

RIVER MURRAY INTERNATIONAL DARK SKY RESERVE

Fact Sheet



RIVER MURRAY
INTERNATIONAL DARK SKY RESERVE

What is a Dark Sky Reserve?

- Put simply, Dark Sky accreditation is a bit like World Heritage Listing for the night sky.
- Night sky darkness is measured at a level of between 0–22, and those closest to 22 are generally the best to be able to view the night sky and its constellations, in all their glory.
- A Dark Sky Reserve is an area of land protected from light pollution which allows the general public the clearest and best views with the night sky.
- Around the world, Dark Sky Reserves are well known as the as the most remarkable places to camp and visit at night for astronomers, astrophotographers and outdoor/nature enthusiasts.
- The facilities within a Reserve are limited, as light pollution is kept to an absolute minimum as part of policies and protections which help to manage and sustain them.
- The River Murray International Dark Sky Reserve will protect and preserve this rural, non-polluted and natural dark region from light pollution for current and future generations.

Why is this one of the darkest places in the world?

- The region consistently measures an exceptional level of darkness, commonly about 21.8 and in some areas achieving the highest global measure of 21.99.
- This is mostly due to the unpolluted skies, high quality of vision, low population and lack of major development.
- Professor Stuart Wyithe, Immediate Past President of the Astronomical Society of Australia (ASA) has stated '*the Reserve has among the darkest skies in the world*'.
- Further, much of the area is protected from the urban environment lighting thanks to the Mount Lofty Ranges Eastern Hills Face Zone that separate the Dark Sky Reserve from greater Adelaide.
- Policies regarding artificial light and future development are also now in place thanks to the Mid Murray Council, which ensures this Reserve is protected.
- More than 10 years of weather monitoring within the Reserve show that the dry climate and low humidity makes for long periods of clear skies with mostly sunny weather all year round.
- The Reserve is an incredibly attractive location for both professional and amateur astronomers as well as international astro-tourists.



Photography by @blntpencil

Where is the River Murray International Dark Sky Reserve?

- This Reserve in South Australia's Mid Murray district covers more than 3200 square kilometres, and its boundaries include more than 20,000 hectares of public conservation parks, privately-owned wildlife reserves and significant wetlands.
- The 'Core Site' for the River Murray International Dark Sky Reserve is located within the Swan Reach Conservation Park – an area of 2000 hectares of untouched Mallee bushland, managed and protected by the South Australian Government.
- The core site has a 30km buffer zone.
- The Reserve will host an education/research centre at the Meldanda Camp Site near the small town of Cambrai. This is approximately:
 - A 1.5-hour drive from Adelaide;
 - 25 minutes from Murray River community of Mannum, or;
 - 40 minutes from Murray Bridge.
- Meldanda will present educational events for schools and the community, with a focus on astronomy and the impact of light pollution on Australian native animals.
- A demonstration site in the main street of nearby township Cambrai, will showcase new types of luminaries and outdoor lighting, and practical ways to reduce light pollution.
- Also within the Reserve are other State Government owned Conservation Parks, including Ngaut Ngaut, Brookfield, Ridley and Marne Valley – each have a high level of protection and are available for recreational and tourism activities. See more on them [here](#).



How dark is it, compared to others in the world?

- As cities grow, so does the spread of light pollution. Recent research shows that more than 80% of the world population and more than 99% of United States and European residents live under light-polluted skies. In many cities around the world it is impossible to see the stars, and some even struggle to see the moon. The International Dark-Sky Association aims to preserve those regions worldwide where the night sky is still pristine.
- Most Mid Murray residents already know how incredible the stars can be in this region. Looking up and seeing the Milky Way and other constellations in complete clarity is something we often take for granted.
- Darkness is measured on a scale of 0 to 22, with 22 being the closest recognised measure to total darkness. Recent measurements in River Murray International Dark Sky Reserve came in at 21.97.

River Murray International Dark Sky Reserve

0 10 km

-  Visitor Information Centre
-  Ferry Crossing
-  4WD Recommended
-  Astro Hot Spot
-  Star Viewing

 Core Site - Swan Reach Conservation Park



- | | | |
|------------------------------|-------------------------------|---|
| 1. Bear Fence Lookout | 6. Meldanda | 11. Maynards Lookout |
| 2. Blanchetown Oval | 7. Cambrai Oval | 12. Walker Flat Lookout |
| 3. Towitta Reserve | 8. Black Hill Cemetery | 13. Palmer Lookout |
| 4. Sedan Oval | 9. Shell Hill Reserve | 14. Younghusband Lookout (East front Road) |
| 5. Big Bend Lookout | 10. Kroehns Lookout | 15. Purnong Lookout |

Is it the first in Australia?

- Yes, the River Murray International Dark Sky Reserve is the first of its kind in Australia – being a Dark Sky Reserve in Australia.
- There are other Dark Sky Places in Australia – notably one of the newest in the Warrumbungle National Park in NSW.
- There are 15 Dark Sky Reserves in the world, with the only two in the Southern Hemisphere located in New Zealand, Namibia and now Australia. There are also dozens of smaller Dark Sky Parks, mainly in North America.



Photography by @row_an_james

What is the difference between a Dark Sky Park and Dark Sky Reserve?

According to the definitions of the International Dark-Sky Association, the International Dark Sky Places Program offers six types of designations:

- **International Dark Sky Communities:** Communities are legally organized cities and towns that adopt quality outdoor lighting ordinances and undertake efforts to educate residents about the importance of dark skies.
- **International Dark Sky Parks:** Parks are publicly- or privately-owned spaces protected for natural conservation that implement good outdoor lighting and provide dark sky programs for visitors.
- **International Dark Sky Reserves:** Reserves consist of a dark “core” zone surrounded by a populated periphery where policy controls are enacted to protect the darkness of the core.
- **International Dark Sky Sanctuaries:** Sanctuaries are the most remote (and often darkest) places in the world whose conservation state is most fragile.
- **Urban Night Sky Places:** UNSPs are sites surrounded by large urban environs whose planning and design actively promote an authentic nighttime experience in the midst of significant artificial light at night, and that otherwise do not qualify for designation within any other International Dark Sky Places category.
- **Dark Sky Friendly Developments of Distinction:** Dark Sky Friendly Developments of Distinction recognise subdivisions, master planned communities, and unincorporated neighbourhoods and townships whose planning actively promotes a more natural night sky but does not qualify them for the International Dark Sky Community designation.



Photography by Theo Pistorius

Read more here: <https://www.darksky.org/our-work/conservation/idsp/>

Is the Reserve backed by global astronomy leaders?

- Yes. The River Murray International Dark Sky Reserve is now formally accredited by the world's leading dark sky organisation, being the International Dark-Sky Association.
- Further, the River Murray International Dark Sky Reserve Committee includes a number of experts from across South Australia, including: Astronomical Society of Australia's Andrew Cool, Astronomical Society of SA past Vice President David Bennett, UniSA Adelaide Planetarium Astronomy Educator Martin Lewicki, and **Professor Don Bursill AM**, former Chief Scientist of South Australia.



RIVER MURRAY
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Who owns the River Murray International Dark Sky Reserve?

- The Mid Murray Landcare group has led the accreditation bid since 2016 and manages the educational and administrative duties of the Dark Sky Reserve through the recently established *River Murray International Dark Sky Reserve Committee*.
- This Reserve in South Australia's Mid Murray district, covers more than 3200 square kilometres, and its boundaries include more than 20,000 hectares of public conservation parks, privately owned wildlife reserves and significant wetlands.
- The South Australia Government owns and manages the various conservation parks, while the Mid Murray Council owns and manages much of the other public land.
- The Reserve is also supported by State Government agencies, the Mid Murray Council and the Astronomical Society of South Australia (ASSA).
- Various private landholders are also included in the Reserve.





Visiting the River Murray International Dark Sky Reserve



Where are the best/darkest locations to view it and how can I access them?

- **Big Bend cliffs:** This is easily accessible along the road between Walker Flat and Swan Reach. There are lookouts near Nildottie and another at Kroehns Landing.
- **Cambrai, Meldanda:** A structured educational campsite just near the township of Cambrai. Meldanda is open to the public 7 days a week. Entry is free. There is a \$5 per person fee for overnight campers. Perfect for groups. Bookings essential to 0427 590 344.
- **Swan Reach:** You can access the Swan Reach Conservation Park (4WD access only, no facilities) off Stott Highway, or you can visit Big Bend By Night nearby for a tour and viewing.
- **Sedan:** Towitta Reserve near Sedan is ideal for an uninterrupted view of the night sky.
- **Black Hill:** The Black Hill Cemetery is a unique place for viewing.
- **Houseboat / boat (on River):** See the sky from the magnificent Murray River anywhere along the Reserve between Younghusband and Blanchetown.
- **Walker Flat:** There are a number of Riverside reserves in and around Walker Flat where you can stop and look up. Our favourite spot here is Sunnydale or the Marne River mouth.
- **Shell Hill Reserve (near Wongulla):** A small reserve and remote location to stop and look up.
- **Other:** The Reserve also includes the towns of Palmer, Blanchetown, Bowhill, Keyneton and Tungkillio – so there are plenty of small towns to visit and explore the skies. Ovals at Cambrai, Blanchetown and Sedan are ideal, along with lookouts at Palmer, Purnong, Younghusband and Maynards Lookout between Walker Flat and Wongulla.

What is the best way to view it?

- The good news is that you DON'T have to have a telescope and all the fancy star gazing equipment out here. A pair of binoculars will do the trick for beginners. Or just sit back and look up (you might see the International Space Station pass overhead).
- If you are a keen stargazer, then bring along your telescope – and set yourself up in a quiet, remote area. Pack yourself some snacks and give yourself a few hours after dark to soak it in.
- We recommend that if you don't own a telescope, then you take a tour with one of our region's local guides who provide this equipment, plus information on how to use them.
- If you're a photographer, then bring all of your equipment fully charged (remember, there's no power in the remote areas).
- If you love camping, then find one of the many spots out in our Conservation Parks or in one of the reserves along the river and soak up the beautiful night sky any time you want.
- If you're not an experienced camper, then again, we would suggest an organised tour and overnight accommodation through one of our great local caravan parks, cabins, motels, riverside holiday homes or a houseboat.



Do I need to stay overnight to see it?

- We recommend that people stay overnight to get the full River Murray International Dark Sky Reserve experience. This may mean camping out amongst the Reserve, or simply finding some local accommodation to head back to once you've been able to explore the darkness for a few hours.
- However, you don't need to stay the night to enjoy the spectacular River Murray night sky. There are plenty of places for viewing that are accessible from Adelaide, so you can still see the stars and be back in your bed in the city or one of the local towns that same night. We suggest taking a tour departing from Mannum, which is just over one hour's drive from Adelaide.
- Be prepared that clouds can impact visibility, so ensure you check the weather map before planning your trip.

What should I know before coming to visit?

- Ensure you check the weather, especially cloud cover.
- Ensure you know how to use your equipment and have mobile lighting to set it up in the remote/unpowered areas of the Reserve.
- Understand how to visit/travel in areas with no/limited facilities (this includes in some cases, no access to toilets, power, signage, shelter).
- Ensure you know how to get where you're going. There are many unsealed roads throughout the Reserve, many of which are not marked on Google Maps (which you can't access anyway if you don't have service).
- Tell someone where you're going and when you're likely to return. If you're planning to be away for a longer trip, make regular check-ins with family or friends.
- There are many native animals in the Reserve – many of which are most active at night. Be prepared to see them and understand how to safely deal with this.
- Bring a torch and dress warm!

What should I bring with me when I visit?

If you're heading to the core site, then you will need ALL provisions for travel and refreshments. We recommend travelling in a 4WD. There are NO facilities in the Conservation Parks within the Reserve.

Key items to ensure the best visit, include:

- Telescopes
- Binoculars
- Map/s
- Camera/s
- Food
- Water
- Telephone
- Torches/lanterns
- All camping equipment (*note, there are no power outlets in the park*)

Can I camp there / have a fire?

- The region is great for camping. There are a number of caravan parks, free campsites and reserves, and community owned facilities that people can access (see more details below).
- The district is known for its relatively low rainfall climate, which means it's suitable for camping all year round. During winter, overnight temperatures can reach -4 degrees Celsius and in summer can reach up to 45 degrees Celsius.
- Fire bans are in force during the warmer months (November to April).

What camping facilities are available?

Meldanda camp site

- There are camping facilities at Meldanda near Cambrai. It's open to the public 7 days a week. Entry is free, with a \$5 per person fee for overnight campers. Bookings essential on 0427 590 344. Perfect for groups.

Swan Reach Conservation Park public access

- The Swan Reach Conservation Park, the core site for the Reserve is open for camping, 4WD and walk-in access 24-hours a day, all year round.
- There are no entry or camping fees.
- There are currently no camping facilities within the Swan Reach Conservation Park boundaries, apart from a few rough tracks.
- The cleared camping sites are suitable for telescopes and are accessible by vehicle on existing unsealed tracks, or by foot.
- There is no power or lighting of any kind in the Park.



Smaller, free camping sites are available at Towitta Recreation Park and the Marne River Reserve. Camping is also available at Greenways Landing near Nildottie, Walker Flat and Wongulla.

For accommodation options and advice visit the [Mannum Visitor Information Centre](#).

What are the recommended light guidelines?

For travellers, campers and people touring the area, there are no formal restrictions. We ask that people coming to visit the Reserve keep their artificial light to a minimum to allow others to enjoy the night sky at its best.

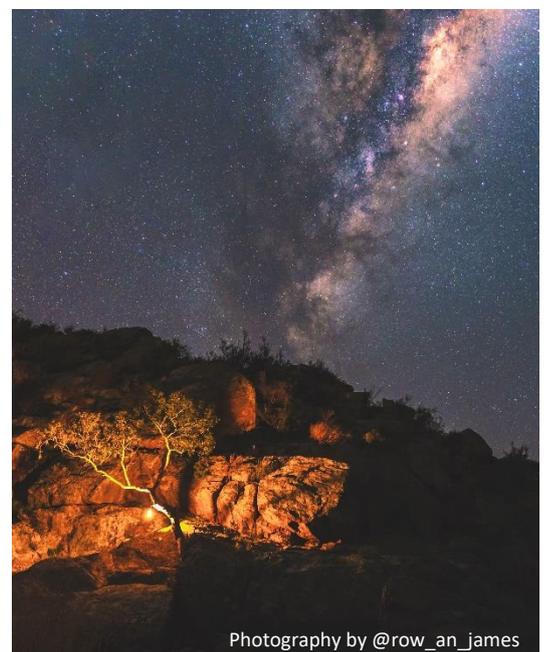
Do I need a 4WD to get there?

Access to the core site within the Swan Reach Conservation Park is by 4WD only.

Much of the remainder of the Reserve can be accessed in a normal vehicle. However, many roads within the reserve are unsealed, and while a 4WD isn't necessary to many of the prime star viewing and astro hot spots, there are other significant driving challenges including rubble roads, dust, wildlife, limited directional signage and substantial levels of darkness at night.

You can take guided tours with a range of great local operators including:

- [Big Bend By Night](#)
- [Juggle House Experiences](#)
- [Murraylands Photography Tours](#)



Is there phone, and internet coverage within the Reserve?

In many areas there is good mobile and 4G coverage – especially amongst all of the major towns. There are, however, a number of patches where no signal is available. For this reason we suggest inexperienced travellers/campers use one of our tours.

If you are experienced in travelling to country areas, ensure your equipment is charged and people know your travel plans.



Photography by @adeltritus

Can I bring my dog?

Not if you're entering one of the Conservation Parks within the River Murray International Dark Sky Reserve. Each has a strong focus on preserving native wildlife (see more below). For this reason, no pets are allowed.

If you want to travel with your pet, we would suggest staying at a pet-friendly caravan park or other accommodation where you can make short trips to viewing areas such as the Big Bend Cliffs, or riverside reserves.

Is it safe to drive there?

Most towns within the reserve area are linked by sealed roads, however, many roads to access some of the best viewing sites are unsealed, and while a 4WD isn't necessary in terms of access, there is a lot of rubble, dust and wildlife to consider when travelling by car.

Access to the core site within the Swan Reach Conservation Park **is by 4WD only**.

There are many native animals in the Reserve – many of which are most active at night – including wombats, emus and kangaroos. Be prepared to see them and understand how to safely deal with this, especially if you are driving at night when many of them will be on the roads.

Fruit Fly restrictions

A substantial part of the Reserve falls within the [Riverland Fruit Fly Exclusion Zone](#). Visitors should check whether their destination is affected and dispose of any fruit or vegetables before entering the zone, or risk on the spot fines.

FAQs

Where can I stay while exploring the River Murray International Dark Sky Reserve?

Easy access from Adelaide (with international airport) allows effortless accessibility for international and interstate travellers to visit and stay. [Juggle House Experiences](#) offer transfer options from Adelaide to the Murray River in their Entertainer Limousine – perfect for small or big groups.

Nearby towns with accommodation

- Big Bend – [River Shack Rentals](#), or camp on site with the Big Bend By Night team
- Blanchetown – [Blanchetown Caravan Park](#), [Big 4 Riverside Holiday Park](#), [River Palms Holiday Park](#), [Blanchetown Hotel](#)
- Bow Hill – [River Shack Rentals](#)
- Curnamont – [River Shack Rentals](#)
- Nildottie – [River Shack Rentals](#)
- Palmer – [Palmer Hotel](#)
- Punyelroo – [Punyelroo Caravan Park](#)
- Sedan – [Sedan Hotel](#)
- Swan Reach – [Swan Reach Hotel](#), [River Shack Rentals](#), [Swan Reach Caravan Park](#), Tenbury Hunter Reserve, Big Bend
- Tungkillo – [The Rabbits Hut](#)
- Walker Flat – [River Shack Rentals](#), [Aruma River Resort](#), [Ankara Campground](#), Hettner Landing, Swamp Hen Reserve
- Wongulla – [Campground](#)
- Younghusband – [River Shack Rentals](#)

Mannum

With a population around 2,000, Mannum is the largest and one of the most popular holiday destinations in the area. The riverside town acts as a 'gateway' to the Reserve, greeting travellers coming in from the southern and westerly direction. There are various accommodation options here including, hotels ([Pretoria Hotel](#), [Mannum Motel](#) or [Mannum Hotel](#)), campsites ([Bolto Reserve](#) or [Haythorpe Reserve](#)), caravan parks ([Mannum Riverside Caravan Park](#)), houseboats ([Unforgettable Houseboats](#), [Kia Marina Houseboat Hire](#) or [Houseboat Hirers Association](#)), and holiday homes ([River Shack Rentals](#) or [Rivershare Lodge](#)).

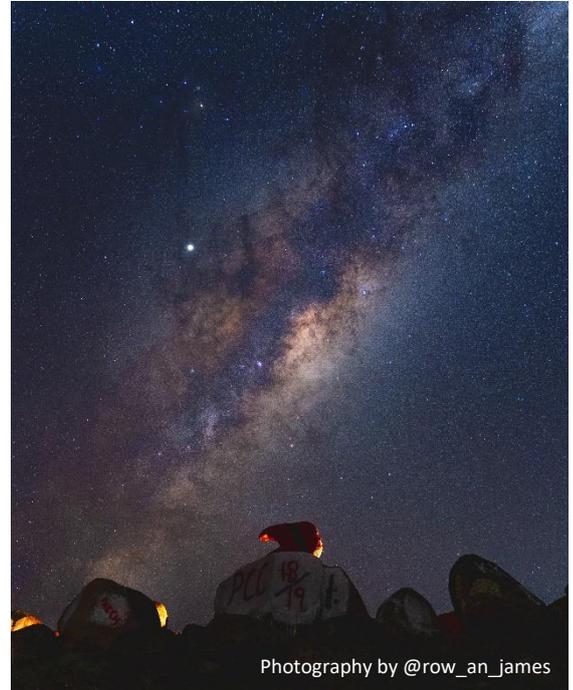
For more accommodation options visit www.themurrayriver.com, www.stayz.com.au, www.airbnb.com.au or www.booking.com.



Photography by @blntpencil

Are there any guided tours or special events?

- [Mid Murray Landcare Association](#) will host future special events at the Meldanda Camp Site.
- [Juggle House Experiences](#) offer two fun sightseeing tours:
 - [Silver Stars Cheese and Bubbles tour](#) – get a piece of the night sky action through Meldanda and the Mannum Waterfalls (optional), paired with wine and share platters.
 - [Gold Stars Sunset Dinner Tour](#) – a stargazing and cultural journey, visit major attractions before delving into the dark sky glory. Or, upgrade to the Platinum package and discover more of the river over the following day.
- [Big Bend by Night](#) - Hop onboard open-top carts for their unique *Dark Sky Night Tour* amongst untouched bushland where you can experience uninterrupted views of the Milky Way and sleep under the gleaming sky. You'll be provided with binoculars, telescopes, an undercover sleeping area (BYO swag), toilets and a bush tucker breakfast.
- [PS Marion](#) is launching a Dark Sky Cruise in early 2020 so you can enjoy spectacular night-time stargazing with an expert while you cruise along the 80km of Murray River that winds through the Reserve.



Photography by @row_an_james

To keep up to date with new tours and experiences, visit www.themurrayriver.com or the Mannum Visitor Information Centre.

What else can I do in the Mid Murray region?

- The **Murray River** itself is the major attraction of the region, with more than 336,000 overnight visitors a year. The River is an excellent place to view the night sky, and with 80km of it winding through the Reserve, you'll have plenty of riverside spots to choose from.
- Find out more about all the ways you can experience it on the regional tourism website here: www.themurrayriver.com.
- The **Big Bend cliffs** are an exceptional attraction during the day and night with an accessible lookout point from the cliff tops overlooking the river.
- The **Mannum Waterfalls** is an outdoor playground for all ages. Explore the trails guiding around the granite rocks and rock pools. Abundant native birdlife and wildlife can be seen here.
- Take a daylight cart ride tour or watch a sheep shearing show at **Big Bend By Night**.
- Spot some of the local birdlife at the [Hermann Gass Bird Sanctuary](#).
- Explore the locally famous [Palmer rocks and lookout](#).
- View the ancient [Shell Hill Reserve](#) – an attraction 5 million years in the making.
- Experience the region's rich industrial river history at the [Mannum Dock Museum](#). Interactive displays bring the past to life.
- Cruise the river in style and serenity aboard one of our vessels including the PS Marion, PS Mayflower, Murray Princess or Proud Mary.
- Learn about the region's history with an extensive collection of memorabilia and souvenirs at the [Swan Reach Museum](#).
- Be guided to some of the region's most spectacular Murray River scenery on a [Four Knots](#) cruise.
- Hire a kayak or canoe and explore the mighty Murray at your own pace.



What do the nearby regions have to offer?

There are plenty of attractions within a short drive or day trip distance of the Reserve that you can enjoy during the daylight hours in between night sky viewing sessions.

Come face to face with lions at the Monarto Safari Park, take a hot lap or watch the latest car race at The Bend Motorsport Park, sample fine wines at Langhorne Creek, take a short River cruise, admire the silo art at Karoonda or Coonalpyn, or explore the nearby hubs of Murray Bridge and Tailem Bend.

Find out more and plan your trip at www.themurrayriver.com.

Is there a connection with the local Aboriginal people and the Reserve?

- Yes.
- The Ngangurkau, Ngaiawang and Ngarkat people were the first inhabitants of the Mid Murray district, and Ngaut Ngaut Conservation Park sits at the junction of these communities.
- Ngaut Ngaut is one of these special places – it's an ancient campsite, meeting place, burial ground and sacred site. The stars are integral to their traditions and stories of this area.
- Carvings in the cliffs at Ngaut Ngaut represent phases of the moon and other ancient astronomical observations. Stories about the sun (female) and the moon (male) and familiar constellations like Orion and the Pleiades are carved into the cliffs.
- There are also constellations unique to Australia's indigenous people, such as the 'emu in the sky', (which Europeans call the 'Milky Way') that use the dark spaces between the stars to create the entire image.
- More information on Ngaut Ngaut, including tours, is available here: https://www.parks.sa.gov.au/find-a-park/Browse_by_region/Murray_River/ngaut-ngaut-conservation-park

What native animals live in the Reserve?

The Australia wildlife in the area is mostly, uniquely, nocturnal. The Reserve will support the habitat of nocturnal animals, enabling iconic species such as the Southern Hair Nosed Wombats to thrive and be viewed in their natural surroundings.

Some nocturnal animals you might come across, include:

- Greater Bilby
- Several kinds of Bettong
- Western Pygmy Possum
- Fat-tailed Dunnart
- Short-beaked Echidna
- Australian Numbat (endangered)
- Owls
- Micro-bats (12 x kinds)

Other Australian wildlife you're likely to see, includes:

- Kangaroos
- Emus
- Various birdlife (*Emus, Kookaburras, Pied Butcherbird, Rainbow Bee-Eater, Bush Stone Curlew, Mallee Fowl, Native Finches, Wrens, Swifts, Swallows, Honey-eaters, parrots, Wedge-tailed Eagles*).
- Frogs
- Turtles
- Snakes
- Lizards
- Goannas



FIND OUT MORE

Where can I get more information?

International Dark-Sky Association: www.darksky.org

River Murray International Dark Sky Reserve: www.rivermurraydarkskyreserve.org

Mid Murray Landcare Association: www.midmurraylandcaresa.org.au

Murray River, Lakes and Coorong Tourism: www.themurrayriver.com

Mid Murray Council: www.mid-murray.sa.gov.au

Department for Water and Environment: www.environment.sa.gov.au