

Serving the Moore River catchment since 1995

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Issue 33 Winter 2014

Welcome to the Moore Catchment Council's (MCC) 33rd *Moore to the Point* newsletter.
 MCC is busy juggling several projects at the moment from bush to beach. From dune protection and signage in Guilderton to planting native forage plants for Carnaby's and Malleefowl. Enjoy the read :)
 editor *Rachel Walmsley*

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New habitat planted for Malleefowl at Maya

Malleefowl have had a welcome boost to their habitat near Maya this year with local landowner Phil Nicolaou rehabilitating thirty hectares of his farm with native species. Moore Catchment Council obtained funds through the State NRM Program to carry out this project to help conserve Malleefowl populations in the area by rehabilitating cleared land with native plants and improving connectivity between remnant vegetation.



MCC NRM Officer Rachel Walmsley said "Malleefowl have got it all against them. This once widespread bird has been reduced to a few pockets in WA with the Maya area being one of them. In WA Malleefowl are classed as 'fauna that is rare or is likely to become extinct' and their downfall is due to mass clearance of their habitat, predation from foxes and cats and their low ability to adapt to human impact from fires and traffic."

This project involved partnering with the North Central Malleefowl Preservation Group (NCMPG) and Department of Parks & Wildlife (DPAW) to plan activities. The farm has also been awarded Land for Wildlife status by DPAW for retaining good quality native vegetation through large remnants and connecting corridors.

Rachel said "Phil has been keen to balance productive agriculture on his farm with preserving and rehabilitating native habitat for Malleefowl and other native fauna. Phil, his son and Peter Waterhouse (local farmer and NCMPG member) planted 29,000 mixed local species in June which include Acacias, Melaleucas, Eucalypts and Allocasuarinas. Hopefully survival will be high as Phil and his team have done an excellent job in establishing the seedlings to coincide with the rains."

The projects also donated 1000 seedlings for the recent community planting day in Maya organised by NACC. Next event planned will be a **comprehensive assessment of one of Phil's remnants to look for Malleefowl activity**. This will involve local volunteers walking through the bush in a systematic way with GPS logging any Malleefowl mounds or birds. This information will be fed into the National Malleefowl database and help build a better picture of Malleefowl presence in the area. Anyone interested in volunteering their time, please contact MCC on 9653 1355.



Above: Peter Waterhouse & Phil Nicolaou inspect the seedlings
 Below: Phil has planted 29,000 seedlings on his Maya farm



Above: Healthy Allocasuarina seedling



Moore happenings at the Guilderton coast

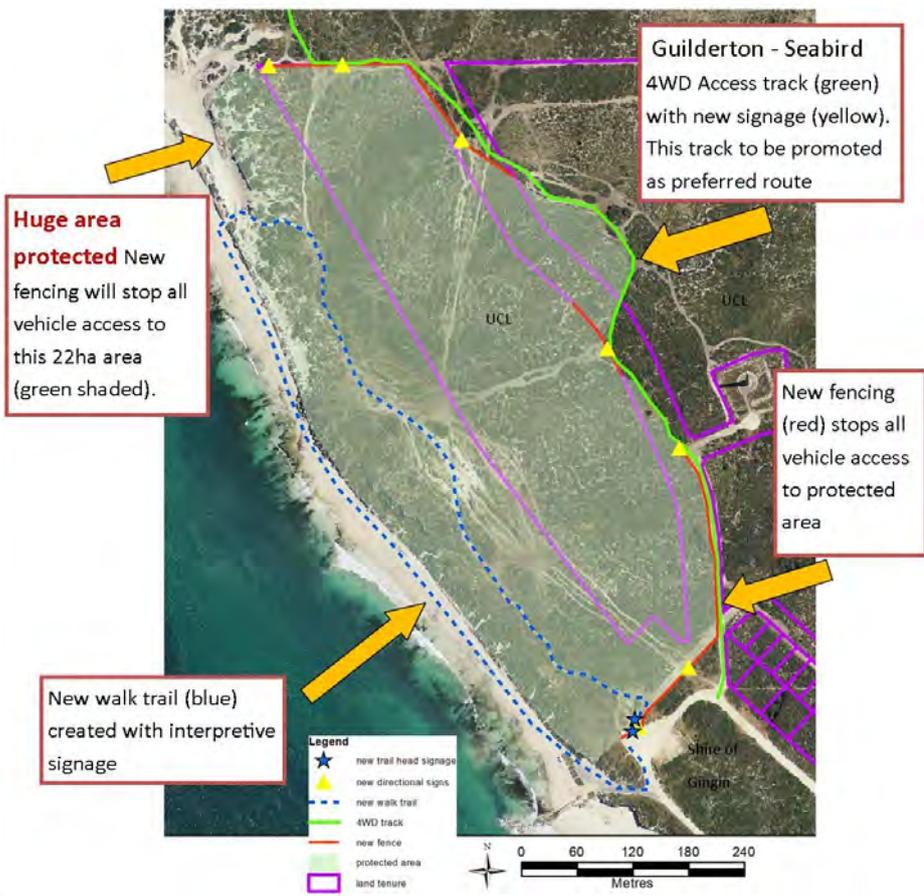
North Guilderton Dune Project Stage 1 completed

Local residents and visitors may have noticed a few things happening on Guilderton's north dunes this year. Rachel Walmsley MCC's NRM Officer said "Over the past few months, fencing and signage has been installed by Department of Parks and Wildlife through a multi stakeholder project funded by Northern Agricultural Catchment Council (NACC) and organised by the Moore Catchment Council." Stakeholders have included Shire of Gingin, Guilderton Community Association (GCA), Yued Group, and South West Aboriginal Land & Sea Council (SWALSC).

Rachel continued "The aim of this project is to reduce degradation of the north Guilderton dunes from unregulated 4WD use by fencing off and protecting a 22ha area, installing signage to encourage dune drivers to stick to one track, and creating a formalised dune/beach walk trail with interpretative signage. The project has taken a long time to get to this point but I'm pleased to say that this stage is now finished"

Visitors are already enjoying the 1.6km Djena Koori-iny (meaning 'go on foot' in Noongar language) walk trail and learning what dune flora they might see from the new trail head signage. The project is ongoing and further funding has been applied for to revegetate the degraded tracks within the protected area and remove weeds. The Shire of Gingin has also just confirmed funding for some track stabilisation using crushed limestone and native brushing.

Outcomes of North Guilderton Dune fencing



Above: New fencing and signage will help protect the dunes at Guilderton
Below: New sign asking vehicles not to venture down the steep dune - seems to be working so far



Above: New gate and signage for Djena Koori-iny walk trail
Below: New trail markers to help guide walkers
Left: Department of Parks & Wildlife team including Kristian Pollock, who installed all the fencing and signage for this project



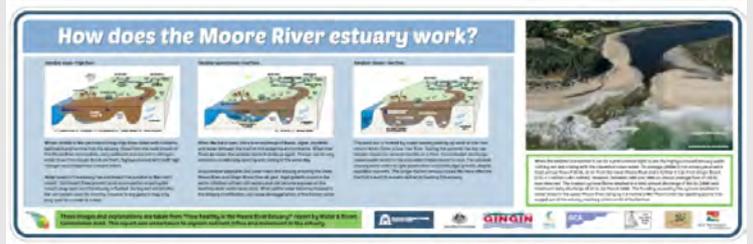
Cont....

New estuary signage coming for Moore River

New informative signage is on its way to the Moore River estuary foreshore. Rachel said "Moore Catchment Council used a NACC funded grant to design and produce five signs to help explain the Moore estuary's ecology, Aboriginal significance and natural processes to visitors and locals. Guilderton is an extremely popular tourist spot throughout the year which puts huge pressure on the natural processes of the estuary including artificial opening of the sandbar."

The project involved collaborating with local groups and Departments to decide what information to put on the signs and gather the material needed. Stakeholders have included Shire of Gingin, GCA, Lower Moore River Working Group, Yued Group, SWALSC, and Department of Water. "Hopefully the new signage will encourage visitors to respect and want to conserve Guilderton's the natural assets around the river mouth, and also understand why it's important to maintain the ecological balance of the estuary by not digging out the sandbar" said Rachel. The new signage will be located at the main estuary car park and the estuary lookout.

Rachel concluded "huge thanks to the coastal community and groups involved with these projects especially the Guilderton Community Association, Yued Group and the Shire of Gingin who have been especially helpful. A grand opening event for the Guilderton projects is being planned for 24th October by the Guilderton Community Association. Keep up to date with what's happening by subscribing to the Facebook page <https://www.facebook.com/moore.catchmentcouncil> or subscribing to our mailing list by contacting MCC on moorecc@bigpond.com "



2014 - Great year for Orchids



Early rains around Moora have proved to be a winner for orchids. They seem to be abundant this year and easy to find. These were all spotted in Candy's Bush Reserve, Moora between June and mid September. Have you seen orchids this year??



Koojan farmer demonstrates soil amelioration

Ian McGillivray is a Koojan farmer who likes to get the best from all his land - even his poor gutless sands. Establishing perennial plants in deep white non-wetting sands is problematic. This is due to poor water and nutrient holding capacity of the soil at the root zone, and ensuring the plants survive their first summer in the NAR before accessing subsurface moisture.

Rachel Walmsley, Moore Catchment Council's NRM Officer said "Back in March 2013 Ian scribbled his idea on the back of an envelope for a trial to better establish fodder shrubs on his poor sands using a variety of proven soil amelioration techniques. He then visited Moore Catchment Council and I submitted his project idea through the Federal Caring For Our Country Community Landcare grants program and was successful in obtaining \$10,900 to demonstrate his trial."

Ian is also a great planner and decided to have a mini trial of his main trial in 2013 to pre-test some of his ideas. With pre-trial knowledge gained, Ian got to work setting up a 47 run trial plot in 2014 which has involved different scenarios of chicken manure, organic soil conditioner, clay and Agflow. All trial runs have been ripped to 350mm and 600mm before spading in the different ameliorants. Ian has a preference for fodder shrubs and has planted 6,000 saltbush (River and Oldman) and Tagasaste as part of the trial.

Rachel said "On inspection in late July with Ian and Phil Barrett -Lennard (Agvivo), it was interesting to see the difference in the subsurface condition of ameliorated soils as compared to the poor water capacity of the normal sand. It was also already clear to see that some of the scenarios involving high rates of chicken manure were causing the seedlings to stress."

The trial will be reinspected after the summer and a field walk held for other farmers to view the trial and see results.



Above: Trial plots 8 and 9
8 = 400t/ha clay planted with river saltbush
9 = 200t/ha clay plus 120m³/ha planted with river saltbush
Below: River saltbush and old man saltbush planted with organic soil conditioner



Above: Ian McGillivray (right) talks to Phil Barrett-Lennard about his project and how deep he spaded.

Right: What is Organic Soil Conditioner? OSC is a product that has come from the recycling of organic waste material, in this case from Perth. Many localities in Perth now collect green waste separately or have one bin systems that gets taken to resource recovery facilities. Once here all the waste is separated and the organics taken to a composting facility. The material is placed in wind rows, turned and watered regularly to encourage aerobic breakdown and pasteurisation.

The resulting material is used as a relatively inexpensive organic soil ameliorant but will contain small pieces of glass and other non organic components from the sorting process. It's a good use for green waste to recycle it back into the system.



Candy's Bush Reserve in Moora now has Land For Wildlife status. This is an accolade that Department of Parks & Wildlife awards to pockets of worthy remnant vegetation which show good quality habitat for native fauna. Fiona Falconer, Land For Wildlife Officer came and did the official assessment in June. This was carried out as part of the latest MCC State NRM Program project to protect and promote Candy's Bush Reserve as a local natural asset. Since fencing off the reserve in 2013, many of the degraded areas have started to cover over already. Some spraying of the SourSob weed has also taken place this year to help control its spread.



The flora in the reserve has really sprung to life this year giving fantastic displays of orchids (see page 3) as well as Hakea lissocarpa (honeybush), carpets of daisies and the purple fringed lily. Plus a possible sighting of a new population of a Declared Rare Flora (DRF) (see below).



Above: Fiona Falconer from DPAW hands over the Land For Wildlife sign for Candy's Bush Reserve

Above: Spotted Jezebel butterfly rests on an Acacia
Below: Magnificent clump of giant white spider orchids



Interpretive signage is in development and will hopefully be ready by the end of the year. This will involve signage at the car park on Gardiner St showing the walk trail, and explaining the history of the reserve, and also flora to look out for. Additional signage will be dotted along the walk trail. New picnic tables and benches will also be placed in the reserve donated by the Shire.



Above: Declared Rare Flora? This sighting of a possible *Wurmbea tubulosa* Long-flowered Nancy is exciting. At present the known locations for this plant are 150-km north so a new location would be fantastic for the plant and the reserve.

Welcome to Candy's Bush Reserve

Candy's Bush Reserve is an eight-hectare Salmon Gum & Wandoo remnant and an important natural asset of Moora. The vegetation was partially cleared and the designated #10000 remnant - residential, reserve and Crown land. Development never took place and the area was allowed to regenerate. It was designated a State Reserve in 2009 after intervention from the Friends of the Moora Woodland Group. Prior to 2003, Candy's Bush Reserve had been neglected and by 2009, the area had been largely cleared. In 2013, local body councillors from the Shire of Moora, local Friends of the Moora Woodland and Moora Catchment Council met to decide on the future of the reserve. Resource Planning was installed in the winter by volunteers from Friends of the Moora Woodland and Moora Catchment Council using State NRM Program funding. Candy's Bush Reserve has also been awarded Land for Wildlife status in 2014.

Of the nearly 1.4 million hectares of the Moore River Catchment around 75 per cent has been cleared. The more fertile soils associated with riparian woodlands were preferentially cleared, and because these woodlands occur predominantly on the valley floor they are more at risk of salinity from rising groundwater. Only 70 (14,200 ha) mature woodlands (with four wet saline grasslands) in Moore River Catchment compared to a pre-European total of 214,250 ha.

The local Aboriginal (Wardji) significance of the reserve is immense. Historically, the site was used as a track camp. The site contains many plant species regarded as bush medicine plants which possess healing qualities as well as bush tucker plants such as Gwandong.

Can you hear the Black Cockatoos?

Headed through to autumn is the time you'll hear the distinct call of the Candy's Black or Short-billed Cockatoos around here. Candy's Black Cockatoos (Calyptorhynchus latirostris) are rare and endangered in WA and estimated at their total population to be between 13,000 and 60,000. The low numbers are due to past and continued clearing of their natural habitat for agriculture, and competition from Galahs and Western Corellas.

Moora is an important area for Candy's as they come here to breed in the hollows of the Salmon Gum and Wandoo trees. Although no artificial nest hollows are in Candy's at present, there will be in years to come when the trees age. The reserve contains lots of forage plants for the Candy's to eat including the seeds of Proteocephalus plants including Hakeas and Siroviolas.

Near the entrance you will see the artificial nesting logs placed here by local Candy's carer, Wally Kirkhoff in 2013. These logs create somewhere for Candy's to lay their eggs and have demonstrated to be a successful way to help raise the population.

Candy's Bush Reserve walk trail

Distance: 3.1km (about 30 minutes)
Grade: Easy
Follow marker posts

- Remember! Wear a hat, sun cream and closed shoes. Take plenty of water with you.
- Snake warning!! Digites and other venomous snakes may be present.
- We warning!! Watch for ants on the trail as they can be bothersome.
- Water warning!! Parts of the trail may be covered in water during wet seasons.

metres 0 100 200
Podocarpus app. You are here

This signage and trail is part of a larger WA initiative to conserve Candy's Bush Reserve. It cannot cover the reserve in its entirety. Please keep to the designated track to allow for future management, and please take your rubbish home. No unauthorised vehicles allowed in the reserve.

This trail links into the down Candy's Black Cockatoos walking trail. See the Shire or Indigenous Services for more details.

Moora Catchment Council would like to thank you to the below organisations for their input and financial assistance especially the State NRM Program which funded this project.

Above & below: Interpretative signage for Candy's reserve is in development

Flora of Candy's Bush Reserve

What will I see?

The vegetation of the Candy's Bush Reserve comprises Wandoo and Salmon Gum Woodland with Melaleuca at the east end. The vegetation is in very good condition; plants are healthy; all vegetation layers are present and there are few weeds.

Past surveys by WWF and the WA Native Orchid Study and Conservation Group reveal many reasons why the bush is important for flora species including being designated as the best location for the Moora Spider Orchid, Brown-veined Shell Orchid and Green-veined Shell Orchid. Both survey reports note the reserve being rich in biodiversity but also note that continued threats from humans is starting to have an effect on its decline. It is important that Candy's Bush Reserve be preserved and managed for its significance as a woodland remnant and its nature conservation, cultural and heritage values for the benefit of present and future generations.

Although Candy's can be enjoyed all year round, winter to spring is arguably the best time to visit when the reserve bursts into bloom. From vibrant wattles and aromatic honeybush to delicate fringe lilies and carpets of yellow and purple daisies, it's a feast of flora. We hope you enjoy your visit.

See if you can spot any of the below on your walk.

Sour-sob wattle Purple Tassies	Hakea lissocarpa Honeybush	Eriophora leucostachya	Felicifera sp.
Acacia sp.	Thymus conjugens Fringed Lily	Grevillea burgoynei	Dampiera sp.
Wurmbea tubulosa Long-flowered Nancy	Felicifera sp.	Atriplex canescens	Sarcocolla leucostachya Yellow

Orchid spotting

Candy's has a good number of orchid species that can be spotted between June and September. Keep an eye out of them!

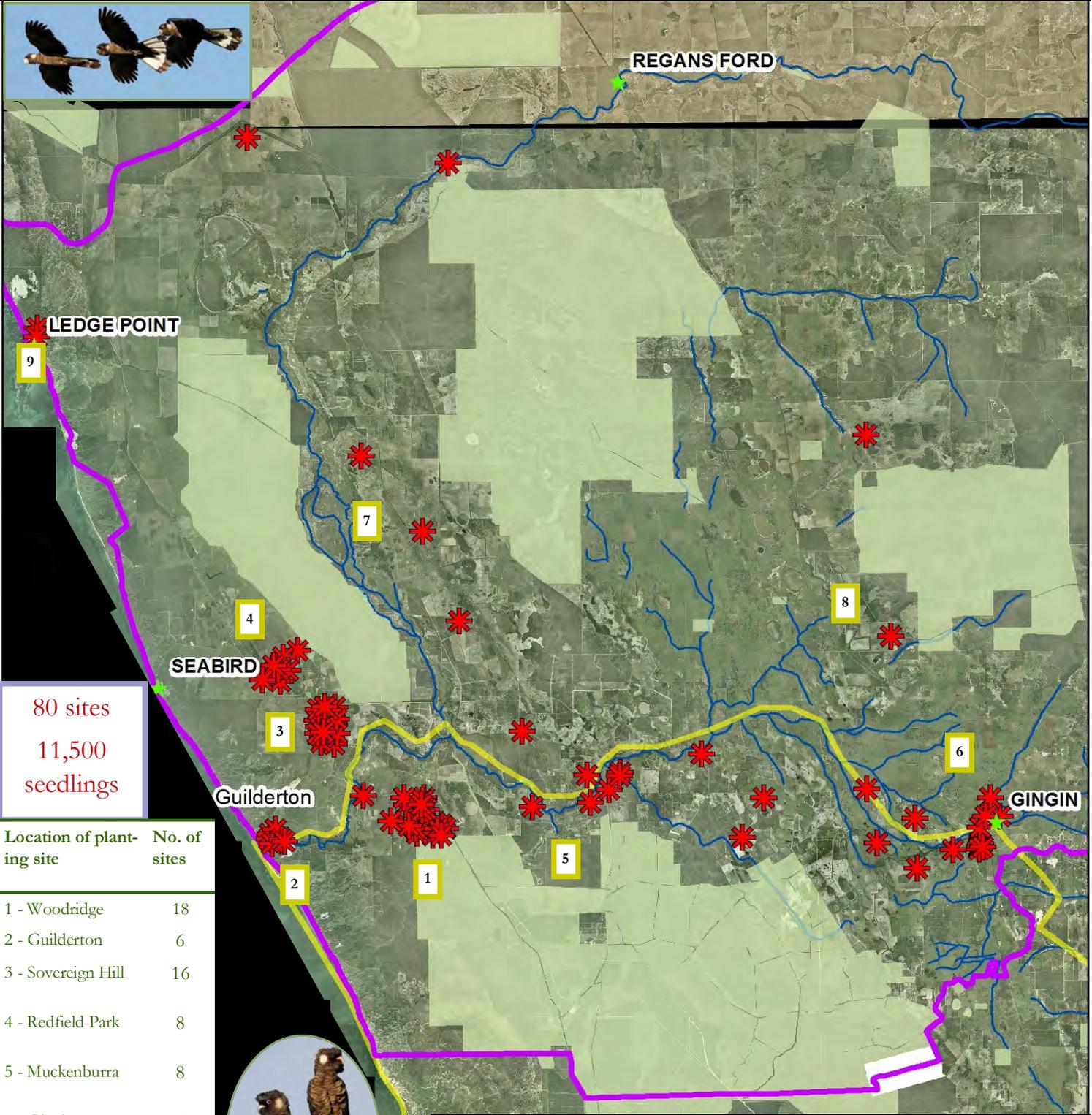
Moora Spider Orchid	Brown-veined Shell Orchid	Green-veined Shell Orchid
Moss Spider Orchid	Black Spider Orchid	Red Spider Orchid
White Spider Orchid	Black Spider Orchid	Black Spider Orchid

Weed Watch

These weeds are common in the reserve and affect the quality of the native vegetation. Please don't help to spread them!

Oxalis pro-capsa Star Jew	Anthriscus calceolaria Daisy weed
Sida sp. White-headed weed which smother's native vegetation	Sida sp. White-headed weed which smother's native vegetation

Above & below: Interpretative signage for Candy's reserve is in development



80 sites
11,500 seedlings

Location of planting site	No. of sites
1 - Woodridge	18
2 - Guilderton	6
3 - Sovereign Hill	16
4 - Redfield Park	8
5 - Muckenburra	8
6 - Gingin	15
7 - Wanerie	3
8 - Beermullah	2
9 - Other	4



Photos: K Lightbody

Carnaby's feed species for Gingin to Guilderton region

A mixture of the below was planted at each



Legend

- Towns
- Carnaby project sites
- Moore Catchment Council
- Important Bird Area
- Reserves
- Rivers

4.5 2.25 0 4.5 Kilometers



Planting feed species for Carnaby's project update

There has been amazing uptake for the Moore Catchment Council's 'Plant feed species for Carnaby's Black Cockatoo project', funded through the State NRM Program. This project aims to increase the native forage habitat in the Swan Sandplain Important Bird Area. Carnaby's are a South West WA endemic but endangered species with population estimates as low as 11,000. Projects like these are urgently needed to conserve this bird species.

80 local landholders and community groups have been involved with planting native Banksia, Hakea and Eucalypt species between Gingin and Guilderton. There has been huge interest from private landholders in Woodridge and Sovereign Hill as well as the Guilderton Golf club and Gardening club (see localities left). Plants and information were also given away to 55 local landholders at the Women Wine and Wellbeing event in Dandaragan in July, and more will be given away at the upcoming Moora Agricultural show 20th September. Overall, 12,500 native seedlings will be planted through this project for Carnaby's.

This project has become even more poignant after the recent release of the Birdlife Aus Carnaby's count report which shows a decrease in bird numbers. With the reliance on the planted pines at Gnaragara as feed by many of the birds, ensuring there is enough of the right vegetation should these pines disappear is evermore important for the survival for this species.

Find the report on the link below:

<http://birdlife.org.au/documents/CBC-2014GCC-Report.pdf>



Above: Carnaby's lunch time in Redfield Park (photo: Michael & Wendy Mullany)
Below: New planting at Gingin (photo: Dianne Miller)
Below left: New *Hakea prostrata* in Muckenburra (Photo: A du Toit)



Railway tree decline update

With the good autumn rains giving the trees a good soaking along the railway line, it was hoped that recovery from the herbicide poisoning incident in the thousands of Salmon Gums, York Gums and Wandoo would be positive. Some of the trees seem to be looking better but quite a few still look sick, their leaves pale as if still intoxicated with the chemical (see right). It was understood the chemical used, Metrabuzin, only has a 40 day life and should have long been gone out of the tree's system. Some very sick trees showed signs of recovery through healthy epicormic growth but this has since died. Why? We don't know as yet.

A strategy meeting was held between Brookfield Rail, Moore Catchment Council, Department of Parks & Wildlife and Mingenew Nursery in August to talk about ways forward including best sites to target large revegetation efforts, ways to regenerate the bush and remove weeds in amongst the larger trees using fire, and why trees are still looking sick. A preliminary inspection of the Koojan rail siding looks to be the ideal spot for a good revegetation project in 2015 as it is 3ha and weedy. Further plantings along the railway line will be planned also but firstly reasons to why the trees are still showing chemical poisoning needs to be addressed.

Further leaf samples were taken for analysis for Metrabuzin and other chemicals. We await the analysis.



Above: Sick leaves - still showing signs of the chemical Metrabuzin?



Above: Brookfield Rail and the Shire of Moora worked together with St Jo's school and planted 1,500 native species in and around Moora for National Tree Day.

New NyPa grass demonstration project for Moora

Good news ! MCC has just been funded a new project to demonstrate NyPa grass on saline land near Moora through the NACC Sustainable Agriculture Innovations program funded through the Federal Government.



Above: NyPa grass thrives on salt land

Finding and applying appropriate methods to rehabilitate saline land in the Moore catchment is on-going. Plants need to handle high salt levels and waterlogging. Woody perennials such as saltbush play a key role to rehabilitating saltland but inter row plants that can handle the harsh conditions have been few up to now.

NyPa Forage (*Distichlis spicata* var. *yensen-4a*) is a perennial salt loving forage grass that is the result of 20 years of selections from the native American grass. The NyPa plants have an exceptional capacity to move salt out of the water it takes up in respiration, this is due to its deep root structure and it's very efficient salt gland.

Benefits of NyPa include 1) Produces palatable green forage on saline discharge sites throughout the summer months, 2) Helps stabilize the soil, helping to prevent further degradation such as erosion and salt spread and 3) Has been shown to improve the soil chemical and physical properties including through the bio-sequestration of carbon.

Funding sought to secure MCC's future

MCC needs funding to keep going post December 2014. All hopes for the moment are pinned on a number of grants submitted over the past few months. Success or failure will be known by Christmas. Projects include:

State NRM Program

- "Further demonstration of NyPa Forage to stabilise saline land"
- "Protecting and enhancing the Moore River biodiversity assets"
- "Rehabilitation of the North Guilderton Dunes - stage 2"
- "Protecting Beermullah, Gillingarra and Miling biodiversity through invasive pest control"
- "Planting food for endangered Carnaby's Black-Cockatoo in the Calingiri IBA"



Above: More help for Carnaby's??
Photo: K Lightbody

Coastwest Grants

- "Rehabilitation of Moore River Estuary Lookout Stage 2"

COGGO (Council of Grain Growers Organisation) Research Fund 2015

- "Develop an understanding of herbicide interactions with ameliorated soils using farmer case studies"

Upcoming events

- ★ 25th September, **NACC Hidden Treasures bushland day**, Don William's farm between Eneabba and Badgy. Call Roger 9652 0872
- ★ 24th October, **Guilderton projects celebration event**. Call MCC for more details 9653 1355

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*protecting the natural resources
in the Moore River Catchment*



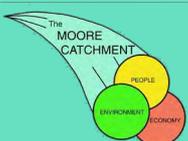
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