LUCI Update No 37 … October 2024

Welcome to the mid-spring newsletter!

'Nature positive' and the 'Nature repair' market – economic settings for nature

This month, the Australian Government and the New South Wales state government co-hosted the Global Nature Positive Summit. The gathering saw leaders from government and business, indigenous peoples, academics and environment groups from around the world discuss ways to boost private sector investment in the repair and protection of the environment.

So, what does Nature Positive mean and why private sector funds? Put simply, "[t]he term 'nature positive' describes stopping biodiversity loss and restoring nature to pre-2020 levels by 2030 – with an aim for full and ongoing ecosystem recovery by 2050."[1] Governments see the enormity of the Nature Positive task as one that needs to be shared with the private sector and landholders. Not surprisingly, the government's 'go to' lever for mobilising private sector action is to monetise nature protection and repair activities.

To this end, the Australian Government passed the *Nature Repair Act 2023* in December 2023, to provide incentives for actions to restore and protect the environment. In effect, a nature repair market will see certificates issued for approved activities on private land, which could then be "owned and traded separately from the underlying land on which the project is carried out."[2]

Reflecting the controversies surrounding the integrity of the carbon credit market,[3] the proposed nature repair market is not without its critics. Developing an effective and legitimate market that is abuse-proof and in which traders and the public can have confidence requires attention to "a governance framework, measurement systems, certification, registration, contracting, trading, monitoring, reporting, accounting, auditing and a bureaucracy for administering, consulting and advising on all of it."[4]

So, is a voluntary opt-in market the most cost-effective solution for securing nature's 'public goods' for humans and life support systems for all other species? Given the imminence of the 2030 target, perhaps a 'sticks, not carrots' approach by government should be a first priority and would see:

- an end to land clearing and the salvage of as much habitat as possible;
- an end to unsustainable water extraction
- a rapid cut to emissions to limit further damage
- public money put into conservation and environmental management
- environmental laws with teeth to act as a more direct and effective method of ending the damage.[5]

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[1] Greening Australia.org.au *What-does-nature-positive-mean-why-is-it-important*

[2] Crikey.com.au *Nature-conservation-public-good-market-tanya-plibersek*

[3] The Guardian. *A third of land set aside for restoration in worse state than before, Australian offset audit finds*

Phys.org Biodiversity-credits-billions-nature

[4] The Conversation *Would-a-nature-repair-market-really-work-evidence-suggests-its-highly-unlikely*

[5] *Ibid.*

Protecting environmental values workshop October 5th

Many landholders are passionate about restoring and protecting native vegetation on their properties to provide resources for wildlife. To this end, many invest years of hard work, time and funds in their stewardship of the land. A concern expressed by some LUCI members relates to protecting the environmental values on their properties beyond their stewardship. To address this concern, LUCI invited LVRC's Cr Cheryl Steinhardt and Deborah Metters of Second Nature Environmental Services to speak to LUCI members about protecting environmental values on private property. Our thanks to both speakers.

Cr Steinhardt outlined Council's environment strategy and the Resilient Rivers and Land for Wildlife programs and described a number of projects delivered under these initiatives that had either flow-on benefits for improving environmental values on local private properties or directly assisted landholders in their environmental stewardship. Projects include tree planting and erosion control initiatives, providing landholder access to weed control advice and equipment, assisting landholders with advice on restoration and revegetation of native habitat and enabling community environment projects through a small grants program.

Deborah's presentation focused on the topic of leaving a conservation legacy. The approach we take in managing our land can be an obvious conservation legacy. Deborah said if "we do manage cleared or degraded land, we can restore it. And if we do manage land that is reasonably intact, we can try to protect the big old trees and the native grasslands and rainforests, and any Indigenous artefacts, living or otherwise. These are the things that are legacies from the past and they deserve our respect and care."
A copy of Deborah's presentation can be accessed here..

Deborah Metters of Second Nature Environmental Services speaking with LUCI members on options for leaving a conservation legacy.

Deborah outlined more formalised options for leaving enduring conservation legacies that included the following:

1. Legal Agreements – in perpetuity covenants such as Voluntary Conservation Agreements administered at the Local Government level under the *Land Titles Act* and Nature Refuge convenance administered at the State Government level under the *Nature Conservation Act*.
2. Philanthropic Arrangements which involve donations of land for ongoing protection For example, land can be donated or sold for the purpose of protection either to local Councils (e.g. the Mary Cairncross Scenic Reserve at the Sunshine Coast and Alice Creek Nature Refuge in the Lockyer Valley) or to non-government organisations (e.g. Bush Heritage Australia's Currumbin Valley Reserve).
3. Ownership structures that can secure the protection of land include revolving funds and community land trusts. Queensland Trust for Nature operates a revolving fund process by purchasing land, then securing a protective mechanism over the land before on-selling the land. Community Land Trusts operate as non-profit companies without shareholding where land that is owned cannot be used for making a profit.
4. Deborah also touched on emerging options such as the market-based Nature Repair and Biodiversity Stewardship Agreements.

LUCI's Spring Walk October 12th

LUCI's spring walk in the Iredale area was led, as usual, by our flora expert Martin Bennett with thanks to host Joe Blatchly. The property is a mixed-use (grazing and conservation) site and boasts some very unusual and significant little treasures.

A standout is *Rhaponticum australe*, Austral Cornflower, of which there were many. It is listed as a Vulnerable species under the *EPBC Act* and Queensland's *Nature Conservation Act*. Its large basal leaves are the first thing one sees before a tall flower stem appears, forming a urn shaped flower body with purple flowers. This species is a heavy soil lover.

Rhaponticum australe (left) and Maireana decalvans (right). Photos Martin Bennett.

Other little treasures include the *Maireana decalvans*, Black cotton bush, the first record in the Moreton Pastoral District although a common species on the Darling Downs. It is a small semi-succulent herb with a papery disc like seed. The *Leiocarpa websteri*, Narrow plover daisy, is the second record for Moreton and another Darling Downs species. It has small grey leaves and a yellow flowered daisy. Another first record in Moreton and a Darling Downs species is the *Leiocarpa panaetioides*, Woolly buttons. It also is small, grey-leaved with yellow flowered daisy.

The group observed *Ajuga australis*, Australian bugle, a common small-leaved herb with purple flowers, *Jasminum didymum* subsp. *racemosum* and *Jasminum dianthifolium* both with a lovely scent, *Denhamia cunninghamii*, *Leuzia australis*, *Indigofera baileyi* and *Alectryon pubescens* or Hairy Boonaree, the second cousin of the far more common Scrub boonaree, with its typical birds eye fruits. All these species were found on a gravelly alluvial flood plain.

MARK your calendars…

LUCI AGM/GM and Christmas Party, 10:30am, Sunday 8th December, Ma Ma Creek Community Hall. We love to celebrate the year's achievements with members, partners and supporters and to have your input into planning for the new year. Our meetings (kept to a total 1 hour) will be followed by our special guest speaker Paul Donatiu, Project Manager with the Queensland Threatened Plant Network and then our usual hearty Christmas feast. Agendas and office bearer nomination forms and proxy vote forms will be emailed mid-November. Put the date in your calendars and essential that you RSVP at LUCI info for catering purposes.

A reminder… LUCI membership due

1st November. Only $10 per person per year, join like-minded others and enjoy membership benefits such as free workshops, guided flora walks, access to grant programs to support property management, loan of fauna monitoring and weeding equipment, newsletters, and lots more.

If you paid your membership after 1st August this year, your membership is current through to 31st October 2025.

Membership can be paid online, with bank details available on LUCI's web site https://www.lockyeruplandscatchmentsinc.org.au/contact/

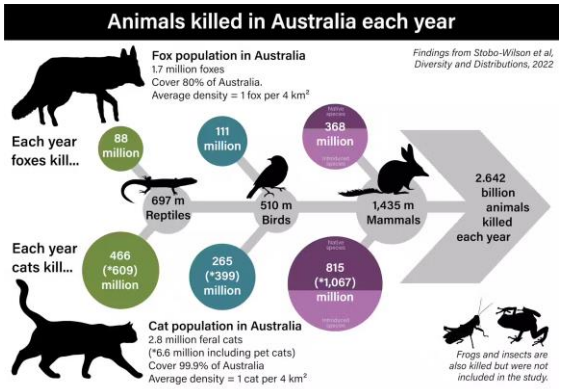
If you would like to know more about LUCI, and how to get involved in local conservation action, please contact us at info@lockyeruplandscatchmentsinc.org.au

Managing foxes in the landscape Workshop 20th October

(Photos from Dennis' slide presentation)

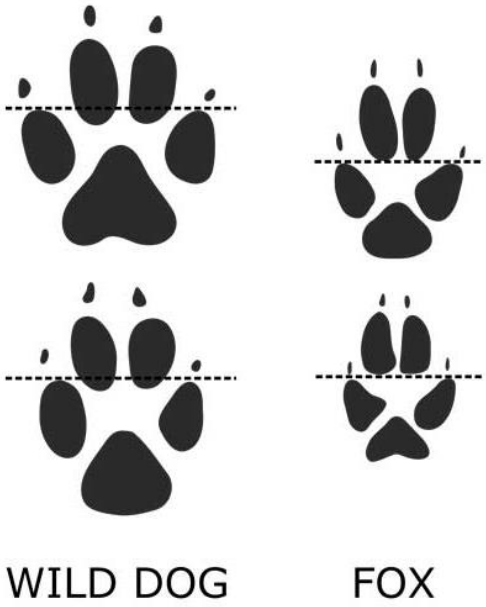
Dennis Gannaway, Bellden Environmental Services, presented a very comprehensive workshop on *Management of Foxes in the Landscape*. Dennis commenced with an overview of the 'problem' of foxes in the landscape, covered the management objectives for fox control at both at a property and a landscape scale, described a range of fox control options including the advantages and disadvantages of each option and provided information on how to access fox-related resources.

It was interesting to learn that foxes are now distributed over 75% of the Australian mainland and can travel up to 10km in a night, more in regions where food resources are less abundant. Both male and female foxes reach sexual maturity at one year of age and a female produces between three to six cubs at a time. While foxes are omnivorous, they are known to prey on small marsupials and ground dwelling bird species.



Often, people become alert to the presence of a fox through its predation on their livestock (e.g. chickens, lambs). Given their elusive and opportunistic habits, it is more often fox scat or tracks that confirm their presence distinguish them from, for example, a feral dog. Other evidence of fox presence might be a den hole or freshly excavated material indicating a den entrance or one of the fox's 'larders' or prey stores.

Examples of fox scats with tell-tale pointy end.



Comparison of fox and wild dog paw pad and toes.

Dennis discussed the humaneness in terms of animal suffering of different control methods from shooting, through different types of baits and different bait delivery methods, exclusion fencing, fumigation, traps (foothold and cage) and guardian animals. Other considerations when deciding a control strategy include efficacy, target specificity and cost effectiveness. On most criteria, the most effective approach for a long-term solution would involve a coordinated effort by landholders across a landscape.

A copy of Dennis' slide presentation can be accessed here.

Bunyas to Border (B2B) project

Now entering its second year, the B2B project is the first of a series of Koala Climate Corridors initiated by the International Fund for Animal Welfare and the Great Eastern Ranges. B2B is a community-driven initiative to enhance core habitat areas and connective linkages across the landscape to support wildlife movement and adaptation under changing climate conditions. Focal species for B2B action include Koala as an umbrella species, long-distance migrants such as Rainbow Bee-eater and Grey-headed Flying Fox, threatened species such as the Greater Glider, Glossy Black Cockatoo and Brush-tailed Rock Wallaby and woodland bird species such as the Speckled Warbler and Painted Button-quail.

In September, B2B welcomed a new project coordinator, Maree Clancy, who replaced previous coordinator, Justine Rice. Justine achieved an amazing planting program of 2,700 native food and habitat trees in strategic locations over 21 properties, as well as the installation of Greater Glider nest boxes and arboreal water drinkers across the B2B Corridor. We wish her well in her new position with the Resilient Rivers program.

A B2B community tree planting day at Mulgowie.

Maree has a strong passion for, and extensive experience in, bush regeneration in both hands on and project officer roles. In the past month, Maree has been busy settling into the role and meeting with a variety of local stakeholders, including landholders, wildlife carers, research institutions, government and other local non-for-profit organizations. Already, Maree has confirmed ongoing support from Greening Australia for supply of seedlings for further tree planting. A top priority for Maree will be to engage with B2B stakeholders in developing a collaborative conservation action plan (CAP) for the corridor. The plan will communicate to our regional communities and potential partners, supporters and funders what our collective aspirations are for our regional landscape and what we will do together to realise those aspirations.

If you would like to talk with Maree about the B2B and getting involved in the CAP process, please contact her at B2B@lockyeruplandscatchmentsinc.org.au

Collared Delma Project

We're excited to announce the start of field research for the Collared Delma project! A UniSQ Masters student has begun assessing how the Collared Delma responds to weed management interventions — an important step in restoring their natural habitat.

This project received grant funding from the Australian Government Saving Native Species Program and is a partnership between Lockyer Uplands Catchments Inc., Pullen Pullen Catchments Group Inc., and Kholo Creek Catchment Group.

To date, a total of 38 sites have been surveyed for C. delma presence with habitat assessments completed. C. delma have been recorded at three sites while fourteen sites have been identified as priority sites for research and habitat restoration work to commence in the new year.

A recent field day hosted by the Pullen Pullen Catchments group, Fabulous Fauna Day, was held at Anstead Bushland Reserve to promote conservation of the Collared delma and its habitat and was very well attended by the community.

Are you passionate about conserving koalas?

Do you want to help koala research?

A group of researchers from The University of Queensland and Central Queensland University are collaborating with landholders in a project investigating the stress levels of koalas in different habitats. The researchers are looking for more property owners to work with them in the research project.

How can you help?

The researchers would require fresh koala scats from a broad range of properties. These scats should be collected once during the breeding season (September to February) and once during the non-breeding season (May to July). Koala scats should be identified by searching the base of a tree where koalas are usually present. It is easier to find fresh scats if the koala is visible in the tree.

What will you receive?

You will receive a collection kit (detailed instructions, an esky, ice packs, permanent marker, Ziplock bags and notebook) for the scat collection.
After the scat samples have been tested, you will receive information on the "stress levels" of the koalas on your property.

Who should I contact if I am interested?

Diane at 0494 110 677 or
info@lockyeruplandscatchmentsinc.org.au

Interesting links to follow up…

ABC's Ann Jones gets up close with a Wedge-tailed eagle Catching Australia's biggest bird of prey

A feel good tale about sighting a critter believed locally extinct Dusky-hopping-mouse-discovery-scotia-sanctuary-nsw

An amazing butterfly odyssey Painted-lady-butterfly-cross-oceans

When planting for butterflies, it is important to understand butterfly and host plant relationships throughout the life cycle Ragged-leaves-untidy-corners-and-no-pesticides-how-to-plant-a-butterfly-garden

Flying foxes on the move as more habitat is lost across the country Grey-headed-flying-foxes-moving-west-habitat-loss-food-adelaide

Frog saunas – keeping warm to fight fungal disease Frog-saunas-at-sydney-olympic-park-fight-chytrid-fungus/104065452

A landscape approach to toad control that involves disrupting toads' access to water sources. Cane-toads-containment-zone-water

Our lack of knowledge on native bees is a drawback in their conservation.. Lack-of-research-on-native-Australian-bees-problem-for-survival

How bad are invasive plants for birds? An American study that might be worth replicating in Australia

Tim Low (author of *Feral Future*) was commissioned by Australia's Invasive Species Council to reconcile the conflicting viewpoints on Glyphosphate. Follow this link to read his report on the pros and cons https://invasives.org.au/wp-content/uploads/2020/11/Glyphosate-A-Chemical-to-Understand.pdf

Important number:

Wildlife carers Kath and Steph 0410 334 661 (available 24/7)

Birds and insects

LUCI's bird survey projects, commenced in late 2019, have provided a foundation database on bird diversity in our landscape. To date, warm and cool season diurnal surveys and nocturnal surveys have recorded over 150 species including threatened species such as Black-breasted Button-quail, Glossy Black Cockatoo, Spectacled Monarch and Powerful Owl plus a number of woodland bird species prioritised in BirdLife Australia's Temperate Woodland Bird Conservation Action Plan (e.g. Speckled Warbler, Painted Button-quail, Grey-crowned Babbler).

While surveys across seasons and time of day will continue, one of the priorities in LUCI's bird conservation plan is to better understand bird habitat relationships so that we can manage our properties to keep birds and bird diversity in our landscape. Birds' habitat needs vary considerably across species in terms of food, shelter and nesting resources. However, insects are a major source of food and most Australian birds feed their nestlings insects, irrespective of what they eat as adults.

Scarlet Robin. Photo D Guthrie

LUCI's understanding of how our insect diversity might be contributing to our bird diversity will get a boost from UQ PhD researcher Rhiannon Bird. Rhiannon is keen to investigate insect diversity and abundance in grasslands at the same sites where LUCI's bird surveys are undertaken.

Correlations between the bird and insect data to be collected at grassy sites will help to inform our management of grassy understorey and its role in bird habitat.

If you are interested in your property being part of Rhiannon's study, contact LUCI

Of interest is a British study indicating plant diversity and soil health is more likely associated with less intensively managed grazed grasslands, which is good for insects, birds and small mammals.

Don't forget to book your place for the Glossy Black-Cockatoo national forum, 19 – 20 November. You'll hear about the latest research, technology used in field research, habitat mapping, citizen science, policy and planning and what we need to do collectively to drive recovery of this iconic species.

For the love of birds - ordinary people doing the extraordinary

One farmer helping to conserve one of Australia's rarest birds Plains-wanderer-bird-endangered-species-australia

Human-assisted migration - the extent to which some conservation efforts will go to prevent extinction of a bird species. Flying-conservationists-teach-endangered-birds-to-migrate

A community leader honouring an ancestral legacy. The-tribal-leader-dedicating-his-life-to-protect-philippines-critically-endangered-national-bird

A dam as habitat

Many rural properties will have a dam, which is often viewed as a stock watering source. However, a dam can provide for ecosystem processes and critical habitat resources for a range of Australian wildlife. Dragonflies and damselflies love hanging out around a dam. They eat flies and mosquitoes and in turn are eaten by birds, lizards and frogs. A remote wildlife camera set up at a dam will capture the diversity of fauna species that come to drink throughout the day and night. In rainy weather, a dam can become a sound stage filled with a frog chorus..

The presence of aquatic and semi aquatic plants in a dam can assist in cleaning the water of impurities, keeping the temperature steady, maintaining pH levels; and these water quality improvements are free. These plants also become habitat for fauna to hide in, or perch on. As parts of plants break away or the plant dies and sinks to the water body floor, this deleterious material becomes a food source for many macro invertebrates, crustacea, and fish, which, in turn, become a food source for larger fish, Rakalie (water rat), and many waterfowl species.

Glossy Black family taking an evening drink. Photo Jan Schafferius.

From top Pacific Black Duck (photo D Guthrie), Myriophyllum, Milfoil, and Ottelia, Swamp lily (photo Martin Bennett), Dragonflies (photo D Guthrie), Duckweed and Pepper plants (photo Martin Bennett).

Lichen[6] - a hybrid colony

Found all over the planet from deserts to polar regions, lichens are not an organism but a symbiotic partnership between a fungus, which provides structure and protection, and either a green alga or cyanobacterium contributes food through photosynthesis.

Capable of inhabiting tree bark to rock surfaces, lichens are often a pioneer colonising species in harsh environments, contribute to soil formation by breaking down rocks and add organic matter once they die and decompose. Lichens provide food for certain animal species and refuge for insects and microorganisms. Due to their sensitivity to airborne pollutants, a decline in lichen diversity and abundance can signal deteriorating air quality and ecosystem health.

Humans have used lichens as a food source, in the production of dyes and perfumes and for medicinal purposes. Lichens continue to be studied for their medicinal potential and the insights they afford in adaptability to a range of climate scenarios.

Further resources
https://www.anbg.gov.au/abrs/lichenlist/introduction.html
https://fungimap.org.au/about-fungi/lichens/
https://www.dcceew.gov.au/science-research/abrs/online-resources/lichen

[6] A summary of The Amazing World of Lichens, Nature's Pioneers.

An **Usnea** species, photo Martin Bennett. Usnea is a genus of mostly pale grayish-green fruticose lichens that grow like leafless mini-shrubs or tassels anchored on bark or twigs. https://en.wikipedia.org/wiki/Usnea

Flora treasures…by Martin Bennett

A patch of *Acacia cultriformis* Cut-leaved Wattle at Spa Water and a single specimen at Mount Sylvia are the first records of this southern species of Acacia in the Lockyer Valley. There were about 40 specimens at the Spa Water site, which had seen a large fire 10 years ago with two thirds of the specimens surviving.

Acacia semilunata, recorded at Spa Water. Photo Martin Bennett.

At the Spa Water site, the wattle occurs in a Large leaved spotted gum forest with Silver leaved ironbark, Narrow leaved ironbark, and a hybrid between these two ironbarks on sandstone.

Three specimens of *Sambucus gaudichaudiana*, White Elderberry have

been recorded in the Lockyer, at Lake Apex Gatton in 1956 and in the heart of Laidley in 1917 and 1920. A thin, weak plant, it is very shade tolerant although it is unlikely you could grow it these days or that it would survive even in a garden.

White Elderberry. Photo Martin Bennett.

A more common Elderberry on the coast and mountains is *Sambucus australasica*, Yellow elderberry. The one pictured below was observed in a private garden in Toowoomba. The small yellow fruits are edible with soft, juicy, sweet flesh although they are a little bland in flavour.

Yellow Elderberry flowers (top) and fruit (below). Photos Martin Bennett.

Lysicarpus angustifolius variously known as Budgeroo, Buff Hazelwood and Tom Russell's Mahogany, is a member of the Myrtaceae family and more commonly seen on Land Zone 7 out west and up north. Zone 7 includes low stony rises on the Darling Downs, shallow soils, and often areas nearby have sodic scalds. It is at its most eastern distribution in the Lockyer Valley, where it almost makes it to the Gatton/Esk Road a kilometre west of the Prison. Here, the species occurs on Land Zone 5, loamy and sandy plateaus.

Described as growing to 10m in height, these specimens pictured below are more than twice the height. When immature, the bark is soft and woolly and becomes flat and stringy on maturing. It has fine, opposite, scented and, sometimes, whorled leaves, which are dark green on the top and a greenish colour below. The flowers are small and white with yellow centres and stamens are followed by dry small capsules, 6-8mm long.

Budgeroo trees (top) and flowers (below). Photos Martin Bennett.

One of the many frog species enjoying this year's weather has been the Pobblebonk. A LUCI supporter and farmer found this Scarlet-sided Pobblebonk *Lymnodynastes grayii at her home.* A burrowing frog, the Pobblebonk prefers river flats, grassy open forests and woodlands but does like to hang around dams and swamps. It's not unusual to come across one when you're digging in the garden as they like to retreat underground during dry spells.

Scarlet-sided Pobblebonk. Photo J Dipple.

One of my favourite native grasses is popping up everywhere at the moment, Longhair Plume grass *Dichelnache crinita.*

If you would like to share your stories and photos, we'd love to receive them.

Stay connected, it's healthy!

Newsletter Editor Diane Guthrie 0494 110 677 If you do not want to be included on the email list for this newsletter please let us know at **LUCI**.