BREMER CATCHMENT ASSOCIATION INC.

February 2017

around the bremer

Special points of interest:

Next BCA Operational Meeting 20th April 2017

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President's Message by Bill Steentsma

A highlight of the Executive's activities was the study of the 'Shaping SEQueensland Regional Plan – October 2016'. I have followed successive meetings, including a summary of speakers' statements at the Parliamentary Annexe (Brisbane). This meeting was by invitation from Healthy land & water. It is no doubt that the Planning Committee will fulfil the difficult task to extrapolate the submissions on the Plan.

Thank you to Andrew Nisbet for looking after our first trailer and for organising the change of the tyres. They needed urgent replacing.

The merger between SEQCatchments Ltd. and Healthy Waterways Ltd. has had many "footsteps in the sand'. I represented BCA at Workshops held in Brisbane. One of these Workshops dealt with the branding of the newly formed organisation. An article within this Newsletter tells us more.

Last month's Operational Meeting we had an interesting topic – "Use of Drones" – presented by our member, Nat Parker, and representing Healthy Land and Water. The possibilities of their use have not yet reached their full potential, including its shape.

Cyclone Debbie has played havoc within the Bremer Catchment. Our member Mal Abbot invited me to inspect the Upper Warrill area and meet Landholders. In particular, the area near the Villis Bridge, where debris against the bridge diverted floodwaters across a recently planted carrot cultivation. Creek-banks along riparian land showed extreme damage. By its very nature riparian land is fragile. At Peak Crossing along the Purga Creek the floods have resulted also loss – chunks disappearing of this type of land on Len Allen's property.

The Warrill creek banks have in places overtopped and just reached the bottom part of Ian Harsant's new solid built bridge. Other crops planted cultivations in the Catchment have shown severe soil erosion problems.

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The value of weed surveillance and early detection

The notorious prickly pear cactus (*Opuntia stricta*) destroyed farmland and sent landholders broke over some 24 million hectares in Australia last century. Few people realise that prickly pear existed in low numbers for about 40 years prior to increasing its range at an exponential rate. Due to a lack of awareness of the risk posed by prickly pear, early opportunities to take preventative action were missed and the consequences were dire.
The cost of weed management to Australian agriculture exceeds $4 billion per year, with further costs to the environment and our community.
There are currently 1324 naturalised (weedy) plant species recorded in Queensland, with an average of 12 new weeds becoming established each year. Almost 10% of these 1324 species are declared invasive plants under the *Biosecurity Act 2014*.

Prevention and early intervention are the most cost effective means of dealing with potential, new and emerging weeds in Queensland. Members of the Weed Spotters Network play a vital role in helping to locate, collect and report new and emerging weed threats across Queensland.

History has shown that complete eradication of a new weed species tends to be feasible only if a target population affects a very small area of land. Once a weed has spread over a large area, the cost of eradication tends to become prohibitive. Much like dealing with skin cancer, early detection is vital. However, to achieve true early detection we need to be vigilant and know exactly what we are looking for.

Queensland uses a process of evidence-based risk assessment, where a range of extreme-risk weed species have been carefully assessed from a much larger pool of potentially invasive species from around the world. These species are listed as 'prohibited and restricted biosecurity matter' under the Queensland *Biosecurity Act 2014*.

The goal with these species is pre-emptive detection and eradication. All these species are major weeds interstate or overseas and there is a strong probability that they will have comparable negative impacts in Queensland if their spread is ignored. For example, tropical soda apple (*Solanum viarum*) has spread over several million hectares in Florida and costs graziers millions of dollars each year in control costs and lost production. In Queensland, we have a clear opportunity to detect tropical soda apple in its very early stages of spread and to wipe it out before it becomes an intractable problem over large areas. However, to achieve this objective, we need a small army of citizen scientists, trained in what to look for – in other words we need Weed Spotters!
Early detection can only be achieved via surveillance. The more people in the community who know what to look for, the greater the likelihood of successful early detection. Also, the earlier a high-risk plant is detected, the cheaper and easier eradication becomes. A single case of early detection and eradication can literally save tens of millions of dollars in long-term production losses and control costs. While not all new weed species pose multi-million dollar threats, a range of prohibited and restricted species do.

Prickly Pear Cactus

Tobacco weed can grow quickly to reach 1.5 m (fig. 1). The leaves grow mostly at the base of the plant and are oval to oblong in shape (10–20 cm long and 2–5 cm wide). Tobacco weed could establish in south-east Queensland, particularly in moist run-on areas.

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Solutions Protecting Your World

WELCOME TO HEALTHY LAND AND WATER!

Check out our new website at [hlw.org.au](hlw.org.au).

Guidelines for the Management of Large Woody Debris (Snags) in Rivers and Creeks

From time to time, branches, large limbs and even whole trees, all of which are known as snags (or more correctly, large woody debris LWD) fall into rivers and remain where they fall, or are washed downstream. Whatever their fate, it is now widely recognised that LWD is a vital natural component of Australian rivers and creeks.

LWD creates a diverse range of flow conditions from deep pools to chutes and aerated water. This range of flow is important for the diversity of plant and animal life in streams rivers and creeks. The smaller branches trap leaf litter and other organic matter to form 'debris dams' which become hot spots of biological activity and a major source of food for animals in forest streams.

Large debris provides an important hard surface on which microscopic plants (algae) can grow, and provides habitat for aquatic invertebrates such as insects andf their larvae, and snails. Such invertebrates are key components of aquatic ecosystems because they share and consume leaves and fine litter, and in turn become food for larger river animals such as platypus and fish. In sandy rivers and creeks there are few stable surfaces other than LWD for these small organisms, so it is there that most of the in-stream primary and secondary production of the food chain takes place.

Snags in River

Smaller items have little or no impact on local water levels, and therefore management of LWD in a congested river reach should focus on the larger items.

Focusing LWD management decisions

These guidelines are 'rules of thumb' for managers of rivers and creeks. They suggest actions that will minimise any detrimental effects brought about by having LWD in rivers.

The current emphasis in LWD management is to leave as much wood as possible in the river for habitat. However, in rivers managed for irrigation supply or where *large debris cause flooding,* it may be considered necessary to remove or modify some LWD.

Only large woody debris (LWD) that is, (it covers more than 10% of the channel cross section) and is oriented across (perpendicular to) the direction of water flow causes substantial local water level increases. It also increases the chance of water overflowing stream-banks during flood flows. Smaller items have little or no impact on local water levels, and therefore management of LWD in a congested river reach should focus on the larger items. The problem caused by local water level variations must be traded-off against the cost of LWD removal, both in financial terms and of stream habitat.

A Short History of Ipswich Waterways

FINDING THE BREMER

Soon after the discovery of 'the limestone hills', convicts were sent to build a small out-station to mine limestone which was then transported along the Bremer and Brisbane Rivers to Brisbane. Free settlers soon arrived, farming the land and making Ipswich a transport hub. By the 1850's Ipswich was a thriving town, development was booming and Ipswich was competing with Brisbane to be named the capital of Queensland.

DISCOVERING WARRILL CREEK

The upper reaches of the Bremer River remained un-discovered for several years until Allan Cunningham set off on one of his many explorations. Cunningham passed over Warrill Creek several times, noting that it formed a thin chain of stagnant pools of water but showed signs of high flood levels. Travelling closer to the mountains, Warrill Creek was recorded as being lined with swamp oaks and described as "a mountain torrent with a stony bed" even though it was dry at the time. It was on this trip that he stumbled upon Cunningham's Gap.

WESTERN CREEK AND THE ROSEWOOD SCRUB

In 1829 Cunningham returned and on that trip he passed through the areas of Kholo and Pine Mountain, but could go no further when he was confronted by the Rosewood Scrub. At that time the area from Lowood to Rosewood, and Haigslea to Plainlands was thick woodland. The scrub was so dense that his pack bullocks couldn't get through and he had to find another way around. Today, less than 5 percent of the original scrub remains and many of its unique species are in danger of becoming extinct.

Travelling west around the scrub he came upon Western Creek where they camped for the night. Today this campsite sits in Bigges Camp Park, near the town of Grandchester.

Much of the Bremer River Catchment prior to European settlement was covered by tracts of Sub-tropical rainforest, eucalypt forest and large areas of 'scrub country'. The scrub consisted of valuable timbers including hoop pine, brigalow or "rosewood", crows ash black bean and red cedar.

This is a synopsis from:
A Short History of Ipswich Waterways by the Ipswich City Council

Cunningham passed over Warrill Creek several times, noting that it formed a thin chain of stagnant pools of water **but showed signs of high flood levels.**

.Selecting the Right Pasture Species

It is important to select the right pasture mix for your land and livestock. There is a wide selection of legume, grass and pasture species available for Queensland conditions. Investigate the characteristics of various native and sown pasture species, and talk to people with practical knowledge about local pasture, before deciding on the right species for you.

Selecting pasture species for quantity and quality

When selecting species for quantity, use forage sorghums or tropical grasses. When selecting for quality, particularly protein content, select annual forages, tropical or temperate legumes, or nitrogen fertilised grasses.

Choosing a grazing pasture mix

Before deciding on a grazing pasture mix, consider the:

- climate, especially rainfall and frost
- land type
- native and sown pasture species that grow well locally
- soil type and health
- type of animals to be grazed
- current environment or existing pasture
- proposed grazing management system
- need for annual or perennial species
- best sowing method to maximise establishment costs.

Selecting the best mix of grasses and legumes for each land type will ensure the best financial return on investment from improved pastures. For more information see: **https://www.business.qld.gov.au**

Rhodes Grass
Chloris gayana

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