland border. They are much less common in the far north-east corner of NSW with a few records from the Nightcap, Tweed and Burringbar Ranges and in the vicinity of Mt Warning. Favouring streamside habitats within coastal subtropical rainforest and moist eucalypt forests with a well-developed rainforest understorey. They feed mainly on fruit and nectar from trees in the rainforest canopy and sometimes come close to human settlement to visit flowering or fruiting trees. They are important seed dispersers and pollinators. They roost either singly or in small groups amongst the foliage and are well camouflaged by its mottled wings. Roost sites are generally close to feeding areas.

Photo: www.en.wikipedia.org/wiki/Eastern_tube-nosed_bat Tolga Bat hasital





Pouched Frog *Assa darlingtoni* is small, only about 20mm long. They are grey to pinkish brown or red, usually with distinctive darker patches on the head and body. The sides are usually dark grey to black and there may be a dark brown broken stripe from the nostril through the eye and down each side. The belly is a cream or white with a brown mottled throat and there is a pink spot at the base of each arm. Skin is smooth on the back and the belly but the sides may be rough or warty. Finders and toes are not webbed and all digits have slightly swollen tips without fringes. The most distinctive feature, in the male, is the twin pouches, one on each side, where the tadpoles are carried after they hatch from eggs laid on the ground. Males call from leaf-litter, rocks or logs with a rapidly repeated series usually of 6 to 10 notes

‘Eh..Eh..Eh..Eh..Eh..’. They call most vigorously around dawn and dusk. Pouched frogs live in cool, moist rainforest or moist eucalypt forests in mountainous area, mostly above 800m. Although it is common in Wilsons Creek at least as low as 250m. They spend most of their time in damp leaf-litter, or under rocks and rotten logs.

There is a great app to download and hear frog calls <https://www.frogid.net.au/> Photo: Steve Wilson and www.en.wikipedia.org/wiki/Pouched_frog Hexasoft



Southern Pink Underwing Moth *Phyllodes imperialis southern subspecies* is named for the brilliant pink patches on its dark hindwing (which also have eight white spots on the trailing edge). The grey/brown forewings are approximately 6cm long with white spots on the underside. When at rest the moth resembles a dead leaf. Young caterpillars are dull brown. However, as they mature they develop a dramatic 'head' display when alarmed: two large 'eye' spots and a double row of white 'teeth'. The pupal stage is a bronze-coloured 5cm case consisting of silk and leaves surrounded by metallic brown bands. The Southern Pink Underwing Moth is found in subtropical rainforest below about 600 m elevation. Adult Southern Pink Underwing Moths require the low light conditions of the rainforest in

order to breed. Potential breeding habitat is restricted to areas where the caterpillar's food plant, a native rainforest vine, *Carronia multisepealea*, occurs in subtropical rainforest. The vine frequently occurs in association with another vine, *Pararistolochia praevenosa*, the principal food plant for the Richmond birdwing butterfly, *Ornithoptera richmondia*. Adults feed on the soft fruits of native rainforest plants, including *Ficus* and *Syzygium* and possibly also on fruits of cultivated plants in the vicinity of rainforest. Photos: Helene Sheean and www.environment.nsw.gov.au

Green-leaved Rose Walnut *Endiandra muelleri subsp. bracteata* is a tree up to 30 m tall, shortly buttressed and often flanged. Brown bark, often in loose round plates. Twigs and branchlets are covered in hairs. The moderately glossy leaves are oval or drawn out towards the tips, and measure 6 – 12 cm long and 3 – 5 cm wide, with three to five pairs of side veins. Flushes of new growth are pinkish-green. Flowers are small, yellowish and hairless, and are held in small clusters. The fleshy fruits are egg-shaped, 2.5 – 3 cm long and black when ripe. Flowering and fruiting has been observed from November to May. Occurs in Queensland and in north-east NSW south to Maclean. It is sparsely distributed within this range. Occurs in subtropical and warm temperate rainforests and Brush Box forests, including regrowth and highly modified forms of these habitats. Records are usually from poorer soils derived from sedimentary, metamorphic or acid volcanic rocks. The species is generally recorded at lower altitudes. It differs from the autonym *Endiandra muelleri subsp. muelleri* in several respects, mostly regarding small hairs:

Photo: www.en.wikipedia.org/wiki/Endiandra_muelleri_subsp._bracteata Peter Woodard and www.flickr.com/dustaway



Giant Ironwood *Choricarpia subargentea* grows up to 30 m tall but, in NSW, most specimens are less than 8 m tall and consist of clumps of crooked trunks growing in dense patches. There is some buttressing at the base. The attractive bark is smooth, with blotches of pink-mauve, orange-green and copper-colour or green where the bark has recently been shed. The leaves are opposite, simple and entire, lanceolate or broad with a fine leaf tip, around 4 to 8 cm long. They are glossy dark green above and silvery below, and when crushed have a strong eucalyptus-like scent. Oil dots are evident when viewed with a magnifying glass. The midrib and lateral leaf venation is only visible on the top surface. An intramarginal vein surrounds the leaf, about 2 mm from the edge. Leaf stalks are 5 to 10 mm long, with scaly matter on the stalk. Flowers are white, in dense round heads, appearing in April. These are followed about six months later by small dry capsules, 5mm in diameter on a stalk 6 to 10mm long. Known in NSW only from around Mount Chincogan near Mullumbimby and in and around Goonengerry. Also one recent record at Jiggi north-west of Lismore. In Queensland it is found from Boonah to Imbil. Giant Ironwood is found in dry rainforest regrowth consisting of thickets growing in steeply sloping paddocks on basalt-derived soil as well as in sub-tropical and warm temperate rainforest.

Photo: www.en.wikipedia.org/wiki/Backhousia_subargentea Peter Woodard and www.saveourwaterwaysnow.com.au Robert Whyte and Alison Ratcliffe

