
# Community Bulletin

The Lakes Hub is an initiative of the Milang and District Community Association Inc. funded by the Australian Government and the South Australian Government's *Murray Futures* program.

**Number 230**
**December 2015/January 2016**

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## Coorong-Tatiara LAP

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Hi!

Christmas has come and gone, along with the end of the calendar year. The Lakes Hub has been closed for the two weeks over Christmas and New Year, to allow our hard-working staff and volunteers to recharge over a well earned break.

If you thought it was hot last month, you are right. Traditionally, January and February are our hottest months, with December being a little milder.

This December, both night time and daytime temperatures were well in excess of our average December, January or February weather. This year, the heat has been coupled with some strong South-easterly winds.

The table below shows our average and December 2015 data for Meningie, with similar temperatures occurring right around the Ramsar site.

| Parameter | Average December | Average January | Average February | December 2015 |
|---|---|---|---|---|
| Mean Maximum Temperature | 24.5°C | 26.1°C | 26.4°C | 29.8 °C |
| Mean Minimum Temperature | 13.0°C | 14.0°C | 14.0°C | 16.5°C |

Several visitors to the Coorong have rung me to report Shore Crab and Polychaete Worm deaths near Seven Mile and Long Point, which are likely to be weather and flow related.

Here is hoping that the rest of the year is a tad cooler!

Faith Coleman

Congratulations to the Finniss Catchment Group for winning the inaugural Natural Resources SAMDB Citizen Science Award for Outstanding Achievement.

Change Exchange 2015 – Planting the seeds


## Hurry!! Competition ends 5pm Thursday 15th January 2016

### Categories

- Our wetland – iconic values, benefits and services of the site (e.g. fishing, recreation, tourism, people in the environment)
- Wetland habitat and landscapes
- Wetland flora and fauna
- Threats (e.g. pests and weeds)

Wetland through time (e.g. changes to the wetland over time including historical images).

Send your photo to DEWNRCLLMM@sa.gov.au by **15 January 2016.**

More details on how to enter are available by clicking the image above. Please read the terms and conditions, your rights, prizes and entry details before entering.

*"The greatest achievement of the human spirit is to live up to one's opportunities and make the most of one's resources."*

Certificate II in

# Conservation & Land Management

National Course Code: AHC21010

tafeSA

Government of South Australia

# Milang information session

**Find out more about this opportunity to study Certificate II in Conservation and Land Management (ACH21010) with us in Semester 1, 2016.**

**Date:** Wednesday 3 February
**Time:** 6.30 - 7.30pm
**Location:** Milang Old School House
24-25 Daranda Tce, Milang

Starting in February 2016 this entry level qualification in Conservation and Land Management will be delivered locally via a series of seven 3-day workshops. This course is an excellent grounding for those wishing to work in the natural resources industry.

**For enquires please contact Administration:**
**P:** 8537 0687
E: reception@moshcc.com.au

tafesa.edu.au/info-sessions

# Tolderol Game Reserve Wetlands Bird & Water Quality monitoring

Latham's Snipe at Tolderol by Colin Rogers

You are invited to attend Bird & Water Quality Monitoring with Natural Re sources SA MDB staff on

## Friday 8th January 2016

## from 8:00am

Please RSVP to Regina Durbridge 0427 364 551

Or email regina.durbridge@gwlap.org.au

Should a Catastrophic Fire Danger Day be declared monitoring will be cancelled and rescheduled

Natural Resources SA Murray-Darling Basin

BirdsSA

gwlap GOOLWA TO WELLINGTON Local Action Planning Association

## It's SA MDB Turtle Time!

Now that we are into the warmer months and having had some heavy rains, our freshwater turtles are active and coming up onto the land to nest!

Aboriginal groups all along the South Australian section of the River Murray are busily mapping turtles and their nests as part of a River Murray wide turtle conservation project. Last summer groups such as Aboriginal Learning on Country (ALOC) and Working on Country (WOC) teams made a huge contribution to the project by mapping turtle distribution and protecting turtle nests across the Riverland, in the Mid Murray area, at wetlands and levy banks in the Lower Murray and around the Lower Lakes.

Everyone is encouraged to be part of the project by downloading the free TurtleSAT mobile phone app from www.turtlesat.org.au and recording any sightings of turtles or their nests. More information on how to protect turtle nests from predators can be found at www.turtlesaustralia.org.au/Turtle-nest-protection.

For more information contact the Murray Bridge Natural Resources Centre on 08 8532 9100.

## Why are we looking for Turtles?

Turtles are a vital, but often overlooked, part of the River Murray ecosystem. Their biomass in the system is (or was) enormous, with estimates of over 100,000 tonnes of turtles in the Murray in the 1980s and early 1990s.

Turtles are major consumers of invertebrate prey, small fishes, aquatic plants and importantly, carrion, making them integral to ecosystem health in the Murray, and ultimately to water quality through their part in the decomposition chain.

For many decades, predation on the eggs of turtles by foxes have been considered a potential problem for the health of turtle populations and more recently direct predation of nesting female turtles by foxes has been recognized as critical. Consequently, a catastrophic decline in turtle numbers was predicted within 20 years of 1993, and shown to be a reality in 2011.

Recent sampling of turtle populations showed a decline of 69 – 91% decline in populations of common species that had been studied in Victoria in the 1970s.

## Turtle Man visits Clayton Bay

Last Thursday, 10th December, Professor Mike Thompson from the University of Sydney spoke to a group of 25 people at the Clayton Bay Community Hall about the different species of Turtle in our area, why they are important to our river system and how they are under extreme threat. Mike also showed us the TurtleSAT app and how it can be used to record turtle sightings.

As one of the key threats to turtles is predation from foxes, Sandy Cummings, Senior NRM Officer with Natural Resources, SAMDB spoke about fox control methods and how to get the best results.

More information on 'The Turtle Project', which Mike is involved in, is provided on the following page.

## More turtle stuff…

The Murray in South Australia has three species of turtles, the Murray short-necked turtle (*Emydura macquarii*), the Eastern long-necked turtle (*Chelodina longicollis*) and the broad-shelled turtle (*Chelodina expansa*). The short and long-necked turtles are widespread and common, whereas the broad-shelled turtle is much less common and considered vulnerable in some jurisdictions.

### Causes of decline

Anecdotal information suggests that the decline in turtles is system wide, however, we have little knowledge of important aspects of the biology of River Murray turtles, such as:

- Where do they breed?
- Are there important breeding "hotspots"?
- How far do they disperse?
- Are there important source populations that then disperse to colonize the rest of the system?
- What are the causes of decline?
- Are there regional differences in the causes of decline?

Our working hypothesis for the decline in turtle populations is that the major underlying cause of turtle declines is predation on eggs and nesting females by foxes, but that many other factors also contribute to problem.

Those factors include deaths on roads, in fish traps and from hook and line fishing, habitat changes from water management, drowning in water regulation structures, the effects of pesticides, salinity and polychaete worms, direct (competition) and indirect (reduction of ribbon weed) influences of the introduction of European carp, and probably other factors. The extended drought of the early 2000s exacerbated many of these problems, resulting in disease and a decline in numbers.

### The turtle project and its technology

The Murray River Turtle Project was spearheaded by Ricky Spencer from the University of Western Sydney, Mike Thompson of Sydney University, Bruce Chessman from University of NSW, Arthur Georges from the University of Canberra. The project aims to identify the local and broader causes of turtle declines and discover the answers to the questions posed above. Answers to those questions are central to developing practical management solutions to halt and ultimately reverse the decline in turtles before the ecological consequences of their decline are beyond repair.

After presentations to the First Peoples of the River Murray and Mallee and the Local Action Planning group (LAP) Managers in October 2013, followed by training in turtle biology and survey methods by Thompson and Spencer, we have secured a grant from the Field Naturalists Society of SA and developed the TurtleSAT website to support community groups on the ground (eg. farmers, wetland managers, and school students) with recording of field data on turtles and their nests.

### Four stages of the project

The first stage of the project would be consultation with agencies involved in fox control and management, as well as landholders and conservation managers. Stage 2 would be coordination and optimisation of fox control activities around key areas and properties. Stage 3 would consist of community mapping of turtle activity and assessing changes in nest predation rates, as well as, predation on nesting females.

Finally, a strategic management plan would be developed for implementation throughout the Murray-Darling Basin. Australia's turtle populations and land managers need your help in answering these important questions so there can be appropriate safeguards put in place to protect turtles into the future.

You can assist by recording where you see turtles, where you see their nests, where turtles are seen or killed on the road, or evidence of turtles (such as skeletal remains).

# Bushfood

**8 week short course.**

**Mondays 9:30am-11:30am, Starts February 1st 2016 in the ACE SPACE at Milang Old School House Community Centre.**

**Join in and discover bushfood in the local surrounding area, seed collection and propagation techniques. Hands on cooking , taste testing, quizzes and more.**

Material fee $5

**Bookings essential**

**Contact MOSHCC Ph:0885370687 or call into MOSHCC to book your place.**

**24 Daranda Tce Milang 5256**

WorkReady

MILANG OLD SCHOOL HOUSE COMMUNITY CENTRE

Supported by Government of South Australia

**World Wetlands Day**
2 February 2016

Wetlands for our Future
Sustainable Livelihoods

# Wetlands are essential for sustainable livelihoods...

Capture this in a photo!

## Wetlands Youth Photo Contest starts on 2 February 2016

- **Take a picture of how people make a living from wetlands between 2 February and 2 March 2016**
- **Upload it to the World Wetlands Day website for a chance to win a free flight to a famous wetland of your choice, courtesy of Star Alliance Biosphere Connections**
- **Open to anyone aged 15-24***

Find out more at www.worldwetlandsday.org

#WetlandsForOurFuture

BIOSPHERE CONNECTIONS
STAR ALLIANCE / RAMSAR / IUCN

DANONE evian
World Wetlands Day is made possible by the Danone Fund for Water.

Ramsar
Convention on Wetlands

*By entering, you agree that the Ramsar Convention Secretariat can use your photo for publicity purposes worldwide with no restrictions. Full terms and conditions can be found on the World Wetlands Day website.

## Long-term SA River Murray Environmental Watering Plan

*(Source: DEWNR Media Release 27 November 2015)*

The State Government has developed a long-term environmental watering plan for the River Murray in South Australia, as required under the Murray-Darling Basin Plan.

Minister Ian Hunter said the plan's release represents the next important milestone in South Australia's firm commitment to the Basin Plan being completed on time and in full.

"We have long stated we will settle for nothing less than the agreed delivery of 3200 gigalitres down the system each year – which we fought hard for – because we know it is the minimum volume of water needed to keep this critically important river system in health," he said.

"This is the first long-term environmental watering plan to be developed for the South Australian River Murray Water Resource Plan Area, and accords with the Basin Plan's environmental management framework.

"It is based on the best-available scientific knowledge as well as experience gained through many years of environmental water management, and a sound understanding of the South Australian River Murray ecosystem.

"This plan details the optimal long-term pattern of environmental water delivery to South Australia in order to support a healthy, functioning ecosystem.

"The development of this plan has given South Australians a great opportunity to express how they would like to see environmental water delivered, and what ecological results are important for the River Murray – the life blood of this state.

"I look forward to delivering this plan in partnership with the MDBA, the Commonwealth Environmental Water Holder, other Basin states, the community, local indigenous groups, and non-government organisations.

The plan is available online via this link.

## Murray Mouth dredging paused for maintenance

(Source: DEWNR Media Release 17 December 2015)

Dredging operations at the Murray Mouth will be suspended for approximately two weeks from tomorrow (Friday 18 Dec) to allow routine maintenance operations to be carried out.

Dredging started at the beginning of the year to maintain connectivity between the Coorong and the Southern Ocean after River Murray flows were no longer sufficient to scour sand from the mouth.

Department of Environment, Water and Natural Resources Water Resource Operations manager Jarrod Eaton said dredging operations will resume again on Monday 4 January.

"During the suspension of operations, dredges and buoys will be moved away from the river mouth," Mr Eaton said.

"Boat operators accessing the mouth area need to be aware that there are shallow sand bars in the vicinity and they should proceed with caution, particularly during low tide."

Mr Eaton said, in the past fortnight additional dredging has been carried out to accommodate the shutdown period, and there is minimal risk of the mouth closing while operations are suspended.

Dredging was required for eight years during the Millennium Drought to keep the mouth open and maintain a healthy ecosystem in the Coorong.

Mr Eaton said it's anticipated that dredging will be required for some time into the future as the current El Niño weather pattern has brought hotter and drier conditions than average across the Murray-Darling Basin.

Maintaining connectivity between the Coorong and Southern Ocean is important for the ecology and water quality in the Coorong.

Updates on dredging operations are available via this web link.


UNIVERSITY OF CANBERRA | MDBfutures Collaborative Research Network

## *Grevillea illicifolia* (Holly leaved grevillea)

Spreading to erect, medium-sized shrub, to 2m high.
It has a very distinctive appearance, with 'holly' leaves and curved red and green toothbrush-type flowers.

Flowering: Spring to early summer

Natural distribution: In mallee areas, occurring from the Eyre Peninsula south-east into western Victoria and New South Wales.

Photo Jill Dennis

## Volunteers wanted for Coorong Shorebirds Monitoring Feb 2016

The Coorong is an internationally important site for shorebirds in the East Asian-Australasian Fly-way. The shorebird census is a long term monitoring project which identifies important trends in the way shorebirds are using the Coorong.

Birdlife Australia will be coordinating the Coorong shorebird census in February 2016 and it will involve a two day survey using shore-based teams, and teams in boats covering the shoreline of the north and south lagoons. The date is yet to be advised.

Volunteers keen to register their participation, or seek more information, should send an email to the project coordinator dan.weller@birdlife.org.au

## *Comesperma volubile* (Love Creeper)

A native twining plant with slender, almost leafless stems and conspicuous, small purple (rarely pink) flowers. .

Flowering: Late winter to spring.

Natural distribution: On sandy soils, in somewhat sheltered positions in woodland or mallee areas in agricultural districts of S.A.

## S.A.R.M.S Program

*(from PIRSA website)*

The River Murray is central to the social and economic structure of the South Australian Murray-Darling Basin region.

The river corridor is home to more than 90,000 people who rely on the prosperity of their local industries to sustain their communities.

By working to develop more industries in the region that are less dependent on water, our river communities will be stronger and more resilient when faced with environmental challenges such as drought.

SARMS will:

- Build strong and sustainable irrigation communities
- Help to secure water resources needed for a healthy environment and a prosperous state
- Boost regional productivity and help river communities adapt to a future of reduced water availability.

The $265 million funding package is funded by the Australian Government and delivered by the Government of South Australia through Primary Industries and Regions SA (PIRSA).

SARMS has been designed to achieve the outcomes sought by the Water Industry Alliance and agreed as part of the Basin Plan package negotiated by the State Government in 2012.

SARMS comprises two areas of investment:

Irrigation Industry Improvement Program (SARMS 3IP).

A suite of regional development, research and innovation programs.

Click on the image for videoOr paste this link into your browser

https://youtu.be/a-8A4n6Fld0

**Irrigation Industry Improvement Program (SARMS 3IP)**

SARMS 3IP is designed to deliver maximum and lasting benefit to river communities from the funding package.

It supports irrigators to ensure they remain at the


forefront of irrigation practice whilst meeting the water return targets specified by the Basin Plan.

Subscribe to the 3IP mailing list to have program announcements emailed to you.

**Regional development, research and innovation programs**

The Regional Economic Development element of SARMS complements the investment currently being made through the 3IP, and will support diverse opportunities that ensure less reliance on the River Murray water supply.

SARMS - Industry-led Research Sub-Program (IRSP).

SARMS - Loxton Research Centre Redevelopment.

SARMS - Regional Development & Innovation Fund (RDIF).

Please email us if you have any questions about the SARMS regional development programs.

## Little Corellas

### Can you help us study little corellas?

There are hundreds of different species of parrots. They are intelligent birds, often brightly coloured, with curved bills, an upright stance, and distinctive feet (two toes forwards and two toes backwards). Cockatoos are a family of parrots found in Australasia, from southern Australia to as far north as the Philippines. Cockatoos nest in tree hollows and are monogamous (they form long-lasting pair-bonds for breeding). Common Australian cockatoos are galahs, sulphur-crested cockatoos, cockatiels, long-billed corellas and little corellas. If you would like to learn more about little corellas, please see our "About little corellas" webpage (click here).

While many people enjoy seeing these native birds, large flocks in urban and rural areas do cause considerable problems in the warmer months. The most common problems are damage to trees (defoliation), taking grain, and disturbing residents with loud vocalisations. They can also damage buildings, particularly when they chew flashing or wiring, and to tarpaulins, wooden structures, cars and a variety of crops. There is significant public contention regarding corella management.

### The research

This research project will focus on sites where little corellas are problematic. We will utilise the existing knowledge and ideas of local communities to explore what makes particular sites problematic. We will then work with local communities to collect data to test ideas. We would like to better understand factors that lead to particular sites being popular with flocks of little corellas and problems for the local community. The project has been designed to help all stakeholders make informed decisions about little corellas. The project has been designed and timed so that results can be input into a new Little Corella Management Plan for South Australia.

### Project plan

This research project will be conducted in 2015 and 2016, with a number of distinct stages:

**Survey**: A short survey about little corellas that will help us to plan the rest of the project. It will include questions about people's experiences with little corellas in order to identify people and places to involve in subsequent phases of the project. You can now complete the online survey:

**Start the little corella survey**

Please contact us (see below) if you require a paper copy of the survey.

1. **Workshops**: We will run workshops with people affected by, or concerned about, little corellas. At the workshops we will explore what causes problem locations. We will use purpose-built software that will allow participants to share their ideas and concerns. No computer skills are necessary. Workshops are being held during December 2015 and January 2016. Upcoming dates and locations are:

- Saturday 16th January in **Onkaparinga** (10 – 11.30am)
- Tuesday 19th January in **Mt Barker** (6.30 – 8pm)
- Thursday 21st January in **Quorn** (6.30 – 8pm)
- Thursday 28th January in **Milang** (6.30 – 8pm)
- Friday 29th January in **Gawler** (6.30 – 8pm)

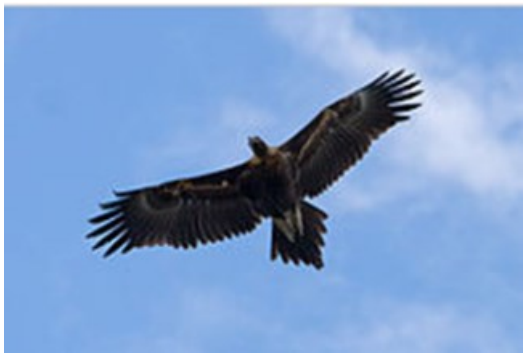
CONTACT US TO ATTEND A WORKSHOP: discoverycircle@unisa.edu.au OR 8302 9999

3. **Data collection**: In order to test the ideas suggested in the workshops, we will need to collect data. For example, we might need to visit problem sites and assess the environment for comparison to sites where little corellas are not a problem. We will ask participants from the workshops to be involved in this work during summer 2015-16. Training will be provided.
4. **Data analysis**: Using the data collected during the previous stage, we will test and refine the ideas from the workshops, exploring management options available to manage little corellas in South Australia. We will involve participants from earlier phases in this process during April-May, 2016.
5. **Sharing results**: We will make the results available to all participants and the wider community during June 2016.

## Wedged Tailed Eagle (*Aquila audax*)

(Source: - Wikipedia & other internet websites)

The Wedge tailed eagle gets its name from its wedge shaped tailed feathers. It is also known as the Eaglehawk.



Like most Raptors the female of the species is larger and heavier than the male bird.

The Australian Wedge tailed eagle is considered to be among the largest of the eagle species in the world. The female weighs in at from 3 – 5.8kg and the male from 2 – 4kg; body length can be from 81- 103cm. Average wingspan is from 182cm – 232cm from tip to tip. However in 1931 in Tasmania two female wedge tail eagles were measured with a wingspan of 284cm and 279cm respectively.

Young eagles are mid brown in colour with the head and back of the wings being slightly lighter in colour and more of a reddish brown. As the bird gets older its colour gets darker reaching a blackish brown colour at about 10yrs of age. Female birds are often lighter in colour than males.

Because of their large wingspan Wedge Tail Eagles can reach heights of over 1,800 metres and have been known to go higher. They have keen eyesight and can see in the infrared and ultraviolet bands of light, this enables them to spot prey and also detect thermal currents in the air which enables them to stay airborne for hours with little or no effort.

A breeding pair of wedge tail eagles may have 3 – 4 nests in their territory. But they only use the one nest per breeding season. The nests are usually spaced about 2.5 – 4 kms apart; they may be closer but this is dependent on the abundance of prey in their territory. Their nest can range in size from 2 – 5m both in depth and width, though the cup of the nest is very shallow. Nests are built in the fork of the tallest tree in their territory, anywhere from 1 – 30 metres off the ground. When trees are not available they will build on cliff faces or even on the ground.

Prior to laying eggs both birds either destroy the old one and rebuild it, or put new sticks and leaf into the nest. The female will lay from 2 -3 eggs; 2 – 4 days apart. The eggs do not hatch together because of the staggered laying; the first chick to hatch will be the biggest and strongest of the hatchlings; and in times of lack of food the stronger or older chick will kill and eat its younger and weaker siblings.

Both parents will incubate the eggs and look after the chicks. Eggs are incubated for 45 days. Eggs are white in colour with reddish brown spots or blotches. When the eggs hatch the female will brood her chick/ chicks for 30 days and will then start leaving them when she hunts for food. For the first 5weeks of its life the parents have to put food into the mouths of the chick/s

When hatched the chick is covered in a white fluffy down and will start to develop feathers after the second week from hatching. They will stay in the nest for up to 6 months or until the next breeding season, whichever comes sooner.

As for their prey Wedge tailed eagles are opportunists in the matter of prey. They will feed off carrion as a regular part of their diet. The have often been seen on the roadside eating roadkill. In the early days of settlement wedge tailed eagles were thought to kill lambs or sheep as they were often seen feeding on dead lambs or sheep, and so they were hunted vigorously with a bounty placed them.

Most prey is captured on the ground in long gliding attacks and sometimes they will take birds in the air. Since Europeans came here their preferred prey has been rabbits or brown hares, also foxes and feral cats. Native animals are also a part of their diet, e.g. possums, wallabies, small kangaroos, Koala's and bandicoots, also sometimes frill-necked lizards, goanna's and Brown snakes form a part of their diet.

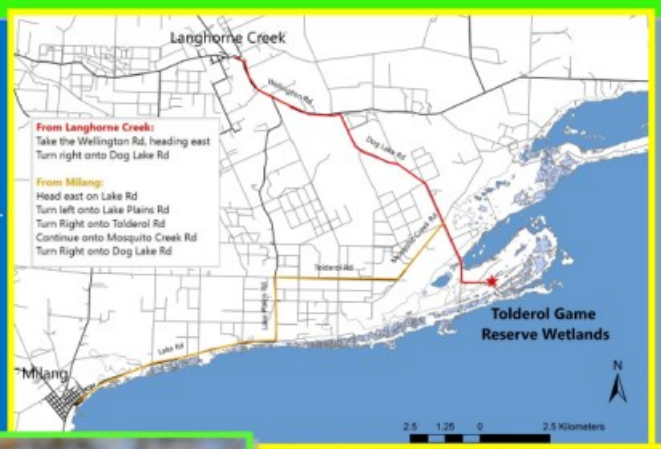
# Visit Tolderol Wetland

Tolderol Wetland was created in 1970 to form a refuge for waterfowl for feeding and protection. The site provides critical drought refuge for the large groups of birds that visit here, particularly migratory waders. Tolderol is part of the internationally significant Ramsar wetlands.

Pumping commenced in early November 2015 and the wetland is already filling with birds, with double the area to be watered this season. Over 125 bird species have historically been recorded at the wetland.

Follow the signs from Lake Rd, Langhorne Creek to Tolderol Wetland. Access tracks between the wetland bays is STRICTLY 4WD ONLY.

Please leave gates as you find them and drive with care and enjoy your visit!




Join our Facebook Community page Tolderol Game Reserve Wetlands To share your bird sightings!

Natural Resources SA Murray-Darling Basin

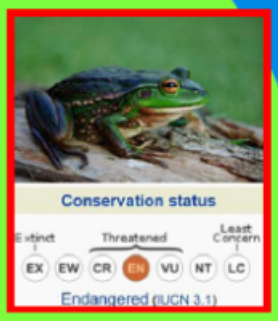
BirdsSA

gwlap GOOLWA TO WELLINGTON Local Action Planning Association

Photos provided by John Gitsham

# Southern Bell frog (*Litoria raniformis*)

The Southern Bell frog is also known as the Growling grass frog, Golden Bell frog or Warty Swamp frog. The females grow up to 10cm in length, while males only to 6cm. Colouration varies from gold to a brilliant green, the armpits and groin are a turquoise blue, with bumpy skin and a line down the back.




One of the few frog species active by day, this species also likes to bask in the sun. Male frogs have a distinctive growling call, which sounds a bit like a motorbike changing gears. This species numbers have been in decline for the past 20 years.

**This frog is one of South Australia's most endangered frog species.**

As part of the Coorong, Lower Lakes and Murray Mouth (CLLMM) Recovery Project, community members are monitoring frog populations in the Lower Lakes region. If you think you have seen a Southern Bell frog or would like to find out more about monitoring frog populations, please contact;


© Southern Bell frog – Tracey Reeves


Distribution of *Litoria raniformis*

**regina.durbridge@gwlap.org.au**

**Ph: 8537 0808 Mob: 0427 364 551**

Australian Government

Government of South Australia
Department of Environment, Water and Natural Resources

gwlap GOOLWA TO WELLINGTON Local Action Planning Association

MAKE SURE YOU BOOK AND PAY BEFORE YOU LEAVE AS SOME SITES HAVE LIMITED MOBILE COVERAGE!

# National Parks SA online booking system is now available

## Booking a campsite online

All campsites in the South East now need to be booked online.
This applies to campsites in the following parks:

- Beachport Conservation Park
- Bool Lagoon Game Reserve
- Canunda National Park
- Coorong National Park
- Little Dip Conservation Park

There is often high demand for camping areas during peak periods such as long weekends and school holidays.

To avoid disappointment visitors are encouraged to book early. You can now book your favourite campsite 12 months in advance.

Please be aware you will not be able to pay camping fees in cash at the park entrance including Bool Lagoon Game Reserve.

It's best to book and pay before you leave home as some locations have limited mobile coverage.

## Applying for snorkel and dive permits online

Did you know that the crystal clear waters of Piccaninnie Ponds have been recognised as a wetland of international significance?

Visitors are now able to book snorkel and dive permits for Piccaninnie Ponds online.

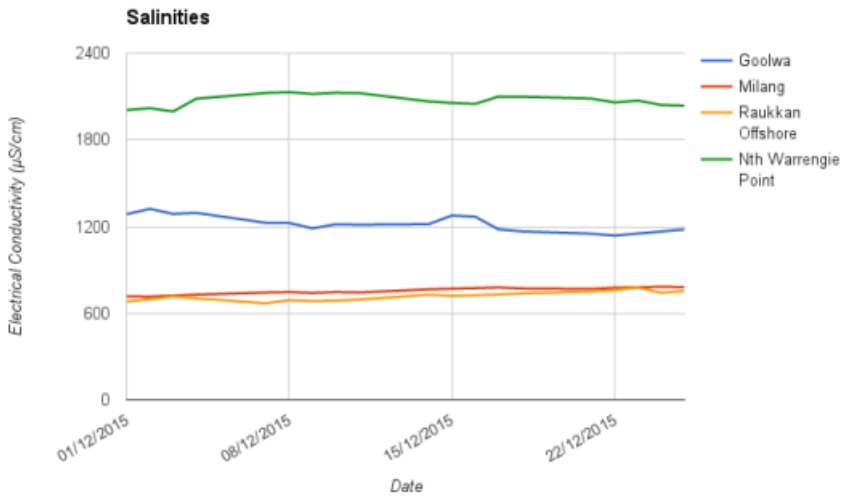
A permit is required to snorkel or dive in the ponds.

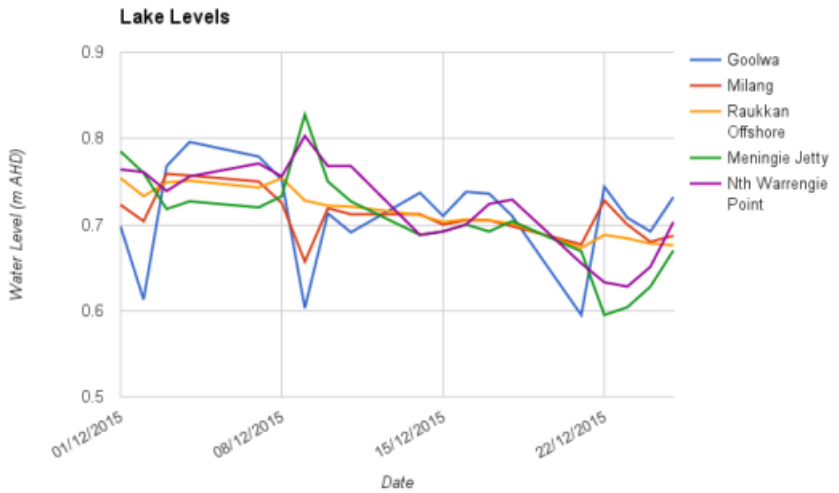
Scheduled timeslots are available and bookings are mandatory.

Conditions apply.

Check out the National Parks SA website for full details **www.parks.sa.gov.au**
or contact Natural Resources South East (08) 8735 1177.

# On the Level




| Some electrical conductivity ranges | |
|---|---|
| **Water type** | **Electrical conductivity (µS/cm)** |
| Deionised water | 0.5-3 |
| Pure rainwater | <15 |
| Freshwater rivers | 0 - 800 |
| Marginal river water | 800 - 1600 |
| Brackish water | 1600 - 4800 |
| Saline water | > 4800 |
| Seawater | 51 500 |
| Industrial waters | 100 - 10000 |

*Source: Suttar S., Ribbons of Blue Handbook. Scitech, Victoria, 1990.*

Electronic versions of these charts are available from the Lakes Hub website.

A spreadsheet of data is available on request from the Lakes Hub Coordinator.

**Data received from: www.waterconnect.sa.gov.au/RMWD/Pages/default.aspx**

Please note: salinity levels in the Goolwa Channel can be influenced by tidal ingress.

## River Murray – Weekly Flow Advice

For weekly flow / level reports on the River Murray and Lakes go to the following website: **www.waterforgood.sa.gov.au**

Up-to-date River Murray flow and water level information can be accessed at the Department for Water, SA Water and Murray-Darling Basin Authority websites: **Water Connect**,

**Daily Flow Report**, **River Murray Storage Data**

Details of river height and rainfall information in the River Murray within Victoria and New South Wales are available at the Bureau of Meteorology website: **http://www.bom.gov.au/vic/flood**

Information on the discharge of acid drainage water into the Lower River Murray can be accessed online at: **www.waterforgood.sa.gov.au**

For the latest River Murray Flow Report and Water Resources Update - 16th November 2012 visit: **http://www.waterconnect.sa.gov.au**

## Contributions to the Bulletin

The Bulletin comes out on the second and fourth Friday of each month. We are always looking for Coorong and Lower Lakes events and articles of interest. Contributions must reach the Lakes Hub Coordinator (info@lakeshub.com) by the start of business, the Tuesday prior to release.

## CALENDAR OF EVENTS *for more info contact the Lakes Hub*

If you have any relevant community event or courses that you would like added to the Calendar of Events please contact the Lakes Hub.

| | December |
|---|---|
| 22 | |
| 23 | |
| 24 | |
| 25 | Christmas Day |
| 26 | Boxing Day |
| 27 | |
| 28 | |
| 29 | |
| 30 | |
| 31 | New Years Eve |
| | **January** |
| 1 | New Years Day |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |
| 16 | Milang Power Rally—Milang Oval |
| 17 | Milang Power Rally—Milang Oval |
| 18 | |
| 19 | |