

Landcare UpHunter

Summer 2020

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The Benefits of Mistletoe

Mistletoe is an important and beneficial plant to a wide variety of Australian birds, insects, and animals across our landscape. Its flowers, fruit, nectar and leaves provide food to native species like the lorikeet, bower bird, cockatoo, koala, sugar glider, possum and honeyeater. Its foliage also provides a safe home and nesting site for some species.

There are 90 known varieties of this plant in mainland Australia with 70 of these native in origin and found in various parts of New South Wales, including the Upper Hunter region.

Mistletoe is referred to as a 'semi-parasitic' plant (meaning it needs a 'host tree' with sap to act as a food source). The relationship between the Mistletoe and its host is really a two-way beneficial process, with the tree providing it with water and nutrients to grow and in turn, the high potassium content in Mistletoe leaves can be of benefit to the tree.

It produces its own energy through photosynthesis—the process of transforming water, carbon dioxide and minerals from our air and soil into oxygen and energy for food and growth. This ability to draw water from its host tree gives the Mistletoe a greater chance of surviving in our landscape, through prolonged dry periods as well as in wet weather.

The foliage stays green throughout the Winter months. When it drops its leaves they are intact so the leaf litter makes good compost for the soil below, unlike many plants that withdraw nutrients from their leaves before they drop. It also attracts butterflies to eat caterpillars and insect-eating birds that eat certain insects not beneficial to the tree.

Some varieties resemble leaves of the host tree—eucalypt, casuarina, banksia, acacia.

At home, during the drought, mature Ironbark and Eucalypt trees housing Mistletoe plants helped to sustain local bird and fauna species by providing a welcome source of food.

I often see a pair of Mistletoe birds (*Dicaeum hirundinaceum*), a male and female, just outside my office window. The male has a bright red throat and breast with a black vertical line beneath, a red undertail and a glossy black head and wings. The female is lighter in colour—grey on top, with a white underbelly and pale red on the underside of its tail. Are they the only pair here, I wonder?

Their digestive system works really fast. From ingesting a Mistletoe berry to expelling the seed only takes about 4-12 minutes! In that time, as it goes through their digestive tract, the bird draws a lot of glucose from the fleshy, sticky layer around the seed. When the seed is expelled, it is coated in sticky strands of material (called viscin) that hardens quickly when exposed to air. The bird twists around, wiping the seed on to the branch it is perched on and the sticky layer with the seed inside it adheres to the branch, with germination occurring fairly quickly. The seed develops a 'peg' which drills down into the tree until it hits a source of water and nutrients and then establishes a root to draw from that. The plant itself is not fast growing with 3-4 years before first leaves appear.

Mistletoe plant and Mistletoe bird—a great example of native flora and birds co-operating to ensure survival of both their species.

The Critically Endangered Regent Honeyeater breeds on the western slopes and drier coastal areas of south-eastern Australia, in temperate forest and woodland (White Box and Box Ironbark) and along watercourses where Mistletoe exists in River she-oaks.

With only 250-350 mature birds left, small numbers of this species nest in the western part of the Upper Hunter region. Over the past 2-3 years 5 breeding attempts have been observed, some successful. Mistletoe has underpinned the breeding success of Regent honeyeaters in recent times, not just in the Upper Hunter but in other regions where they have managed to breed successfully.

With little Eucalypt blossom available, Regent honeyeaters have turned to Mistletoe as a key food source and nesting site, assisting them through a bottleneck of poor Eucalypt blossom and highlighting just how important mistletoe is to this very vulnerable species.

"Breaking Down Myths About Mistletoe" is a new brochure by Hunter LLS and BirdLife Australia—go to www.hunterlls.nsw.gov.au

Ruth Hardy



Threatened Species Day at Belltrees School

In the Spring edition of Landcare UpHunter we featured written presentations on 'Endangered Animals in Australia' by some of the students at Belltrees Public School, located in a rural area in the east of the Shire. Here are more extracts from other students.

Black-flanked Rock Wallaby

The Black-flanked rock wallabies can also be called Warru by aboriginal people. Some wallabies live in arid zone central Australia. This wallaby eat grass, herbs, low shrubs but even eats fruits. Some of them have a grey or brown fur chest. They can be formed in a size from 10 to 100 individuals and did you know they can weigh up to 9 kilograms (that is 20 pounds in old weight).

Long ago these wallabies were once widespread across many parts of Western Australia and they were also once in the Kalbarri National Park but they disappeared due to foxes and cats.

Renzy and April



Northern Quoll

Dasyurus hallucatus or Northern Quoll, the smallest of six quoll species, are endangered due to wildfires that destroy their habitat and cover making them easy targets for foxes and wild cats. Also they mistake cane toads for native frogs and die of the poison when trying to consume them.

They have an extremely short lifespan (2-4 years in the wild) and annual male die off means numbers drop even more. Males do a lot of reproducing in the first year then die due to fighting over females. At the end of mating season the population consists of mainly females and young.

Found in northern Australia and Western Australia and to south-east Queensland, they live in rocky areas, eucalypt forests, woodlands, rain forests, sandy lowlands, beaches, shrub land, grassland and desert places. They eat mostly invertebrates but also mammals, little birds, carrion, fruit and native frogs. It has a pointy snout, reddish-brown fur, cream underside, white spots down its back and a spot-free tail as long as its body. It is roughly 21cm long and weighs 20g (adult). There are only about 64,000 Northern quolls left. Females have between 5 and 8 pups at a time.

Darcy and Tatum



Gouldian Finch

The Gouldian finch (*Erythrura Gouldiae*) is listed as endangered on The International Union for Conservation of Nature species scale. It lives in the Kimberley and Northern Territory but mainly in Queensland in tropical savannah woodland in amongst the grassy understorey. In the wild the Gouldian finch eats seeds and sometimes grubs but in captivity they eat greens, egg food and more veggies. They are small with a bright green back, yellow belly and purple breast and can have a black, orange or red face. A Gouldian finch can live 4 to 6 years. Adults weigh up to 12gs.

These finches have become endangered by fire regimes and cattle grazing, which is an issue because some farmers cut down too many trees in their paddocks and feral predators hunting them such as wild cats. They became endangered in 1999 when scientists realised that they were not being seen very much and there are only about 2,500 mature birds left.

We can help them by being volunteers in water hole monitoring and leaving more trees around.

Robert and Trixy



Southern Snapping Turtle

Their scientific name is *Eseya albagula*. On land they feel vulnerable against predators. The turtle lives in the Burnett, Mary and Fitzroy catchments along the central and southern coasts of Queensland. It mainly eats fish or invertebrates, frogs and even ducklings. They are the largest fresh water turtle and their colour is an olive brown with raised ridges on their shells. They are endangered because of dirty water from making dams and erosion in rivers. They weigh up to 90kg, grow to one metre, Their head can be 25cms. across and it can bite a finger off in one bite.

The turtle collects food by sticking out the tongue, enticing their food with pretending it is a worm.

Robert



Tasmanian Devils

They are the biggest marsupial in the world, are carnivorous which means they eat meat (also bugs, birds, rats, mice and little rabbits). The female is pregnant for 3 weeks and the baby is born all over pink, small and dependant on its mother and her milk. The female grows to about 57cm long and weighs about 6kg, The male is bigger and heavier at 65cm long and weighs about 8kg.

They live in northwest and eastern Tasmanian woodlands and in underbrush and scrubland land and live about 5 years in the wild. They have a severe disease called Devil Facial Tumour Disease or DFTD for short. The Tasmanian devil is black and has grey specks with a white band around its chest. It has four legs with very sharp claws on its feet, a long brushy tail and teeth that look like vampire teeth that they use for ripping apart meat.

Jack and Angus



AgriSkills in 2021

As our largest vocational education and training provider, TAFE NSW supports around 500,000 students through a variety of training methods—a mix of face-to-face courses at campuses across the State and on-line, workplace and distance education.

TAFE as we know it today had its origins back in the early 1830's, through facilities such as the Sydney Mechanics School of Arts established in 1833 and in the Hunter Valley, Sydney Technical College opening a Newcastle training facility later in the 1800's.

The State's population growth and industry development (including from the gold rush) meant a wider range of skills were needed for an increasingly diversified economy. In 1883 responsibility for Sydney Technical College was transferred to State Government.

The Technical Education and New South Wales University of Technology Act began in 1949. Commonwealth Government funding to State Government in the 1970's was also instrumental in developing the sector, which officially became known as TAFE NSW.

Hunter Institute of Technology (TAFE), Scone Campus was officially opened in 1996, with a focus on Equine Studies. Courses now include Agriculture, Veterinary nursing, English language, Social media, Business management—face-to-face and online learning.

TAFE training within the Shire for 2021, under the AgriSkills Program, offers practical learning opportunities. This may include:

- * Chainsaw Operations (Merriwa)
- * First Aid (Merriwa)
- * Rural Welding & Fabrication Techniques (location/s TBA). Expressions of Interest for this course are currently open.
- * Basic Tree Felling (location/s TBA)
- * Computer & Hand-held Digital Literacy (Scone & Merriwa)

For a fully subsidised place, eligibility criteria under the Smart and Skilled Funding guidelines are:

You must live or work in NSW; have left school and

Be an Australian Citizen or permanent resident or New Zealand citizen or a humanitarian visa holder.

You must also meet one of the following criteria:

Aged from 17—24 inclusive (regardless of employment status), including Year 12 school leavers or

In receipt of a Commonwealth Government benefit; or Be an unemployed person or Expected to become unemployed.

For information on local Agriskills courses call Lynne Ring at Scone TAFE on 6545 3218 or email lynne.ring@tafensw.edu.au

Ruth Hardy



Resources & Funding

Rivers Full of Fish webinars—National Oceanic & Atmospheric Administration (NOAA Fisheries) webinars held to celebrate World Migration of Fish Day 2020. For Part 1: Transformational Change—A Movement for Rivers go to [Rivers Full of Fish Webinar Session 1 - YouTube](#) & Part 2: A Celebration of Free-Flowing Rivers at [Rivers Full of Fish Webinar Session 2 - YouTube](#)

Soils for Life webinars—A National Landcare Facilitator & Soils for Life partnership webinar series looking at how we can practically regenerate our soil health and measure and extend effective practices. Webinars include Why healthy soils are important; What is the science telling us; A view from on the ground. Recordings at <https://soilsforlife.org.au/media/webinars-regenerative-agriculture>

Biofluorescent Australian mammals and marsupials take scientists by surprise in accidental discovery—An ABC News article discussing how some Australian fauna glow-in-the-dark (biofluorescence). It looks at how scientists have observed this in marsupials, platypuses, wombats (and insects and sea creatures); how ultraviolet and other light sources show this. To read this article go to [Biofluorescent Australian mammals and marsupials take scientists by surprise in accidental discovery - ABC News](#)

Precision crop stubble grazing to benefit farmers in vulnerable times—A CSIRO article that discusses nutritional values, a new tool to assist farmers review practices for maximum outcomes; recalculating crop stubble inputs. You can read the article via https://ecos.csiro.au/precision-crop-stubble-grazing?utm_source=ECOS-2020-11&utm_medium=newsletter&utm_campaign=ECOS

What's your Beef?—a weekly podcast by Beef Australia in the lead-up to Beef 2021. Time-controlled management plans; holistic grazing; steer operation on farm are some subjects covered. Just go to the beefaustralia.com.au website for details of the podcast

Funding

2021 Woolworths Junior Landcare Grants—For Primary Schools & Early Learning Centres. Grants up to \$1,000 for hands-on projects such as vegetable or native plant garden, habitat restoration, composting and recycling. A further \$500 is available if your project has a component related to Bees. Guidelines & Application form at www.juniorlandcare.org.au—entries close 19th March.

Strengthening Rural Communities—Foundation for Rural & Regional Renewal funding that supports projects addressing broad community needs in remote, rural and regional communities. The current funding round for grants of up to \$25,000 closes on 23rd of February. Go to frrr.org.au/grants/strengthening-rural-communities for the guidelines and to download an application form.

Events for your Diary

Landcare UpHunter stall—farming, environment, Landcare, education resources, plants/herbs. Visit us at: No stall events at present.

Sydney Edible Garden Trail online—21st, 27th & 28th of February. Over 60 backyard, school & community gardens featured, highlighting their own edible plants grown for food.

For more information & to book go to sydneyediblegardentrail.com

Clean Up Australia Day 2021—the official event day is 7th March, with Schools/Youth Day on 5th March & Business Day held on 2nd March

Organise your own ‘Clean Up’ for individual, family, group, school or business & sign up via the website to receive the Clean Up Starter Kit.

Details go to www.cleanup.org.au/

Revegetation & Planting Workshop at Merriwa (Hunter LLS event) on 13th March at 9.30am to 12.30pm.

Access <https://hunterlls.wufoo.com/forms/uh-revegetation-planting-workshop2021/> to register for this.

Earth Hour—World Wildlife Fund event on 28th March from 8.30pm to 9.30pm. To participate & sign up go to www.earthhour.org.au

Merriwa Landcare Group. Contact Jenny Lee on 0429 337 557

Murrurundi Landcare Group just Email Sandy@boyscreek.com.au

Pages River Warriors Working Bee Wilson Memorial Oval, Murrurundi 1st & 3rd Sunday monthly (morning) Email Sandy@boyscreek.com.au

Landcare UpHunter & Scone Landcare—refer details below

Gliders in our Landscape

There are 5 known species of gliders in New South Wales—the tiny Feathertail, then the Sugar, Squirrel and Yellow-bellied species to the largest of all, the Greater Glider.

Did you know that ‘gliders’ are actually possums? So they are also Australian marsupials.

The Great Dividing Range, stretches over 3,600kms. from the Grampians in Victoria to far-north Queensland, with the Upper Hunter Shire part of this eastern Australia land mass. Dry sclerophyll forests and woodlands are common areas for gliders to be found.

Most Gliders live in small family groups in tree hollows in mature, old trees and line their nest with dry leaves. They have a distinctive membrane of skin stretching from the front to rear legs, helping them easily glide through the air from tree to tree, branch to branch.

It uses the flexible membrane to steer left to right and when landing, draws the back legs closer to the body and swoops upward, enabling it to land with all four paws. The tail also acts as a rudder to help it steer correctly and it brings it up to a ‘nose’ position to land.

Gliders are arboreal, feeding mostly at night. The Squirrel glider (*Petaurus norfolcensis*) is 47cm. in length (27 cm. being its tail). It has brown-grey fur on its back, pale grey to cream yellow underbelly, dark stripe between the eyes and along the back and a black bushy tail, with a dark tip at the end. It can sometimes be mistaken for a Sugar glider (*Petaurus breviceps*) but it is larger and has a long bushy tail and a longer, pointed face.

It feeds mostly at night—insects like caterpillar, beetle, stick insect are its main diet, with pollen and nectar in winter-flowering Eucalypt trees such as Spotted Gum (*Corymbia maculata*) and Forest red gum (*Eucalyptus tereticornis*) along with understorey plants like Smooth-barked apple (*Angophora costata*) and Red bloodwood (*Corymbia gummifera*).

For its food, Sugar and Squirrel gliders can also prey on small birds and on their eggs whereas a Greater glider is a solitary herbivore, focussing on Eucalypt leaves and buds.

The Greater glider is the largest, up to 100cms. from head to tip (tail to 60cms.) and it weighs up to 1.7kg. Originally thought to be only one species, research now confirms they are in fact three species, with monitoring needed to determine population numbers.

At the other end of the size range, the Feathertail glider is as small as a mouse. It only weighs 12grms. and is 6.5—8cms. long. It is known as the smallest glider in the world.

Kookaburra, quoll, snake, feral cat, lizard, owl, fox, antechinus are some glider predators.

Like many other species, gliders are warm-blooded and vulnerable to changes in climate and loss of habitat. They eat less as temperatures increase and the taking in of food itself creates heat. Warmer nights = gliders eat less food and have less energy stores.

Land fragmentation from clearing, especially mature, old-growth trees with hollows and loss of food sources are threats to long-term survival of gliders. Reducing barbed-wire fencing, retention of natural habitat, feral pest management all help in protecting gliders.



Landcare UpHunter

PO Box 276, Scone NSW 2337

Contact: Ruth Hardy

Tel: 0407 232 539

Email: landcareuphunter@gmail.com

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Landcare UpHunter is hosted by Scone Landcare Inc..

The Greater and Squirrel Glider Symposium held by Biolinks Alliance (Victoria) in late 2020 involved a mix of online workshops and importantly, keynote presentations such as: Conservation Planning in dynamic environments; Connecting habitat across roads Squirrel gliders: Nest box use & population monitoring

The influence of temperature on food intake of populations of arboreal marsupials

Predicting habitat suitability for Great glider (*Perauroides Volans*) using remote sensing: implications for conservation planning

Maximising learning opportunities while replacing tree hollows for wildlife

To access all Symposium presentation recordings go to <https://biolinksalliance.org.au/>

Ruth Hardy

Visit us at www.landcare.nsw.gov.au/groups/scone-landcare-group