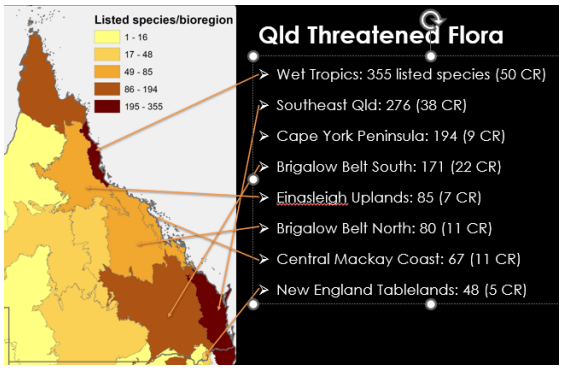
LUCI Update No 38 … January 2025

New year greetings and best wishes to all LUCI members and supporters for a rewarding 2025 that brings contentment.

LUCI AGM/GM 8th December 2024

LUCI's AGM/GM guest speaker for 2024 was Paul Donatiu, Project Manager for Queensland Threatened Plants Network. Paul's talk on *Current and Emerging Issues in Native Plant Conservation* highlighted that we have over 1,000 threatened plant species in Queensland, 755 of which are only found in this State! Of the total listed, 141 are classified as critically endangered, 232 endangered, and 403 vulnerable, with many others poorly surveyed and relatively unknown.



Distribution of critically endangered plant species in Queensland. Source Dr Jen Silcock.

Paul outlined a number of current and emerging issues that need to be considered when managing threatened plant species including fire management, plant diseases (e.g. Myrtle Rust and Phytophthora), extreme weather impacts (e.g. flooding, landslips), climate change, small population size, and the scope of the survey effort required to improve our understanding of many species. Paul also described several culturally significant plants (such as remnant Cypress Pines on Bribie Island) and their associated threats.

Finally, Paul outlined some of the core activities that Network-affiliated groups (such as LUCI) can undertake including the development of species recovery plans, surveys of data deficient species, and participating in training workshops linked to specific recovery actions. We thank Paul for his talk and LUCI is keen to follow up on some of these conservation options.

Forty-one members and supporters attended the AGM/GM at which the President's and Treasurer's 2024 reports were tabled and accepted unanimously. Elections for 2025 office bearers saw the re-election of Diane Guthrie as President, Penny Kidd as Treasurer and Fiona Watters as Secretary.

Members confirmed their support for LUCI's current projects and identified additional topics of interest for attention in 2025, which included fire management, soil and soil processes, weed management and flora, fauna and fungi surveys. The LUCI office will keep you posted on all projects and upcoming events through the quarterly newsletter, email notices and social media.

Members of LUCI's management committee for 2025 include the three elected office bearers, LUCI Project Coordinators Maree Clancy (Bunyas to Border Project) and Kathy Finch (LUCI Walks Coordinator) and general member representatives John Hopwood, Jason Creamer and Elspeth Darvall. The committee welcomes members' ideas for projects and events, which you can send to LUCI. We look forward to seeing everyone at some of the LUCI events over the year.

Lockyer-Toowoomba Birds on Farms project by Scot McPhie (Project Coordinator)

Birdlife Australia is launching the Lockyer-Toowoomba Birds on Farms project this month. This project is the successor to LUCI's Lockyer Uplands Bird Survey Project and encompasses the entire Lockyer Valley Regional Council area, and parts of the Toowoomba Regional Council.

The project is mainly (but not exclusively) focused on woodland birds. Approximately 195 bird species in Australia rely on woodlands, and just over a quarter of those birds are threatened or in decline. Australia has lost 30% of its woodlands, and 75% of what remains exists on private landholdings.

The Spotted Pardalote *Pardalotus punctatus*, a woodland bird species, recorded on a number of LUCI members' properties. Photo S. McPhie.

The purpose of Birdlife's Birds on Farms project is to improve populations of threatened woodland birds by supporting private rural landholders to increase the extent, condition, and connectivity of woodland habitat on their properties. There are currently six Birds on Farms projects operating in Australia, the Lockyer-Toowoomba Birds on Farms project will be the seventh, and the first in Queensland.

The first year of the project will involve quarterly scientific surveys on the properties of interested land holders, and the second will involve habitat management plans and plantings in priority areas.

The project is co-ordinated by Toowoomba Ornithologist Scot McPhie. If you have a minimum of 5 hectares of woodland on your property and are **interested in being involved, then please email Scot at** scot.mcphie@birdlife.org.au

Reminder…

UQ Gatton PhD student Rhiannon Bird will be working alongside Scot at bird survey sites to investigate how grassland condition and the surrounding landscape affect the biodiversity of grass dwelling insects. The findings will inform how grassland management and insect biodiversity interact with bird biodiversity, which will help us in our management of grasslands for insect biodiversity. Insects are critical for the maintenance of food webs and healthy ecosystem functioning, yet insect diversity and abundance is considered to be 'crashing' in various parts of the world, including, potentially, Australia. Theguardian.com/up-to-three-insect-species-become-extinct-in-australia-every-week-report-says

Over the next couple of months, Rhiannon would like to contact landholders who have participated in bird surveys to date or will participate in the Birds on Farms project, to gain consent to conduct insect surveys. If you would like further information on Rhiannon's project, please contact LUCI

Farming practices have a critical role to play in the conservation of birds and insects…

A European study, published in the Proceedings of the National Academy of Sciences, provides strong evidence of a direct and predominant effect of farmland practices at large continental scales. High-input farming, especially in use of pesticides and fertilisers, is the most influencing pressure explaining bird population changes. The deleterious impacts of these inputs on insects and other invertebrates have a cascading effect on available food for birds in turn affecting their breeding success.

Bunyas to Border by Maree Clancy (Project Coordinator)

Planning for Phase 2 planting projects is now underway for the Koala Climate Corridors Bunyas to Border project, which is an initiative of the International Fund for Animal Welfare, Great Eastern Ranges and Lockyer Uplands Catchments Inc.

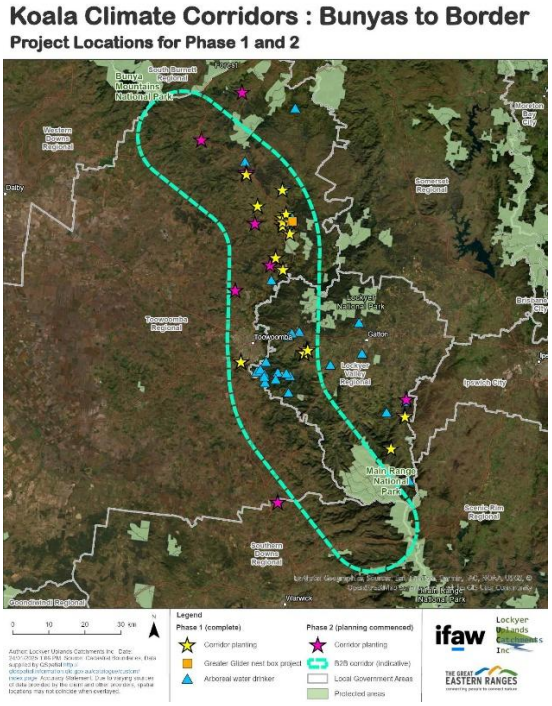
I caught up with eleven wonderful landholders at their properties, which span from Kooralgin in the far north of the Bunyas to Border corridor to Allora in the South. I was so inspired by each and every one of these landholders, who come from all walks of life with so many different life journeys and stories to tell, and who are bound by a common thread to help wildlife, starting in their own backyard. I was also fascinated to hear what they considered to be co-benefits for the plantings, including providing shade for livestock, slowing down water and wind and reducing soil salinity.

Desktop planning will continue for each of the properties with the aim of undertaking plantings between March and April this year while larger plantings will likely be staged. We are also assisting landholders by reaching out to partner organisations who are interested in collaborating on the larger revegetation projects.

We received great news recently from one of our B2B collaborators, Kym Sparshott of Leaftail Environmental, that one of our monitoring cameras installed on a Habitat nest box at Dingo Mountain had captured a Greater glider peeking out of the entrance. Greater gliders, a hollow-dependent species, were once common across eastern Australia and have declined by an alarming 80% over the past twenty years. Other images captured a Feathertail Glider and two Common Possums. The nest boxes were created by **Habitat Innovation & Management** to mimic natural tree hollows and installed at locations identified by Paul Revie, Wildlife Queensland, as ideal locations for Greater gliders.

Greater Glider captured by wildlife monitoring camera using a Habitat nest box at Dingo Mountain installed during Phase 1 of B2B.

It's comforting to look at a map of the B2B corridor and to see how much has and will be achieved after only 1.5 years of project running.



Map of B2B projects that are already completed under Phase 1 and that are planned for Phase 2.

Collared delma Project by Justine Rice (Project Officer)

We're breaking into the new year with a bang as the Collared delma Project continues its vital conservation work to protect this cryptic legless lizard which is federally listed as Vulnerable. All ecological surveys in the Lockyer Valley are now complete, and we're nearing the finish line for Brisbane-based surveys. These efforts have given us valuable insights into this cryptic species' habitat requirements.

Research by UniSQ is also progressing with some fantastic discoveries, including more effective survey methods to locate the Collared delma and a better understanding of the impacts of habitat modification. Looking ahead, we'll extend our research to focus on genetics and supplementary habitat strategies. Meanwhile, habitat restoration is entering the planning stages, with priority sites identified for upcoming works aligned with our habitat modification research.

Mark your calendars! The Lockyer Valley **Collared Delma Field Day is set for Saturday, March 22, 2025,** at Helidon Hall from 9 am to 12 pm. This family-friendly event promises exciting presenters, stalls, and food. Highlights include C. Delma educational talks, wildlife encounters with Geckoes Wildlife, a presentation on C. Delma scent detection dog by Bellden Environmental Services, and engaging presentations from our researchers. Come along to learn all about this special species and discover how you can get involved in its conservation efforts! Follow LUCI's Facebook page for updates and registration which will open soon.

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.

Diagnosis of stress levels in koalas project by UQ Professor Joerg Henning

This UQ led research project (with CQU involvement), which aims to develop a non-invasive species-specific test kit to measure stress in koala faeces, is progressing well. The team of Prof Joerg Henning (UQ) and Drs Flavia Santamaria and Rolf Schlagloth (CQU) presented a well-attended workshop in September 2024 to inform landholders about the background to the project.

Attendees of a workshop conducted on the 14 September 2024 to inform landholders about the koala stress kit project and to train them in koala scat collection

Since then, landholders have been busy collecting fresh koala scats. So far, ten landholders from various groups (including LUCI) have supplied scats from 54 koalas and shared pictures and valuable information on each koala!

Dr Rolf Schlagloth and LVRC's Lisa Swales looking for koala scats.

The research team has been busy processing the scat samples and conducting laboratory experiments in preparation for test kit development. The team also initiated trials in both Austria and Australia to generate antibodies, which are required for the kit development. A new lab technician will support the kit development at UQ Gatton laboratory from February.

The research team would like to thank all landholders supporting this project and is looking forward to another good collection round of scat samples over the non-breeding season of koalas.


One of the participating koalas from Flagstone Creek (left) and Martin Bennett examining koala scratch marks (right).

If you are interested in participating in the koala stress level project, please contact Diane at 0494 110 677 or LUCI. Participants receive a koala scat collection kit (detailed instructions, an esky, ice packs, permanent marker, Ziplock bags and notebook) and information on the "stress levels" of the koalas on your property.

Flora and fauna snippets by Martin Bennett

My **Peanut tree** (*Sterculia quadrifida*) fruits were covered in these Pale Cotton Stainer bugs, *Dysdercus sidae*. It appears that most of the seed was affected by the bugs feeding and, if that's the case, then that's nature. Wild Malvaceae plants (e.g. *Abutilon*, *Hibiscus*, *Sida*) and some trees are hosts also to these bugs.

Pale Cotton Stainer *Dysdercus sidae*. Photo M Bennett

Cotton stainer bugs (family Pyrrhocoridae) are so called because some members of the family leave an indelible yellow-brownish stain on cotton crops. *D. sidae* have a red head, red eyes, and pink to orange body, with a small black dot on each forewing, and can be distinguished from *D. cingulatus* by its dark nape area. They lay loose clusters of eggs in soil or leaf litter under host plants, which hatch in about 5 days. There are 5 nymph stages over 30 days and adults have been known to fly 15kms.

A globally widespread family, cotton stainers are treated as a threat to cotton crops and some food crops. While chemical control is in common use, the natural predators of the cotton stainers include assassin bugs and Tachinid flies. lucidcentral.org/pppw_v12/text/web_full/entities/cotton_stainers

The **Stinging Nettle** or Scrub Nettle (*Urtica incisa*) usually gets a bad wrap due to the painful sting it inflicts on contact. Endemic to Australia, this upright, scrambling perennial herb grows in well-developed upland rainforest and waterways.

Stinging Nettle (*Urtica incisa*), photo Martin Bennett.

Stinging nettle grows up to 1m tall with pairs of dark green, lance-shaped to triangular broadly toothed leaves, with a scattering of stinging hairs on stems and leaves and small male and female flower spikes all year round especially winter to early summer.

The Stinging Nettle is a food plant for caterpillars including the Australian Admiral Butterfly. For indigenous Australians, cooked Stinging Nettle leaves were a tasty vegetable, and the plant had medicinal uses. Colonists also used the Stinging Nettle as a tonic for "clearing the blood" and for treatment of rheumatism. Other reported uses of Stinging Nettle leaves include as a compost starter or for compost enrichment, as a dye or oil and in weaving.

Yellow Admiral (*Vanessa itea*). Source Wikipedia.org

lucidcentral.org/urtica_incisa
inaturalist.org/Urtica-incisa
Toowoomba plants.blogspot.com/whod-grow-nettles

Grey-headed flying foxes. Photo Doug Gimesy, source The Guardian 3Jan2025.

Listed as Vulnerable at federal and state levels, the **Grey-headed Flying Fox** is the only mainland flying fox species that occurs only in Australia. It ranges from as far north as Ingham in Queensland to Melbourne in Victoria and west to Canberra and Adelaide.

Grey-headed flying foxes are capable of travelling up to 50kms a night (and up to 2,500 kms a year) in search of flowering gums, figs and fruit trees. They are a 'flying mammal' that do most things upside down.

Grey-headed flying foxes are a critical pollinator and seed disperser and feed on fruit and nectar mainly, with a special dependency on eucalypts. However, destruction of native forests has pushed flying foxes to search for alternate food sources on farms and in urban areas causing increasing conflict with humans. Their viability is also increasingly threatened by extreme heat events due to changing climate conditions, which are causing record numbers of flying fox deaths.
https://www.theguardian.com/environment/2025/jan/03/australia-flying-foxes-endangered-species-list
https://www.propublica.org/article/peggy-eby-video-bats-pandemic-virus
https://www.lfwseq.org.au/deadly-recipe-flying-foxes-extreme-heat-climate-change/

Exotic water hyacinth – a growing problem in the Lockyer

Water hyacinth *Eichhornia (syn Pontederia) crassipes* was introduced to Australia in the early 1900s and released into ponds and lagoons in public parks throughout Queensland. A native of Brazil, it is now one of the world's worst invasive aquatic plants infesting creeks, rivers and dams. It chokes wetlands and waterways, depleting water bodies of oxygen, killing native wildlife and interfering with recreational use. This water hyacinth is a restricted category 3 invasive plant under the *Biosecurity Act 2014*, which means a person cannot give away, sell or release the plant into the environment.
https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/biosecurity/plants/invasive/restricted/water-hyacinth

Water hyacinth seeds and stem fragments are spread mostly by water movement. Seeds can persist in the substrate of a water body for up to 15 years. Control

measures adopted will depend on extent of infestation and landholder capacity although a combination of mechanical, herbicide and biological control methods is considered the best approach.

Exotic water hyacinth *Eichhornia (syn Pontederia) crassipes*. Photo Martin Bennett.

Two weevil and two moth species have been introduced as biological control agents and appear to have been established in Queensland with varying levels of success. Biosecurity Queensland Scientist Tamara Taylor reports that the biocontrols considered the most impactful are the weevils, particularly *Neochetina eichhorniae* (mottled water hyacinth weevil). "The adult … feeds on the leaves making small scars. Eggs are laid in the bulbous leaf stalks and the larvae tunnel through the plant tissues. Bacteria and fungi then attack the damaged tissues and under heavy attack the plant becomes waterlogged and eventually dies. The life cycle of the weevil takes three months, and the insect is inactive over winter." https://www.daf.qld.gov.au/__data/assets/pdf_file/0005/54680/water-hyacinth.pdf

LUCI is liaising with Biosecurity Queensland and Lockyer Valley Regional Council Senior Pest Officer Steve Moore on establishing a supply of the *Neochetina eichhorniae* (mottled water hyacinth weevil) in the Lockyer that can be bred up and distributed, eventually, to landholders with a water hyacinth problem. **If you have a water hyacinth problem and are interested in applying the weevil biocontrol, please contact LUCI for further information.**

Note … It is important to remember, as Martin Bennett points out, that we do have a native water hyacinth, the *Monochoria (syn. Pontederia cyanea) cyanea*. This species never covers dams and grows in shallow water and drying mud of permanent or temporary water bodies. Lagoons, melon holes and anabranches, are their favoured habitat.

The native water hyacinth is an annual or perennial plant with floating and/or emergent leaves and flowers. It grows from 16cm to 80 cm high with leaves (blade elliptic to ovate) with petiole-like stalks to 30 cm long. The flower stalks are 5–120 cm long, with mauve to purple flowers. Seed capsules are numerous and 9–15 mm long.

Native water hyacinth *Monochoria (syn. Pontederia cyanea) cyanea*. Photo Martin Bennett.

Interesting links to follow up…

The use of 1080 baits to control foxes, cats and wild dogs is not without controversy for several reasons. It is distressing to hear accounts of off-target kill of native animals such as Wedge-tailed eagles. One research project reports on native animals that are more likely to take up the baits than target pest species and the need to consider alternative control methods. Baits-are-used-to-kill-foxes-cats-and-dingoes-but-other-animals-can-be-more-likely-to-eat-them

Fire management is a topic of interest identified by LUCI members at our December 2024 AGM/GM. Cultural burning methods are gaining more attention with increasing on-ground adoption and research investigating the comparative values of traditional and 'western' scientific fire knowledge. A University of Wollongong study examined the impacts of cultural and agency-led prescribed burns on a number of soil and ecosystem health parameters finding both techniques have positive outcomes on soil health while cultural burning is more efficient in increasing carbon and nitrogen stores. Just as important is the understanding that not all Australian ecosystems benefit from fire and indeed are adversely affected by fire Our tall wet forests were not open and park like when colonists arrived and we shouldn't be burning them. If you are interested in a historical and archaeological account of the role of cultural burning in indigenous cultural and economic systems, the analysis reported in the following is of interest… Cultural burning Cambridge University Press

The Australian Land Conservation Alliance has published its recommendations on how to maximise the contribution of private land conservation to Australia's commitment to build our permanently protected area estate to 30% of Australia's land by 2030 alca.org.au/the-private-land-conservation-opportunity-to-deliver-for-30-by-30.

Measuring complex biodiversity outcomes and the implications for providing support for Nature Positive claims is challenging.. https://phys.org/news/2024-12-nature-framework-highlights-biodiversity-credit.html

Read about the accidental discovery of embryonic learning in Superb Fairywrens where the mother teaches the unhatched eggs a critical 'password'. scientificamerican.com/article/wrens-teach-eggs-to-sing/.

Published in 2022, the Australian Conservation Foundation's Queensland land clearing report highlights the seemingly endless hunger for land to be cleared in preparation for predominantly export-oriented industries. The report notes that "[mining companies and property developers sought and received approval to clear 25,000 hectares of habitat in the last decade [and] shows in a single year pastoralists destroyed three times that amount in Queensland alone without even seeking approval." (emphasis added)

The conservation space has some very interesting, passionate and eccentric advocates such as this self-described 'British tourist' although tourist is the last descriptor I would use… I discovered a tree kangaroo that had only been seen once - by the man who shot it in 1928

A reminder… LUCI membership fee due for 2025. 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 2024, 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/

Volunteers needed for a half day a month for the Friends of Dwyers Scrub weeding project. Interested? Contact LUCI.

LUCI Friends of Dwyers Scrub weeding volunteers

MARK your calendars…

- **LUCI Summer Walk Saturday 22nd February, 8:30am-11:30am** at a **property in Townson** with walk leader Martin Bennett. The 3,400ha property contains eucalypt forest and rainforest areas with several threatened fauna and flora species and many regionally significant plants. Parking will be available at the property entrance for 2-wheel drives with carpooling into 4-wheel drives for travel to the walk site. BYO morning tea for post-walk catch up. Numbers will be limited so book your place early by emailing LUCI.

- **Soils and Soil Processes Workshop, Saturday 8th March, 9:30am-11:30am at a property in Iredale.** Workshop presenter Polyculture's Scott Robinson will cover a broad range of topics including soil biology, how to do a soil test, hydration and irrigation, perennial green ground cover, the benefits of planned grazing and how livestock can benefit native trees, and much more with plenty of opportunity for Q&A. This workshop is for **anyone who is interested in wholistic management of their land and livestock**. Morning tea will be provided. **Registration open now** by emailing LUCI or B2B at LUCI

- Lockyer Valley **Collared Delma Field Day, Saturday 22nd March, at Helidon Hall from 9am-12pm**. Family-friendly event with expert talks on the C. delma with scent detection dog demonstration, wildlife presentation, stalls, and food. Discover how you can get involved in the conservation of Australia's smallest legless lizard. For further information and how to register for this fact- and fun-filled event, contact justine@lockyeruplandscatchmentsinc.org.au

One of the many stunning views on the Townson property, venue for LUCI's summer walk. Photo Martin Bennett.

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

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.**

Red-browed and Double-barred finches sharing a water bowl with female Red-back Fairywren.

Stay connected, it's healthy!

Important numbers:

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

Bat Conservation & Rescue Qld Inc 0488 228134