BREMER CATCHMENT ASSOCIATION INC.

around the bremer

August 2023

Special points of interest:

The next Meeting will on

17th

August

2023

Inside this issue:

Where and when did it all start?	1
Prepare for bushfire season	2
Upper Catchment Project Shnapshot	3
Meet my pet Termite	4
$1.2m funding boost for our Protecting Koalas Program	5
Ecosystem on s Balloon Cotton Bush	6
Information Page	7

Where and when did it all start? by Barry Jahnke, BCA Member

Even though we were not there we are fully aware of the removal of the extensive Brigalow-softwood Scrubs which were such a feature of the Fassifern District in the 19th century. Today only a few weed-infested scattered patches remain.

It is also known that some of us are descendants of those European settlers who in the latter part of the 1800s moved onto surveyed blocks in those scrubs with the dreams of a new life in Australia.

But, before they could establish some sort of a farm and dwelling they had to clear this dense vegetation using axes and the skill of falling patches of scrub where large trees were used as 'knocker'trees. Not only was the work exhausting but it could be dangerous, especially where there were masses of vines in the forest canopy. Then there was the wait for suitable conditions for the fallen vegetation to be destroyed by a scrub burn.

Come forward into the 1950s and there were wide expanses of cultivation producing a wide range of crops for cash or for supporting the numerous dairy herds which supplied cream to the large co-operative butter factory in Boonah. This cultivation was usually in right-angled blocks and when not producing a crop, was lying fallow after being tilled with mould-board or disc ploughs.

This bare soil was often exposed to alternating periods of dry air and rainfall from severe storms, especially in the Spring and Summer months. The effects of raindrop splash together with sloping land meant that this unprotected soil was often carried down to the lower parts of the cultivation and it was not uncommon to see partly buried fence posts.

So, the question arises ----- When and where did the first soil conservation practices start in the district?

(to be continued in the next newsletter)

Contour ripping

Prepare for bushfire season

Use the following lists as a guide to start preparing your home before the start of bushfire season. A well prepared home is easier to defend and reduces the risk to surrounding properties.

What are your responsibilities as a land owner?

Managing Queensland's bushfire risk is a shared responsibility. However, as a land owner, you are legally responsible for managing bushfire hazards on your property. If a fire starts, you are legally responsible for taking all reasonable steps to report the fire and prevent the fire leaving your property.

What is a bushfire hazard?

A bushfire hazard is the potential fire behaviour characterised by weather, fuel loads and topography. Fuel load is live or dead vegetation that accumulates in an area, over time. For example, dead leaves and twigs may build up as they fall from trees.

What do you need to do to meet your responsibilities as a land owner?

As a land owner, we must prepare and plan for bushfire hazards by being aware of fire management issues in your area, trimming trees, mowing grass, removing flammable material around your home and clearing vegetation, particularly if your land shares boundaries with bushland.
You must also strike a balance between undertaking these activities and preventing harm to the natural environment and areas of cultural heritage. You can do this through property planning or preparing and implementing a land and water management system.

What are Queensland Fire and Emergency Services (QFES) responsibilities?

If a QFES officer becomes aware of a potential bushfire hazard, such as an excessive fuel load, on a particular property, the officer is authorised under the Fire and Emergency Services Act 1990 to undertake a site inspection to discuss what may be necessary to reduce the risk of bushfire to your property, including:

- improving firebreaks or conducting a hazard reduction burn
- removing or disposing of any vegetation or flammable material
- obtaining and maintaining equipment for fire fighting purposes
- ensuring there is an adequate water supply on your property for fire fighting purposes, and / or
- ensuring there is a safe escape from the property.

QFES Officers are authorised to formally direct you to comply with measures considered necessary to protect the community, or to take necessary measures on your behalf, at your cost.

What if you don't comply?

If an agreement cannot be reached, QFES may elect to undertake enforcement/compliance action. The initial fine for not complying with such a direction is currently 50 penalty units for individuals. However, if an agreement cannot be reached, more serious penalties may apply under the Fire and Emergency Services Act 1990, including imprisonment, depending on the seriousness of the offence.

What are your responsibilities under the Environmental Protection Act 1994?

Under the Environmental Protection Act 1994, emergency incidents, such as those involving the release of hazardous materials from fires, vehicle accidents, and spillage of explosive, flammable or toxic chemicals, often involve public safety matters and require an immediate response from emergency services. These types of incidents may also threaten or cause serious or material environmental harm.

What are your responsibilities under local government legislation?

Overgrown vegetation and storage of materials in and around a property are regulated under local government legislation. Before clearing your land, you should check what local vegetation protection laws apply in your area.
For more information go to: **www.qfes.qld.gov.au**

UPPER CATCHMENT PROJECT SNAPSHOT –

Resilient Rivers Initiative, Upper Bremer River Rural Partnerships Program

by Anna Shera

The Upper Bremer River - Rural Partnerships Program is focused on working collaboratively with rural landholders and other stakeholders.

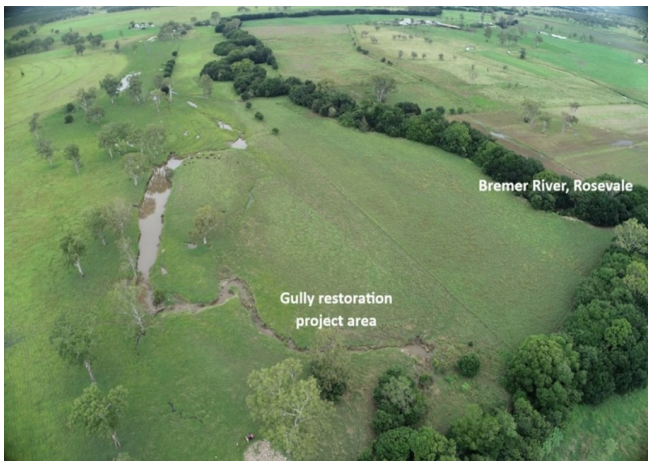
Project in the Upper Bremer River Catchment.

The focus area for this project is a wetland system along the banks of the Bremer River, in Rosevale, which has been significantly eroded. A 3D model was developed from a drone scan of the site captured in March 2022, which contributed to an erosion control report and site assessment by an RPEQ Environmental Engineer. From the modelling it is estimated that sediment lost from this channel over the last 10 years is 590m3, about 88.5 tonnes per year (Airborn Insight, 2022).

Objectives of this project include:

-Deliver on-ground, co-ordinated rural partnership projects to improve waterway health in priority locations in the Bremer Catchment;

- Reduce sediment loads entering the Bremer River from sources of hillslope, gully, bed and bank erosion;
- Protect soil from overland flow and reduce the risk of further degradation to the gully from future flood events;
- Provide habitat and connectivity to riparian corridors by establishment of a refuge gully.



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On-ground works at this property began in April 2023, with earthworks targeting the slumping and degraded gully banks. The bank battering along the gully followed the engineering design parameters (min 1V:3H slope) and banks were track-rolled (20-tonne excavator), followed by top soil being placed over the batter. Vetiver hedges, native trees, shrubs and Lomandra were planted to stabilise the battered banks. A rock revetment and small rock wall were installed along sharp bends in the gully, and two rock weirs were constructed to control channel deepening.

Stock exclusion fencing has been installed around the project site, whereby the landholder has provided a generous area that will be treated as a refuge paddock.

Refuge paddocks not only reduce sediment loss in the landscape, but they also provide multiple and ever improving Natural Resource Management outcomes such as native habitat, denser and more diverse pastures, and rough hydraulic areas at critical locations through the landscape.

Integrating the refuge paddock with evolving grazing management practices for the broader landscape maximises the benefits for landholders. Improved pasture cover and composition results in greater soil infiltration rates, reduced overland flow velocities and increased profitability for landholders (Airborn Insight, 2022).

Meet my pet termite *submitted by Gary Cochran, BCA Member*

All termites belong to the Infraorder Isoptera [meaning equal wings], having derived from their ancestorial linkage to cockroaches (Order Blattodea). Three different types of termites exist, Dampwood, Drywood and Subterranean. As their name implies, Dampwood termites infest damp and decaying timbers, whilst Drywood termites consume dry timber – no contact with soil.

However, subterranean termites (contact with soil) contain the most destructive species. They construct various types of nests such arboreal, trees/poles and ground mounds. Destructive species are those that ingress into timber structures. They are attributed to cause > $1 billion dollars damage in Australia annually.

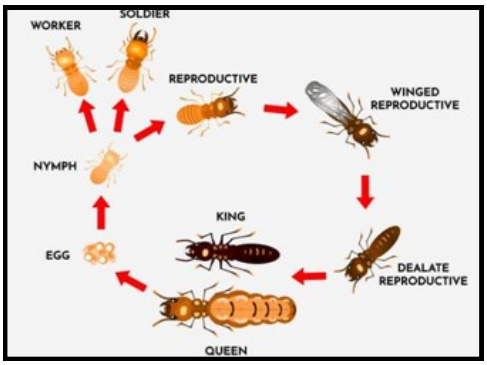

Figure 2. A most damaging subterranean termite, *Coptotermes* spp. soldiers with worker castes.

However, subterranean termites contain the most destructive species, those that ingress into timber structures and feed on cellulosematerials. Hence, they can be detected feeding on timber in areas such as <u>cattle yards, fences, electricity poles, sheds and houses.</u>

Their gradual life cycle (Fig. 1.) within a colony structure enables abundant worker termites to seek food and moisture. These castes perform all work necessary to ensure colony survival, even destroying your home. Their care and attention given to the king and queen, provide conditions for colonies to increase in population, permitting survival of future generations.

Contrary to belief, soldier termites do not damage timber. They are fed by workers and their defensive role performed in the colony provides support to other castes. Soldier castes (Fig. 2) are usually distinguished by prominent mandibles. Many soldier species have developed specialized skills to defend against their enemies. Some use their powerful mandibles to crush the enemy, others use a white latex material which is sprayed over enemies to deter them.

Worker termites are the most numerous caste in the colonies. They perform many tasks such as collecting food and moisture, colony maintenance, feeding of young, tending to nursery, tending to king and queen. A mature termite colony of *Coptotermes* spp. can contain more than 10 million individuals.

There are a number of effective methods, both non-chemical and chemical, to control and eradicate termites from around your property. Non-chemical methods include but not limited to ensuring excess moisture is removed from around the house, removing all timber stored beside and/or under the house, keeping soil levels 75mm below brick weep holes and maintaining annual timber pest inspections.

Current chemical methods include a number of options such as employing monitoring and baiting devices, dusting or foaming activity, and where possible direct injection. Depending on level of termite activity and where they have been located, a local licensed timber pest manager will be able to advise on the best approach to control and eradicate the termite activity.

Many folk believe that their household insurance policy will cover the damage caused by termites. Sadly across Australia, there is no insurance coverage for repairs of termite damage or activity. So when termites invade your home, it is your responsibility and at your cost to control and eradicate them.

<u>Don't let them in……..</u>

$1.2 m funding boost for our Protecting Koalas Program

After three years of amazing work to protect koalas, new funds mean we can expand and extend our efforts for another year!

We have been rolling out three great projects to protect koalas in and around the Scenic Rim.

Key koala habitats across Flinders Peak, North Pine, Lake Manchester and Grandchester are earmarked for targeted planting, weed control, and improved fire management.

This work helps conserve and restore the quality, extent, and connectivity of the local habitat that is so important to the survival of our iconic but endangered species.

The areas we are concentrating on include four of the 20 priority koala habitat areas in South East Queensland (SEQ) which have been identified in recent studies. These areas are aptly known as Areas of Regional Koala Significance (ARKS).

The program is achieving great results, with our program of ambitious on-ground action being rolled out and built upon thanks to our three initiatives, all of which have received vital funding from the Australian Government.

Why our work is essential for this endangered native species

Koalas are endangered, and their populations in SEQ are at elevated risk for a variety of reasons.

Australia's koala populations have dramatically decreased since European arrival. Well before it was realised that they would become a threatened species, between 1906 and 1927, some 450,000 to one million koalas were killed for their fur annually in Queensland alone.

Koalas prefer forests growing in better soils (possibly due to the better nutritional value within tree leaves), but the growing human population has led to large-scale clearing of better-quality koala habitat. Many of them are now struggling within smaller, fragmented patches of poorer-quality forest.

This, combined with the decline in habitat condition (through drought, fire, and climate change), disease, vehicle strike, dog attack, and reduced genetic diversity, have culminated in a further, substantial decline in their populations.

The amazing work

Our work aims to protect and restore the quality, extent, and connectivity of koala habitat, as well as improve community engagement and knowledge, and monitor koala numbers and distribution.

Our work improves key koala habitats and builds knowledge of remaining koala populations by:

- Maintaining or enhancing existing koala habitat through initiatives such as tree planting, fire management, and weed control.
- Expanding and connecting koala habitat with revegetation, animal fencing, and other initiatives that improve their capacity to move across the area.
- Building local capacity to improve land management practices to benefit koala habitat. This includes a series of knowledge-building and fire information and planning workshops to improve the capacity of our communities and land managers to contribute to this vital koala conservation work.
- Implementing monitoring regimes to measure the impact of activities on koala populations and their habitat. This includes data analysis, community reporting of koala sightings, targeted koala surveys, Traditional Owner involvement, and research on koala habitat quality.

Building collaboration between governments, community, land managers, and Traditional Owners to improve outcomes for koalas.

https://hlw.org.au/portfolio/protecting-koalas#gsc.tab=0

Click here to find out more about this great koala work.

Ecosystem on a Balloon Cotton Bush by Chris Rinehart, West Moreton Landcare

On a recent RDPO (Rosewood and District Protection Organisation) Nature Walk at Tallegalla, I took this photo of a balloon cotton bush *Gomphocarpus physocarpus.*

There was a whole ecosystem on this one plant which is considered a local environmental weed. Some leaves were being eaten by striped larvae of the orange and black monarch butterfly (*Danaus plexippus*), also known as the milkweed butterfly. There were also some creamy-white eggs of the butterfly on underside of leaves. Milkweed is the only plant the monarch butterfly will lay eggs on. The plant is toxic to a wide range of animals. Monarchs are resistant to the toxic sap and become toxic themselves, hence the warning colouration of larvae and adults. The caterpillars might reduce the vigour of the plant slightly, but don't seem to make too much damage. (Interestingly the butterfly has invaded Australia from North America and the milkweeds have come from South Africa.)

Aphids, a ladybird beetle adult and a parasitic wasp on balloon cotton bush

The stems and young leaves were covered in a colony of yellow oleander aphids (*Aphis nerii*). These small sap-sucking insects are notorious pests on many cultivated plants, reducing plant vigour and potentially transferring plant viruses. They have a tolerance to the toxins in milkweed sap. Like every other aphid species, they are mostly asexual so their numbers can quickly inflate. A few winged males were present; they can mate with the totally wingless females and fly to other plants. They give birth to live nymphs that start feeding right away and they are pregnant at birth. Those new nymphs can start dropping offspring and eggs in the soil within a week. Some research has shown that when milkweeds are infested with aphids, monarch butterflies laid fewer eggs on the plants, and caterpillars developing on those plants were slower to mature.

The aphids, in turn, were being eaten by larvae and adults of transverse ladybeetles, *Coccinella transversalis.* They are 5mm long and bright orangey red with a central dark stripe down the middle of their back and v-shaped markings on each side. The aphids were also being parasitised by a wasp as evidenced by some of their brown, bloated mummified bodies. Some 1cm long wasps were seen on the leaves of the milkweed. The parasitic wasps lay eggs in the bodies of the aphids, turning them a dark color. Eventually the eggs hatch from within and kill the aphid, leaving behind hollow aphid carcasses called "mummies."

Two Ladybird beetle larvae, two monarch butterfly eggs, winged male aphids, a mummified (parasitized) aphid (lower right)

Parasitic wasp on balloon cotton bush milkweed

Information Page

Ipswich City Council Report by Cr. Russel Milligan

Gladstone Road Reserve Streamlbank Stabilisation Project

This project is now approximately 50% complete, with another 4 weeks anticipated until the project is finished. The stabilisation work involves reprofiling the streambank to a stable gradient to avoid further bank failure and planting out this re-profiled batter with a dense natrive mix of riparian vegetation. Jute mesh and coir logs will be pinned across the batter, whilst lagre woody debris will be used as bank toe protection and fish habitat to further mitigate further migrate further erosion and also provide some habitat improvement outcome.

Franklin Vale Creek Initiative

Council has a team of contractors commence 2 weeks of intensive woody weed management at a property on Franklin Vale Creek last week, in order to start site preparation works for planting in the Springtime. The site has a number of large Chinese Elms which are to be treated, but more importantly, many hundreds of small Chinese Elms which Council will treat. Council will then be planting the approximately 150 metre long section of bank with 800 native canopy trees in September to stabilise the bank and enhance the riparian corridor.

Shapcott Park Riparian Enhancement

Last year Council was successful in a grant application to continue weed management and riparian revegetation at Shapcott Park, working, back upstream along the riverbank for approximately another 100 metres. The grant is to help protect Queensland Lungfish and their habitats, which are thought to only occupy approximately 8 km in the Bremer River, between the town reach and Berry's lagoon. The proposed rehabilitation area in Shapcott Park is densely infested with Chenese Elms, amongst other weeds such as Leucaena and mulberries. Council is currently in the process of engaging a provider to carry out significant woody weed treatment throughout the area and planting, watering and maintenance of 4,000 tubestock.

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