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Latest news from the REC

The NSW Roadside Environment Committee (REC) is sponsoring the NSW Roadside Environmental Management Award as part of the 2021 Local Government Excellence in the Environment Awards.

This is the tenth year that the REC has sponsored the award which helps promote good practice by NSW local councils and other council organisations in managing roadside environments.

LG Excellence in the Environment Awards winners will be announced at an award forum and ceremony on 16 November (see article below).

NSW Roadside Environmental Management Award

Celebrating 24 years of inspiration from NSW councils in programs, projects and people working together to manage and protect the environment, this year's LGNSW Excellence in the Environment Awards saw an amazing 127 entries across 14 categories. One of the award categories is the Roadside Environmental Management Award, which is sponsored by the NSW Roadside Environment Committee (REC).

The Roadside Environmental Management Award recognises on-ground achievements in roadside environmental management, as well as strategic initiatives that build capacity to deliver these achievements over time and across tenures.

This award recognises activities which:

- Improve the condition of roadside vegetation, including through the management of threats.
- Build capacity to deliver on-ground roadside environmental management initiatives.
- Promote co-operation and collaboration in roadside environmental management across tenures.
- Build and/or disseminate knowledge about roadside environmental values and management.

This year's Roadside Environmental Management Award finalist is Penrith City Council for its Roadside Vegetation Management Project, which was established to create a framework for Council to better manage its roadside vegetation and to assess and identify areas within the local government area that had been identified as having significant value in Council's Roadside Vegetation Management Plan. This was achieved through reviewing the Roadside Vegetation Management Plan, creating a Review of Environmental Factors (REF) and Test of Significance template, implementation of procedures to undertake REFs, employment of a dedicated REF staff member, installation of roadside markers and the education of Council staff.

Award winners will be announced at the on-line ceremony on 16 November. LGNSW will also host a Finalists Forum showcasing council environmental projects on 9 November. More details: <https://www.lgnsw.org.au/Public/Members-Services/Environment-Awards/Excellence-in-the-Environment-Awards.aspx>



Roadside marker - Penrith LGA

New techniques for artificial habitat installations for hollow dependent fauna

Habitat Innovation & Management has teamed up with Transport for NSW to implement exciting new habitat solutions as part of the South Batemans Bay Link Road project on the south coast of New South Wales.

The road realignment and construction works require the removal of vegetation including hollow bearing trees. In response, Transport for NSW has initiated the creation of 80 new homes for a range of hollow using species including microbats, scansorial (climbing) mammals, small parrots, gliders, possums, forest owls and black cockatoos.

It was an important consideration in the project that the habitat solutions provided were functional, scientifically sound, and able to genuinely meet the hollow needs for this range of species. Habitat Innovation & Management was engaged to install a combination of nest/roost/den boxes, as well as carved hollows all specifically configured to cater for the target species.

A range of modular Habitech nest boxes have been installed. It was recognised that this new nest box system, comprised of a dual-walled plastic outer casing and an internal timber nest/den chamber, is able to provide a stable internal microclimate and longevity in the field. The nest boxes were developed in a collaborative project through Charles Sturt University in a team led by Professor David M. Watson. This project represents the first installation of these nest boxes beyond the testing stage.

Additionally, the team from Habitat Innovation & Management has been among the first in the world to adopt the new Hollowhog tool (more details in this newsletter) for carving hollows directly into trees. This tool precludes the need to cut a faceplate from the tree – as is the case with chainsaw hollows – which is the most likely failure point for this type of habitat augmentation.

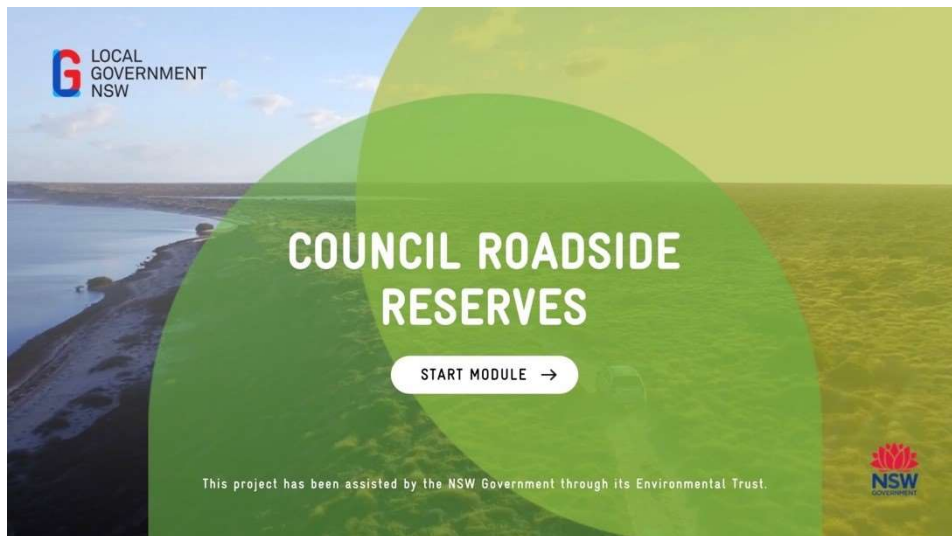
This new range of artificial habitat will be monitored for use over the coming months.

More details from Mick Callan, Habitat Innovation & Management at mick@habitatinnovation.com.au



Habitech nest box installed as part of the habitat solution for this project

Council Roadside Reserves e-Learning Modules up for a 2021 LearnX Award



Developed as part of the NSW Environmental Trust’s Council Roadside Reserves grant managed by LGNSW, the four e-learning modules have been listed as an award finalist for Best Free eLearning Resource Design in this year’s LearnX awards - <https://www.learnx.live/winners2021/>

The free e-learning modules were developed specifically for councils to guide them through the complexities of roadside reserve management. They were designed to raise the learner’s awareness of their responsibilities when it comes to managing and working in the road reserve and ensuring roadside environmental management best practice.

Module 1 is focused on “why” roadside environmental management is important, and provides an overview of the roadside reserve. It is aimed at both operational staff, as well as team leaders, general managers, and councillors.

Modules 2, 3 & 4 focus on the “how” of good roadside management and are targeted towards the day-to-day of roadside management best practice. These modules focus on learning outcomes for a range of staff, including minor works and maintenance staff, engineers, strategic planners, and environmental staff.

All four free e-Learning modules are available on the LGNSW website: https://www.lgnsw.org.au/Public/Public/Policy/REM-pages/CRR_training.aspx

Wildlife crossings – more than just endangered species

Western Sydney’s first ever wildlife ladder crossing has proven a success, with monitoring cameras revealing thousands of native animal movements across the structure.

The wildlife ladder was installed by Greater Sydney Local Land Services, Penrith City Council and Mulgoa Landcare above Bluestone Drive at Glenmore Park to

connect arboreal wildlife between the adjoining Mulgoa Nature Reserve and Surveyors Creek Reserve.

“Monitoring of the crossing structure between June and September this year produced 1,364 records of native wildlife using the crossing” said Peter Ridgeway, Senior Land Services Officer at Greater Sydney Senior Land Services. “The results were above anything we could have hoped for”.

The most frequent users were Sugar Gliders, a species which is common in some regions of NSW but of high conservation concern in Western Sydney’s Cumberland Plain Woodland as a result of increasing habitat isolation.

While many wildlife crossings focus on state- or nationally-listed species, the Glenmore Park project highlights that road crossing structures can also be necessary to maintain the health of endangered ecological communities. Many threatened ecosystems are highly fragmented and even ‘common’ fauna can be lost without intervention, threatening the integrity of the ecosystem as a whole.

Penrith Mayor Karen McKeown OAM praised the installation of the wildlife ladder for providing a safe passageway for arboreal fauna species: “The wildlife ladder will protect our valuable wildlife and ensure that Penrith remains a safe home for these animals,” she said.

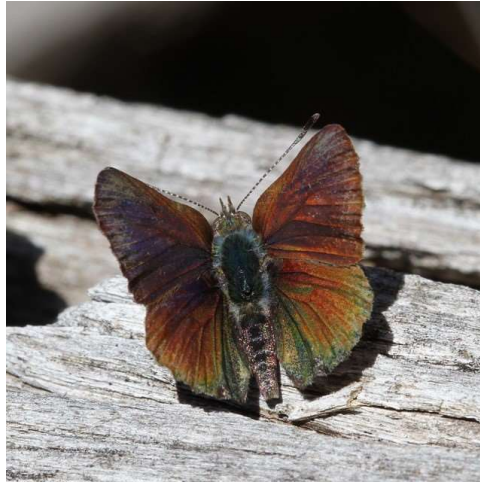
The project partners are investigating opportunities to improve fauna connectivity between other key conservation reserves in the region.

For more information about the project, contact Peter Ridgeway via Peter.Ridgeway@lls.nsw.gov.au



Wildlife ladder crossing erected in Glenmore Park

Friends with Benefits come together to help butterfly



Thanks to the Friends with Benefits project, over 30 hectares of Purple Copper Butterfly habitat has been rehabilitated after the devastating Black Summer bushfires of 2019/20.

Particular focus was given to removing fire-loving broom and blackberry, as well as the removal of pines that were not killed by the fire to ensure sun continues to shine on the butterfly's habitat.

Weeds were removed within the high-quality habitat at known sites around Lithgow, and buffer areas were built surrounding those sites to slow down any future weed invasion.

Named for the mutualistic relationship the Purple Copper Butterfly caterpillar has with an ant species, the project is funded by the Federal Government through its Bushfire Wildlife and Habitat Recovery Programme, delivered by Central Tablelands Local Land Services and Lithgow and Oberon Landcare, in partnership with the NSW Saving our Species Program and Lithgow City Council.

Central Tablelands Land Services Officer Evelyn Nicholson said the project had exceeded expectations and will hopefully deliver a positive outcome this flying season.

"Our goal was to rehabilitate 19 hectares of land so to have achieved this and more is a wonderful step forward in helping this threatened species recover from the impacts of a horrific bushfire season," Ms Nicholson said.

"After fire, weeds often proliferate as they respond quickly to bare ground following the disturbance, and in the project locations, weeds were competing with the native blackthorn for resources and space, shading out habitat, making it unsuitable for the sun-loving butterflies.

"Even though the initial weed control period has drawn to a close, follow-up weed control will continue to ensure longer-term protection of precious habitat."

The tiny species of butterfly has very specific habitat requirements, and is found only in the Lithgow, Bathurst and Oberon LGAs above approximately 850 metres

in altitude, within patches of a subspecies of native blackthorn and where an attendant ant species co-occurs.

Caterpillars feed exclusively on blackthorn leaves and when feeding are protected from predators, such as huntsmen spiders and wasps, by the ants, who in return for protection, consume a sugary sap that the caterpillar extrudes from a gland on its back.

Trish Kidd from Lithgow and Oberon Landcare said that the project was a great example of people coming together to protect native species.

“Like the relationship between the caterpillar and the ant, Friends with Benefits has had tremendous success because we all worked together as a team to deliver a positive outcome” said Ms Kidd.

“We’re hoping that once lockdown restrictions ease and members of the community will be able to join us in upcoming monitoring activities over spring and summer.”

For more information about the Purple Copper Butterfly project, please contact Evelyn Nicholson on evelyn.nicholson@lls.nsw.gov.au or on 0427 637 907.

Searching for the Small Purple-pea



With funding from the Federal Government’s National Landcare Program, Central Tablelands Local Land Services has been working alongside Central West Local Land Services to find and conserve previously unknown populations of the Small Purple-pea or *Swainsona recta*.

Small Purple-pea is one of 30 plants identified as a conservation priority under the Federal Government’s Threatened Species Strategy.

Over the last three years, targeted surveys have identified an additional 19 populations in the Central Tablelands and Central West regions, and the search for new populations continues this spring, whilst the species is in flower.

Working with the Australian National Botanic Gardens, seeds were collected after the flowering season last year for the National Seed Bank. Propagation is already underway to bolster wild populations and help conserve this species in our natural landscape.

The Small Purple-pea flowers between late September and early December, with each plant bearing one or more sprays of purple flowers. Plants are easiest to see and identify during flowering and can be confused with a range of similar species, such as the vulnerable Silky Swainson-pea (*Swainsona sericea*) or the Notched Swainson-pea (*Swainsona monticola*).

Detailed habitat mapping and modelling of potential habitat for Small Purple-pea will help focus searches in high priority areas, and will allow targeted engagement with landowners to conserve the species and its habitat. A monitoring program will be established at four currently known sites (Mudgee Common, Flirtation Hill Mudgee, Lue Road Mudgee, Mandurama railway line easement) to assist in determining the trajectory of the species at these sites.

At known and new sites, weed management and fencing to restrict access will be carried out to reduce the threats to the species, and the box gum woodland where it occurs.

More details about the project can be found at

<https://www.ils.nsw.gov.au/regions/central-tablelands/key-projects/searching-for-swainsona>

Searching for barking owls in TSRs

Researcher Candice Larkin is on the hunt for the lesser-known Australian owls like the elusive and under-studied barking owl, whose calls are often confused with the woofs of a dog — and even the screams of a human.

Ms Larkin is also collecting data on the country's smallest and most widespread owl, the boobook or "mopoke", and the barn owl – which in Australia lives in hollow trees and caves rather than barns.

She is doing a PhD at the University of New England. As part of her work, she has microphones hidden in trees to pick up the sound of owls, which are usually hard to detect because they are only active at night.

While all owls are hard to find, barking owls are particularly tricky because in states like NSW, they're thin on the ground, Ms Larkin says. They don't like coastal or urban areas like the larger and better-known powerful owls. Instead, their preferred habitat is remote dry open eucalypt forest and woodland, which can also be home to koalas and quolls.

The problem is so much of this habitat has been cleared for agriculture or burnt by bushfires, and concern is mounting for species like the barking owl.

Ms Larkin is strategically surveying potential barking owl habitat that remains in travelling stock reserves (TSRs). "We're finding a lot of really threatened species using them to move through the landscape," she reported.

Ms Larkin put 50 sound recorders out in the field in 2019 and has constantly tended them since. "I need to drive around and change the SD cards and batteries nearly every month," she said.

Read the full article about the research at <https://www.abc.net.au/news/science/2021-08-15/on-the-hunt-for-the-barking-owl-recorders-headtorches-thermal/100348184>



Barking owl (photo: Candice Larkin)

Highway crossings are making roads safer for drivers and animals

On 21 August, 2019, in a canyon west of Denver, wildlife experts, transportation officials, and a parking lot full of stakeholders gathered to watch Colorado Governor Jared Polis sign an executive order that catapulted state agencies into a frenzy of action focused on identifying and conserving wildlife migration corridors. Since then, Colorado has developed some of the most advanced and groundbreaking migration policy in the nation.

The Colorado Legislature signaled that it is also interested in advancing wildlife corridor conservation and habitat connectivity. The bipartisan Colorado Habitat Connectivity Senate Joint Resolution 21-021 sailed unanimously through both chambers of the Legislature and was enacted in June. Though nonbinding, the resolution should help build momentum among lawmakers and stakeholders to continue to address habitat fragmentation, facilitate wildlife movement, conserve ecological connectivity, and reduce collisions between motorists and wildlife.

Colorado policymakers have also advanced other solutions to facilitate safe wildlife movement. In 2016, the Colorado Department of Transportation (CDOT), with support from a host of partners, completed a state-of-the-art wildlife

overpass and underpass system on an 11-mile (18 km) stretch of Highway 9 between Silverthorne and Kremmling, reducing wildlife-vehicle collisions by 90%. By the end of this year, CDOT will have identified and prioritized all the collision hot spots across the state. And this summer, the agency is breaking ground on a large wildlife crossing project on U.S. 160 near Chimney Rock National Monument.

Read more at: <https://www.pewtrusts.org/en/research-and-analysis/articles/2021/08/13/colorado-leads-states-in-protecting-wildlife-migration-corridors>



Wildlife overpass on Colorado State Highway 9 (photo: Jeffrey Beall)

2022 NSW & VIC Weeds Conference



The combined NSW & VIC Weeds Conference showcases the latest research and ideas for managing the establishment, impact and spread of weeds.

Due to the coronavirus pandemic the 2021 conference was postponed from August 2021 to 21-24 March 2022.

The NSW & VIC Weeds Conference is regarded as the premier event to discuss weeds and related vegetation and production issues. The conference is a biennial

event conducted in partnership with a host council attracting up to 350 attendees from NSW and interstate.

Three awards are announced at the conference, acknowledging the work of NSW Government, NSW local government and community weeds professionals for their outstanding contribution towards protecting NSW from the impacts of weeds.

More details at <https://www.nswweedsconf.org.au/>

Drill invention fast-tracks creation of tree hollows for wildlife displaced by fires



A new drilling technique, called the Hollowhog speeds up the natural hollow-development process — which normally takes up to 70 years.

Inventor of the Hollowhog, Transport for NSW environment officer Matt Stephens, said 15 per cent of Australia's wildlife, including 300 species of birds, reptiles and mammals, relied on hollows for shelter.

"Animals prefer them because of their small entrances, which allow them to tightly squeeze through and avoid threats from larger predators," he said.

"What the Hollowhog allows us to do is to rapidly form a hollow in a tree, and sometimes multiple hollows in a tree, and speed up that natural process," Mr Stephens said.

Prior to the Hollowhog, the only hollow-carving technique involved the use of a chainsaw and the removal of a large patch of the tree's outer layer – the tree's living tissue.

Mr Stephens said the new technique only required drilling a small hole the size of a finger into the living material by using a uniquely designed drill head.

"This technology allows us to keep the rest of the tree's structure intact and carefully enter and remove some of the deadwood in the centre of the tree," he said.

Since June, Transport for NSW has installed more than 800 hollows in bushfire-affected areas under a pilot habitat replacement project.

Transport for NSW senior environment and sustainability officer Kate Dallimore said the new shelters had aroused strong interest from forest dwellers. "We have had uptake by some lorikeets, bush rats and antechinus," Ms Dallimore said.

Read more at <https://www.abc.net.au/news/2021-09-13/invention-speeds-up-tree-hollows-for-wildlife-habitat/100446560>

Watch 9 News story at <https://m.facebook.com/9News/videos/blue-mountains-man-builds-homes-for-wildlife/2693911684242348/>

New species of rare tadpole-carrying frog discovered in northern NSW



A new frog species, one of only two in Australia known to carry its tadpoles on its body, has been discovered in the Gondwana rainforests world heritage area in northern New South Wales.

The tiny frog measures 16mm and is found on one mountain in the Wollumbin national park.

Researchers from the University of Newcastle and the South Australian Museum used genetic analysis to identify the frog as a distinct species from its close relative *Assa darlingtoni*.

The frogs are commonly referred to as pouched or hip pocket frogs, or sometimes the marsupial frog.

The male frogs carry developing tadpoles in pouches on the sides of their bodies before little frogs emerge two to three months later.

“The hip pocket frog is not only unique for its amazing breeding biology among Australian frogs, but it is also unique among frogs of the world,” said the University of Newcastle’s Michael Mahony, one of the researchers who discovered the frog.

“There are only four of the 4,000 species worldwide that have male parental care where the male carries its developing tadpoles.”

The tiny frog population is confined to an area of about 2,000 hectares on Wollumbin mountain.

Read more at: <https://www.theguardian.com/environment/2021/nov/07/new-species-of-rare-tadpole-carrying-frog-discovered-in-northern-nsw>

Project Splatter



Project Splatter is a citizen science project to quantify and map wildlife roadkill across the UK. Anyone can report observations and data is collected all year round. As of 2018, over 50,000 individual roadkill records were received.

At the end of March 2018, 37.9 million motor vehicles were licensed for use on the roads in Great Britain (DVLA). Project Splatter aims to estimate that impact that roads have on UK wildlife.

Project Splatter is run by a team of researchers based at Cardiff University. With help from the public, the team collects data on animals killed by motor vehicles on roads in the UK. It analyses the submitted roadkill observations to determine the impact of roads on UK wildlife and to identify hotspots. It provides regular updates on what has been learned on social media, on its website, and in scientific publications.

More details at <https://projectsplatter.co.uk/>

Rural Boundary Clearing Code

The following is an extract from the NSW Rural Fire Service website:

The Rural Boundary Clearing Code allows rural landowners to clear certain vegetation along the boundary of their landholding to reduce the potential for the spread of bush fires.

This Code was introduced to simplify and empower vegetation management for rural landholders and addresses the intent of Recommendation 28 of the NSW Bushfire Inquiry, which was commissioned following the devastating 2019/20 NSW bush fires which cost the lives of 26 people and destroyed 2,476 homes across NSW.

The Inquiry recommended:

28. That Government acknowledging that a strategic approach to planning for bush fire will take time, and in order to protect, prepare and build resilience into existing communities better, should immediately: review vegetation clearing policies to ensure that the processes are clear and easy to navigate for the community, and that they enable appropriate bush fire risk management by individual landowners without undue cost or complexity.

The 'Rural Boundary Clearing Code for New South Wales (Rural Boundary Clearing Code)' has been prepared by the Minister for Police and Emergency Services in consultation with (and the concurrence of) the:

- Minister for Energy and Environment,
- Minister for Planning and Public Spaces, and
- Minister for Agriculture / Minister for Western New South Wales,

in accordance with Section 100RA(5) of the *Rural Fires Act 1997*.

The objective of the Rural Boundary Code is to simplify vegetation management for owners or occupiers of land for the purpose of bush fire hazard mitigation by allowing them to clear vegetation on their property within 25 metres of their property boundary. This should be undertaken with consideration of environmental impacts.

For more details: <https://www.rfs.nsw.gov.au/plan-and-prepare/boundary-clearing-tool/boundary-clearing-faq>

Zero extinction target for NSW national parks welcomed by environment groups

The New South Wales government has set a target of zero extinctions of native wildlife in the state's national parks estate, the first time an Australian government has set the goal.

The environment minister, Matt Kean, said the target, which will apply to all parklands in NSW, was a response to the continued decline of threatened plants and animals, and Australia's status as the country with the highest rate of mammal extinctions.

"Globally, one million species face extinction over the coming decades and, as international biodiversity negotiations continue, everyone needs to aim high," Kean said.

"Just as we have a net zero emissions target, we now also have a target of zero extinctions for our national parks, and are aiming to improve and stabilise the on-park trajectory of threatened species by 2030," Kean said.

Environmental advocates welcomed the announcement but noted it covered less than 10% of the state.

Kean said the declaration would boost protections for 92 species, including 15 of the most important strongholds for the koala, and seven sites where the endangered brush-tailed rock-wallaby is found, including one location where the population has dropped to 10 individuals.

Read more at: <https://www.theguardian.com/australia-news/2021/sep/07/zero-extinction-target-for-nsw-national-parks-welcomed-by-environment-groups>

The aim of this newsletter is to share information about the management of NSW linear reserve environments and profile the NSW Roadside Environment Committee (REC).

For more information about the REC: <https://www.rms.nsw.gov.au/about/what-we-do/committees/roadside-environment-committee.html>

Please contact the REC Executive Officer if you wish to subscribe or unsubscribe.

