

Managing wetlands for the future

The future of Oceania wetlands

Max Finlayson (Institute for Land, Water & Society, Charles Sturt University), Jenny Davis (Institute for Applied Ecology, University of Canberra) and Samantha Capon (Australian Rivers Institute, Griffith University)

The Society for Wetland Scientists (SWS) Oceania undertook a horizon scanning and scenario development exercise to systematically identify and describe potential threats to and opportunities for wetland management.

The outcomes of this exercise will guide further discussions about policy development and research procurement, and help determine which issues warrant further study.

Issues identified from other sources were used as a guide to identifying those that are important for Oceania wetlands. These are:

- **Public Perception** — lack of relevance to other sectors; environmental fatigue and loss of public support; urbanisation; changes to how wetlands are valued including increased recognition of aesthetic and recreational values and climate change mitigation functions



A coastal urban wetland in south east Melbourne, Victoria (© Copyright, Jenny Davis)

- **Climate change** — unpredictability, frequency of large events; ocean warming
- **Technological development** — improved satellite monitoring, e.g. drones; bioassessment using genomics; further technological innovation e.g. data management
- **Changes in land use** — agricultural intensification; grazing changes; urban sprawl
- **Water use/demand** — increasing urban water demand; irrigation efficiency; cross-border water issues; artificial recharge of groundwater; increased water storage
- **Wetland restoration** — reconstruction, rehabilitation or creation of new wetlands.

A further exercise involved the identification of archetypal wetlands with broadly differing values, threats and management and knowledge needs to guide prioritisation of interventions and research to achieve the best possible condition of future wetlands. Three archetypal future wetlands were identified: urban, agricultural and protected area.

Urban wetlands, including coastal wetlands will become increasingly important as Australia's population continues to grow and dwell mainly in cities. Agricultural wetlands are those occurring in regions dominated by intensifying food production to serve a growing global population. Protected area wetlands will represent the 'jewels in the crown' but

we must ensure that they are not degraded by enterprises such as mining and energy production. Maintaining the water regime and water quality of these archetypical wetlands will be important.

As further knowledge becomes available it is important to remember that the objective of these exercises is not to predict the future but to assist

decision-makers to produce strategies and plans that are sufficiently flexible and adaptable to remain robust under a range of possible plausible futures.

For further details, contact Max Finlayson (mfinlayson@csu.edu.au), Jenny Davis (Jenny.Davis@canberra.edu.au) or Samantha Capon (samantha.capon@gmail.com).



A wetland adjoining agricultural land in north east Tasmania (© Copyright, Jenny Davis)



A World Heritage Area wetland in south west Tasmania (© Copyright, Jenny Davis)

Farming journey takes Victorian farmer back to nature

Melissa Pouliot, Wimmera Catchment Management Authority

A Victorian farmer reflects on a lifetime of farming, and his growing realisation of the benefits that wetlands can provide to his farm.

A lifetime of farming has taught West Wimmera farmer Tom Porter many things. The main thing he has learnt is to 'keep it simple'. And when it comes to continuously cropping swamp areas, he says his farm's experience is that ultimately it is not financially beneficial for the long-term. It just doesn't work.

"When you put new low-lying paddocks into cropping, it's amazing how they can survive water logging. But when you crop for the fourth year in a row, weeds and water logging can become an issue," Tom says. "And when cropping works, it's sensational, but when things get washed out or you have a tight year, it can be very unrewarding financially."

Tom grew up on the farm his father Arthur bought in 1945 at Benayeo, northwest of Apsley in Victoria's West Wimmera. The West Wimmera is recognised for its wetland diversity, having more than 2500 wetlands. Tom said one of the 'clinchers' for his Dad's purchase were full wetlands and plenty of ducks and snipe. But in general the property's condition, compared to now, was poor with previous custodians ringbarking 90 per cent of its trees during the Depression.

The farm, now around 2265 hectares, is 80 per cent pasture for livestock and 20 per cent cropping. In the early 90s it was a different story, with 100 per cent pasture.

"The Apsley Liberal Party had a conference in 1992 on onion weed which was a huge problem for the district and us, and from that I decided to do more cropping to eradicate this weed. Some of our paddocks are low-lying naturally-occurring (shallow) swamps that were drained so we were able to crop them," Tom recalls.



A West Wimmera farmer discovers the benefits of preserving wetlands on his property (© Copyright, Christine Bull Photography)



Working with the Wimmera Catchment Management Authority, landholders help to restore areas of their farm back to wetland habitat (© Copyright, Christine Bull Photography)

Tom says his decision to pursue more cropping was also based on the simple fact he needed to diversify to make money. Changes in the wool reserve scheme and a lack of good pastures meant he needed to become more self-sufficient. And cropping helped him achieve higher returns in a shorter timeframe.

But a few costly years where cropping returns didn't meet input costs due to seasonal challenges made Tom reassess his long-term farm management. He reduced his cropping area and went back to what was more natural for him—farming livestock.

Tom had already started to cast a more critical eye over his swamp and creek areas, deciding in the late 1990s the farm would suffer no further loss and had potential to benefit if he fenced these areas off and returned them to their natural state. He sourced his first fencing and revegetation grant through Wimmera Catchment Management Authority (CMA) in 2000. He has fond memories of his young children's rubber boots filling with water while they helped plant trees around swamps in a particularly wet year.

Through his own investment and other funding incentives since that time, Tom now has around 60 hectares of protected swamp and creek areas on his farm. "I love it. When it's wet and the swamps are full you go out there and see the birdlife — it's just delicious. They're breeding and flying around and you get mobs of up to 800 ducks whoosh from one swamp to the other. It's getting back to nature and it's bloody sensational."

Tom admits there are negatives also, such as having to manage foxes and weeds, plus keep your eyes out for tiger snakes—but he can live with all that. He feels he has achieved a good balance. He still has a highly productive enterprise but it's a lot more picturesque.

"In farming, the things that work naturally are the things you want to grow. The same goes for planting trees and other vegetation. You don't want to fight nature, you want to work with it. There might be a little less financial reward at the end but there is a lot less stress and there are other benefits to enhancing the nature of the place. You are helping the flora and fauna such as bulokes (*Allocasuarina luehmannii*), redgums and lignum and there are also benefits for our livestock—we have more sheltered areas that will push our lambing rates up," says Tom.

"I am glad to be putting things back together again."

Wimmera CMA's incentive programs have helped Wimmera farmers conserve more than 2500 hectares of wetlands and associated riparian areas. This includes more than 100 wetlands. The CMA is continuing this work with upcoming projects including one that will help farmers conserve critically endangered Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains.

For further information on similar projects and programs available through the Wimmera CMA, please visit: www.wcma.vic.gov.au.

The future of wetland co-management is here

Michael Colagrossi and Dr Karl Hillyard, South Australia's Department of Environment, Water and Natural Resources

In South Australia's Riverland region, new structures will allow wetlands to be periodically wetted and dried for the first time since the River Murray became regulated with dams, locks and weirs.



Private landowners are taking steps to balance the agricultural and environmental needs of wetlands along the River Murray as part of the Riverine Recovery Project (© Copyright, Karl Hillyard)

Wetlands at North Purnong, Murbko South, Beldora-Spectacle Lakes, Lake Merreti and Lake Woolpolool in South Australia will benefit from the new infrastructure which is designed to allow more natural watering regimes to optimise conditions for native plants and animals.

Partnerships are a key component of the project. These new works are a positive step forward in integrating wetland management as a part of

agricultural production in the region. Participating landholders, at Murbko South and North Purnong, must be congratulated on their commitment to balance agricultural and environmental needs on their properties. Their foresight will benefit the health of the River Murray into the future and support landholders to link their produce to one of South Australia's Seven Strategic Priorities: Premium Food and Wine from our Clean Environment.

The benefits to the environment are huge. The owners of Beldora Station, who have a long history of managing the neighbouring Beldora-Spectacle Lakes floodplain, want to leave a legacy to the next generation. By managing the system as a whole, they will improve the condition and abundance of wetland plants, prevent long-term impacts of groundwater salinity, support bird, fish and frog communities, and manage water levels in a way that disadvantages pest plants and animals.

The Traditional Owners of the lands and waters on which these Riverine Recovery Project (RRP) works have taken place have been actively engaged in the project to ensure that Aboriginal cultural interests and principles are considered in RRP infrastructure design and endorsement. The representative bodies include the First Peoples of the River Murray and Mallee and the Ngarrindjeri Regional Authority, and its member organisation the Mannum Aboriginal Community Association Inc.

Engagement has been achieved largely through cultural heritage assessment surveys and input into wetland management plans. At Lakes Merreti and Woolpolool, partnerships have been established with land managers already interested in conservation. Both lakes are in the Riverland Ramsar site, and are located on Calperum Station. Works included upgrading water regulation infrastructure at the two lakes. As well as providing opportunities for wetland-dependent plants and animals, the structures will help keep groundwater-derived salinity at bay and will help better capture high flows.

These works were funded by the South Australian and Australian governments' \$100 million Riverine Recovery Project which aims to ensure the health of River Murray wetlands into the future.

Twenty-three years experience in wetland and environmental water management and still going strong...

Murray Darling Wetlands Working Group Ltd.

The Murray Darling Wetlands Working Group Ltd. celebrates 23 years of developing and implementing well researched, technically sound and community-endorsed management plans for specific wetlands.

The Working Group was born from the well-known NSW Murray Wetlands Working Group Inc. formed 23 years ago.

From its humble beginnings as a sub-committee of the NSW Murray and Lower Murray Darling Catchment Committees, the Working Group is now an independent, not-for-profit organisation that focuses on the Murray–Darling Basin in NSW, Victoria and South Australia. Its Board of Directors are experts in wetland management and science, community engagement, irrigation and primary productivity, company governance and environmental law.

The Working Group received four *Rivercare* 2000 awards and was a finalist in the 2002 Thiess Australian *Riverprize* for its work in the rehabilitation of Moira Lake.

The Working Group received the 2007 Thiess Australian *Riverprize* for its innovative wetland rehabilitation programme for successfully delivering 75 000 megalitres of water to more than 200 wetlands covering 71 000 hectares across two catchments. This project was also voted as one of the “Top 25” Australasian Ecological Restoration Projects by the Global Restoration Network.

Key outcomes for the Working Group over the past 23 years include:

- rehabilitation of more than 3900 hectares of wetland habitat
- investment of more than \$1.2 million in 114 wetland-based projects
- delivery of more than 102 000 megalitres of environmental water to more than 200 wetlands
- recipients of \$11 million worth of government funded projects and environmental water.

Further information on the Murray Darling Wetlands Working Group and key achievements is available at: www.murraydarlingwetlands.com.au, or Facebook www.facebook.com/pages/Murray-Darling-Wetlands-Working-Group/139994559394028.



The Murray Darling Wetlands Working Group Ltd. engage with a variety of stakeholders, including private landholders with wetlands on their property (© Copyright, Murray Darling Wetlands Working Group)



Kings Billabong near Mildura, Victoria is one of the many wetlands that the Murray Darling Wetlands Working Group Ltd. have been involved with over the last 23 years (© Copyright, Murray Darling Wetlands Working Group)

Camden Council Aquatic Plant Management Procedures

Raphael Morgan, **ngh**environmental

Camden's waterways are being improved through the implementation of new procedures for managing aquatic plants in local waterways and wetlands.



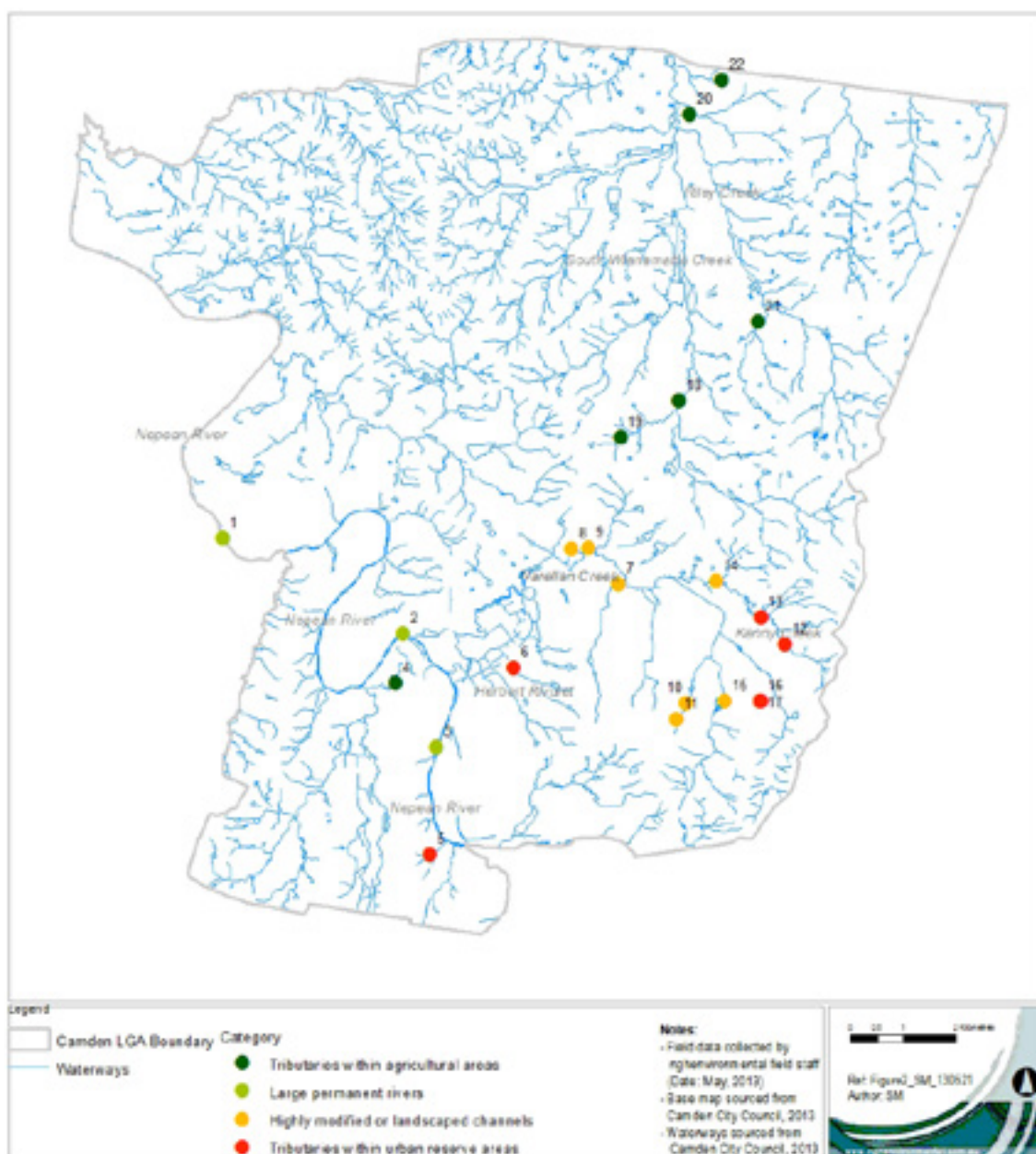
Tributary of the Nepean River in Camden, New South Wales with common rush (Juncus usitatus) in the foreground
(© Copyright, Stephanie Mifsud)

The consultants, **ngh**environmental, on behalf of Camden Council in New South Wales, undertook field surveys and developed Standard Operating Procedures (SOP) for the management of aquatic plants within the Camden Local Government Area (LGA). The principal aim of the procedures was to increase knowledge and skill levels of Council staff to manage aquatic plants within waterways and wetlands to ensure the ecosystems maintain their functions without compromising the values of the water bodies in which they occur. The procedures will also assist in minimising Council's long term maintenance costs.

The most relevant issues to aquatic plant management that were observed during field surveys included:

- Frequent blockages to water flow in all but the largest waterways as a result of raised culverts, concrete paths, large boulders, concrete barriers, dams and spillways, and litter. Blockages lead to a build up of sediment, and the growth of problematic plants such as cumbungi (*Typha latifolia*), river oak (*Casuarina cunninghamiana*), swamp oak (*Casuarina glauca*), marsh club-rush (*Bolboschoenus fluviatilis*), spike-sedge (*Eleocharis sphacelata*), tufted sedge (*Carex appressa*), water couch (*Paspalum distichum*) and rushes.

- A high prevalence of invasive exotic weeds throughout the riparian zones. Weeds have in many instances become dominant, which affects the ecology of the waterways. Eleven noxious weeds were observed, including three aquatic species.
 - Sparse or thin riparian vegetation zones. Without a substantial buffer between maintained areas and waterways, declines in water quality, ecosystem function and diversity will be inevitable. Small riparian zones facilitate weed invasion.
- Specific advice on weeding and plant-removal activities is provided in the SOPs, including:
- Performing regular sediment and nuisance plant removal activities in minor waterways.
 - A substantial weed control and eradication effort applied across the LGA.
 - Planting and management activities designed to protect and increase the width, diversity and connectivity of riparian vegetation.



Categorisation of waterways within the Camden Local Government Area including sites surveyed as part of the study
 (© Copyright, Stephanie Mifsud)

- Increase community awareness of management issues relating to aquatic and riparian situations. Involving the community in activities such as planting or weeding days in riparian situations can help to foster community support and promote the appreciation of the natural environment.
- Modifications to the built environment's interaction with waterways such as the removal of boulders, barriers and adjustment of culverts to improve water flow.

Through the SOPs, the long-term outlook for ecosystem function in Camden's waterways will be improved and better positioned to meet the targets of the Community Strategic Plan for 2040, ie:

"natural systems are resilient and fully functional, and as a result provide for the health and wellbeing of the current and future populations through clean air, water, natural systems and diverse ecosystems".

For more information on the SOPs, please contact Bernadette McKinnon (Team Leader — Sustainability, Camden Council) on 02 4645 5004 or bernadette.mackinnon@camden.nsw.gov.au.

Managing Western Australia's Historic Lowlands Reserve

Western Australian Department of Parks and Wildlife

Managed by the Richardson family for over 150 years, Lowlands Reserve has recently come under management of the West Australian Department of Parks and Wildlife as an important conservation reserve.

Lowlands Reserve is the only large remnant area of its type remaining on the Swan Coastal Plain between Perth and Bunbury. It contains 1310 hectares of intact ecosystems including remnant bushlands and the Serpentine River system. Lowlands is proposed as a Class A nature reserve and is the focus of a major conservation initiative.

The intact riverine ecological system of Lowlands Reserve provides spawning grounds for endangered and priority aquatic species (Carter's freshwater mussel (*Westralunio carteri*), pouched lamprey (*Geotria australis*), nightfish (*Guyu wujalwujalensis*), marron (*Cherax tenuimanus*), western minnow (*Galaxias occidentalis*), western pygmy perch (*Nannoperca vittata*) and Swan River goby (*Pseudogobius olorum*)), several threatened wetlands such as Hymus Swamp, populations of threatened flora (grand spider-orchid (*Caladenia huegelii*), glossy leaved hammer-orchid (*Drakaea elastic*)) and fauna (Carnaby's black-cockatoo (*Calyptorhynchus latirostris*), forest red-tailed cockatoo (*Calyptorhynchus banksii naso*), chuditch (*Dasyurus geoffroyi*), brush-tailed phascogale (*Phascogale tapoatafa*), rakali (*Hydromys chrysogaster*) and quenda (*Isodon obesulus fusciventer*)). Lowlands Reserve also has a significant area of remnant mature Banksia woodland. It is the only remaining place where these species are still found together on the Swan Coastal Plain.

There are some major threats to Lowlands Reserve including dieback (*Phytophthora*), altered hydrological regime on the riverine system (particularly decreasing water levels from a drying climate or water extraction), introduced species including weeds (arum lily (*Zantedeschia aethiopica*), blackberry (*Rubus fruticosus*), bridal creeper (*Asparagus asparagoides*), freesia (*Freesia leichtlinii*), black flag (*Ferraria crista*) and watsonia (*Watsonia meriana*)), invasive alien species of animals (foxes (*Vulpes vulpes*) and cats (*Felis catus*)) plus the potential impacts of wildfire. Other potential impacts are from surrounding land uses and lack of connectivity to other bushland.

Lowlands Reserve has been included in the Peel Harvey Catchment Council project 'Rivers to Ramsar: Connecting River Corridors for Landscape Resilience' through funding from the Australian Government. With support from partners, the Department of Parks and Wildlife is implementing control measures as well as restoring areas of bushland and aquatic habitat to ensure the reserve's values remain intact. The project will reconnect corridors to increase refuge, breeding and food sources for native fauna (both terrestrial and aquatic) that traverse the landscape.

To date, the Department of Parks and Wildlife has been able to undertake several measures to control threats. These include undertaking a dieback survey and identifying management options, 1080 fox baiting, replanting over 50 000 seedlings, collecting endemic native seeds, installing more than

5 kilometres of fencing and undertaking over 40 hectares of weed control. In the coming years, the Department will install an additional 16 kilometres of fencing, continue fox baiting, plant a further 70 000 seedlings (including 1000 die back resistant jarrah seedlings), conduct an additional 40 hectares of weed control, undertake dieback control measures, and continue to establish a seed bank collection.

The Department has established a working group of neighbouring landholders and local community to ensure the best outcomes for the reserve.

For more information, please contact Megan Rowland (0412 782 351) from the Western Australian Department of Parks and Wildlife.



Lowlands Reserve is the focus of a major conservation initiative by the Western Australian Department of Parks and Wildlife (© Copyright, Heidi Bucktin)



Lowlands Reserve on the Swan Coastal Plain in Western Australia contains 1310 hectares of intact ecosystems (© Copyright, Heidi Bucktin)

Setting the trend in modern methods of fire management

Hanna Kogelman, Regional Manager, WetlandCare Australia

Fire ecology is a fundamental component of modern methods of natural resource management and landscape rehabilitation.

Some vegetation communities are well adapted to, and benefit from, regular fire and it is a feature of the landscape within the Burdekin region of far north Queensland. WetlandCare Australia (WCA) is managing, along with our community partners, the Delivering Biodiversity Dividends for the Barratta Creek Catchment project, funded by the Australian Government.

Key project outcomes include the training of Indigenous rangers in fire, weed and land management methods, for their long-term employment in such activities, and reversing the decline in remnant vegetation through co-ordinated fire regime management. Fire is a high priority element of the project, and WCA has been successfully working with

local partners and community groups, as well as the farmers of the region to incorporate sustainable fire management for lasting and positive landscape outcomes into the future.

WCA has implemented the co-ordinated Fire Management Strategy and developed Fire Management Guidelines, which include training for land managers and fire wardens, establishing necessary agreements to achieve controlled burns across varying land tenures, and the development of an effective post-fire flora and fauna response monitoring program. Integrated grazing and burning regimes from the 'Controlled Grazing Guidelines' (WCA, 2011) will be implemented to promote extensive regeneration in areas where it has been stalled.



Fires are a feature of the landscape within the Burdekin region of far north Queensland (© Copyright, Merv Pyott, WetlandCare Australia)



Fire management is a key component of the Barratta Creek catchment project (© Copyright, Merv Pyott, WetlandCare Australia)

On Wednesday 9 July 2014, a controlled burn was undertaken on a section of the Burdekin Shire Council reserve at the corner of Brown and Barratta Roads adjacent to Viv Cox Bridge. Stakeholders commented that they have never witnessed controlled burns as early as July in the Burdekin.

The three main aims of the controlled burn were to:

- reduce the grass fuel and the risk of a hot late season wildfire that would threaten neighbours and severely impact biodiversity
- burn at a time when the fire would have little negative effect on flora and fauna, particularly ground nesting birds and reptiles
- eradicate pest weeds in the understory.

The controlled burn was organised by WCA's Senior Project Manager, Merv Pyott and was attended by NQ Dry Tropics, Gudjuda Reference Group, Burdekin Shire Council, Queensland Fire Services and adjoining landholders. The 60 hectare burn is part of a trial to test early dry season burns in the Barratta environmental zones to continue to meet hazard reduction targets, protecting crops and infrastructure while having less impact on native plants and animals.

For further information on the project, please visit: www.wetlandcare.com.au/index.php/our-work/current-projects/delivering-biodiversity-dividends-in-the-barratta-creek-catchmen.

New fence protects estuarine crocodile habitat in Western Australia

Western Australian Department of Parks and Wildlife

Estuarine crocodile (*Crocodylus porosus*) nesting sites in the Ord River Nature Reserve have been separated from wandering cattle with a new 20 kilometre fence constructed by the Western Australian Department of Parks and Wildlife.



The 20 kilometre fence will help to protect estuarine crocodiles (Crocodylus porosus) within the Ord River Nature Reserve in Western Australia (© Copyright, Western Australian Department of Parks and Wildlife)

The fence, when combined with existing pastoral property fences, safeguards approximately 1500 hectares of valuable estuarine (saltwater) crocodile nesting habitat, said Parks and Wildlife officer Trent Stillman.

“The Ord River is recognised as one of the most significant breeding sites for this species in WA. In past years, up to 1000 head of cattle have been observed grazing within the boundary of the nature

reserve. On a number of occasions they have been rounded up and removed, but over time they have reinvaded the riverine grasslands within the reserve. Cattle trample and disturb species like crocodiles that live or nest at ground level,” Mr Stillman said.

“Cattle also degrade wetland habitats generally by altering vegetation composition, fouling water bodies, spreading weeds, denuding soils, increasing runoff and erosion and facilitating the intrusion of saltwater into critical freshwater habitats.”

Mr Stillman said a fence was considered the best long-term strategy for reducing cattle incursions into the reserve and reversing the impacts caused by them.

“As part of the department’s Remote Regions Nature Conservation Program, Parks and Wildlife staff from the Warren region travelled to the north of the State to assist East Kimberley staff, including Miriuwung Gajerrong rangers, with the fence-building project,” he said.

“Construction began in the 2012 dry season after securing an Australian Government grant and was completed earlier this year.”

Mr Stillman said crocodile spotlight surveys conducted in the Ord River area since 1987 as part of a long-term population monitoring program would continue in 2014. “This will show us whether there has been an increase in estuarine crocodiles in the Ord River Nature Reserve since cattle have been excluded.”

Estuarine crocodiles are protected under the *Western Australian Wildlife Conservation Act 1950*. They live in coastal rivers and creek systems, and often occur in open sea and around islands. Estuarine crocodiles also move inland along major rivers, floodplains, billabongs and into freshwater, rivers, creeks and swamps.

For further information, please contact the Western Australian Department of Parks and Wildlife media on 08 9219 9999, or follow them on facebook (www.facebook.com/dpawwa) or Twitter (@WAPARKSWILDLIFE).

Wetlands, brolgas and Latham's snipe: south-west Victoria's great natural assets

Birgita Hansen and Inka Veltheim, Federation University Australia, Ballarat

The wetland landscape of south-west Victoria is home to two very different but fascinating waterbird species: the brolga (*Grus rubicunda*) and Latham's snipe (*Gallinago hardwickii*).



The cryptic Latham's snipe (Gallinago hardwickii) undertakes a long trans-equatorial migration between Japan and Australia each year (© Copyright, Roger Standen)

Brolgas breed in shallow freshwater wetlands that are scattered throughout the agricultural landscape. They also depend on more permanent freshwater and saline lakes during the non-breeding season. These wetlands provide a critical network of breeding and roosting habitat distributed amongst cropping and livestock grazing paddocks, where birds feed during the day. The majority of the wetlands occur on private land, and their preservation relies on the goodwill

of landowners. Rural drainage and changes to flooding regimes pose a significant threat to brolgas as they alter the natural wetting and drying cycles critical for successful breeding and fledging of chicks.

Latham's snipe is a small, cryptic migratory shorebird that breeds in Japan during the Australian winter and undertakes a spectacular trans-equatorial migration twice a year. One of the largest snipe populations in Australia occurs in the small urban Powling Street wetlands in Port Fairy, Victoria. Snipe use this wetland for protection and roosting during the day and disperse across the landscape at night to feed in nearby wetlands, drains and flooded paddocks. The provision of different wetlands habitats allows birds to rest and fatten up over spring and summer in preparation for their long migration back to Japan for breeding.

Researchers at Federation University Australia are investigating what wetland habitats these two species are using in south-west Victoria. They are working closely with local communities and organisations to protect brolgas and snipe, and improve management of these wetlands.

The variety of wetlands scattered throughout south-west Victoria is one of the region's great natural assets. Ultimately, the preservation of a network of wetlands of different size, depth and vegetation types will ensure the future of these enigmatic birds in Victoria.

For further information, please contact Birgita Hansen (b.hansen@federation.edu.au) or Inka Veltheim (inka.veltheim@gmail.com).



Brolgas (Grus rubicunda) utilize a variety of wetlands across agricultural areas in south-west Victoria

(© Copyright, Inka Veltheim)

New book launched to promote North Queensland wetland plants

Queensland Department of Environment and Heritage Protection

A new plant identification book 'Wetland Plants of the Townsville-Burdekin Floodplain' has been developed to assist with wetlands rehabilitation and management in this key location.

The full colour field guide will make it easier to identify and select suitable local wetland plants to use in revegetation and constructed wetland projects. It is hoped the publication will lead to greater propagation and planting of these endemic species in rehabilitation and other projects.

The Queensland Department of Agriculture, Fisheries and Forestry (DAFF) under the Queensland Wetlands Program, joined forces with the Lower Burdekin Landcare Association Inc. and the RPS Group Townsville, to develop the publication.



A freshwater wetland on the Townsville-Burdekin floodplain featured on the cover of 'Wetlands Plants of the Townsville-Burdekin Floodplain' (© Copyright, Dr Greg Calvert)

Dedicated wetland ecologists Dr Greg Calvert and Laurence Liessmann, from the RPS Group Townsville, shared their collective experiences and catalogues to produce the book.

“This book has a long-awaited focus on wetland plants in the Townsville and Burdekin area and provides a valuable resource for community groups, local government, land managers and others with an interest in wetland plants and habitats,” Dr Calvert said.

“The book profiles more than 50 submerged plants, floating and attached plants, free floating plants, herbs, grasses and sedges with information on uses and propagation. It also includes common introduced species,” he said.

DAFF extension officer Terri Buono said the book is a welcome tool for anyone involved in wetlands management.

“As our area boasts the Ramsar-listed Bowling Green Bay wetlands and nationally important wetlands, it is important that people protecting and rehabilitating wetlands can identify and use local native species to ensure the long-term sustainability of our wetland systems.”

“What is particularly special about the book is the focus on planting local native species in constructed wetlands and bioretention structures to treat stormwater and agricultural run-off, which are becoming more common in both urban and rural landscapes,” Ms Buono said.

Local native plants are often overlooked in favour of sub-tropical species due to a lack of knowledge and commercial availability. Sub-tropical species are less likely to succeed in our hot and seasonally dry climate. There is also a risk that non-local species will proliferate and out-compete local wetlands species to become weeds.

The Lower Burdekin Landcare secretary, Linda Kirk, was instrumental in developing the book.

“We will now propagate local wetland species at our nursery and promote their use in revegetation projects.”

“We are grateful to our sponsors the Queensland Wetlands Program, Burdekin Shire Council and Wilmar International Ltd and NQ Dry Tropics.

“Greg Laurence, Lower Burdekin Landcare, DAFF and RPS Group Townsville also provided significant in-kind support and contributions,” she said.

To obtain a copy of the book, contact Linda Kirk at Lower Burdekin Landcare or visit the website www.LowerBurdekinLandcare.org.au