

In the night sky

Rachael Oxborrow looks up to a tourism drawcard offering astronomical outcomes



Taking in a world-class spectacle.



So tranquil by the river.

There is a place in regional South Australia where the night sky is so unpolluted by artificial light that the darkness itself has earned international environmental protection status. The International Dark-Sky Association (IDA) accreditation for the River Murray International Dark Sky Reserve seeks to preserve the natural ecosystem from increasing light pollution levels across the planet. It also serves as a tourism drawcard for both seasoned and amateur night sky enthusiasts.

Mid Murray Landcare SA chair Chris Tugwell spearheaded efforts to protect this unique part of the world located less than two hours from Adelaide in the state's east.

"People respond really emotionally to the stars, but they don't see it as a part of the environment," he said.

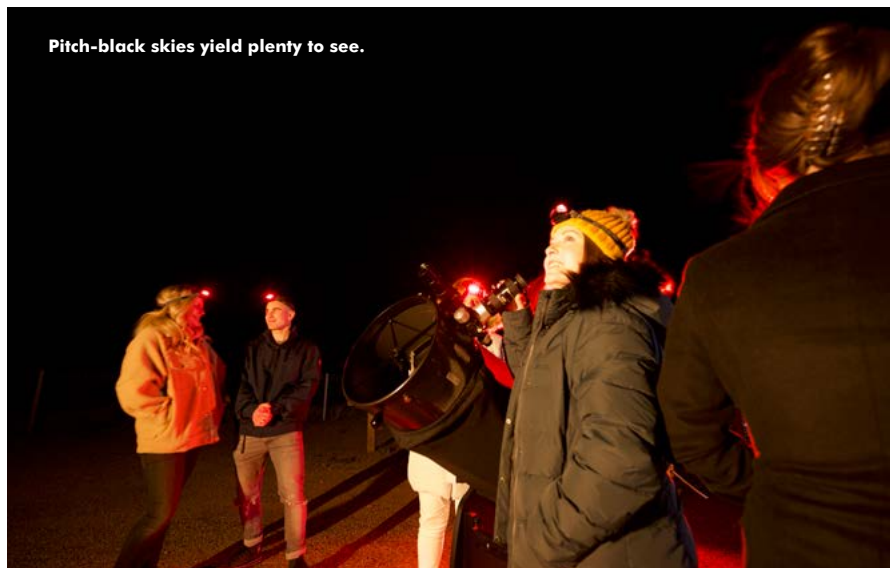
"Most just assume we don't have to do anything about it and neither did I, but now I realise how special our view of the night sky is in comparison to the rest of the world."

Chris and his partner Maude purchased property in 1998 atop cliffs overlooking the River Murray with a view to

revegetating the former sheep country. During the next 10 years they direct seeded 80km of land with Mid Murray Landcare funding. It was during this time that they would admire the night sky while accompanied by the warmth of a bonfire. Come 2016, Chris had taken on the role of Mid Murray Landcare chair and was inspired to protect the unique nightscape and nocturnal wildlife, while adding an unusual tourism element to his region's attractions.

With the help of two Adelaide-based astronomers, the process began to prepare information for the region's local council and community about how special their night sky vantage point really is and why it needs protecting.

"I spoke to the Mid Murray Council and community groups about the opportunities an accredited Dark Sky Reserve would create, not the difficulties in making it happen," Chris said.



Pitch-black skies yield plenty to see.

In the night sky

“With the council we were able to work out the boundaries of our park reserve, some core night sky viewing sites, what benefits there were to tourism and how we move forward.

“The Mid Murray Council could see the real benefit for creating tourism attractions for smaller townships in their region that have smaller and shrinking populations but also present great viewing locations for the stars.”

Efforts to receive official IDA accreditation took about five years to complete. These reserves consist of a dark core zone surrounded by a populated periphery where policy controls are enacted to protect the darkness of the core. The Mid Murray Landcare Group together with the Mid Murray Council opted to create an International Dark Sky Reserve that encompasses tens of thousands of hectares of conservation parks, farmland and small townships, with Swan Reach Conservation Park as the focal point.

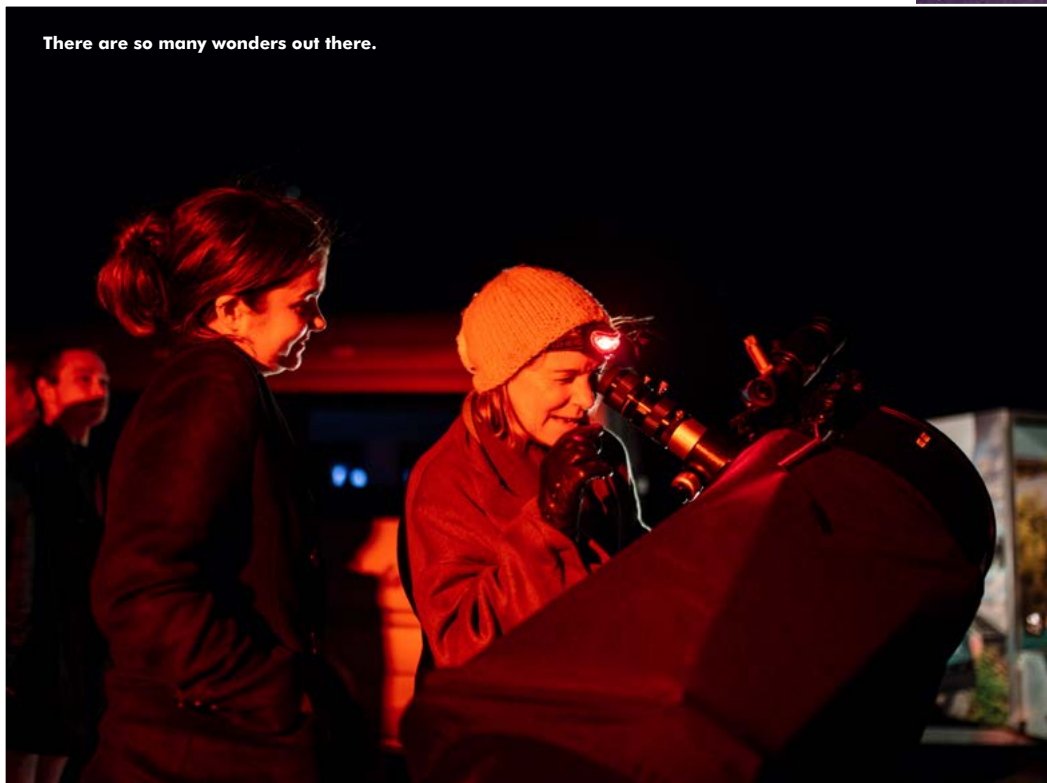
The 3200sq km tract of land in eastern SA has Sky Quality Meter (SQM) readings of 21.9 on a scale of 0-22, making it one of the darkest locations

on the planet. The Milky Way is visible with the naked eye and in some key locations, the stars themselves provide the only light of the night. The reserve stretches from just outside of the popular holiday destination of Mannum on the banks of the River Murray and north towards Blanchetown.

Travellers to the region are guided by a River Murray Dark Sky Reserve map and signage on major road entry points clearly defining and introducing visitors to where they are entering the reserve. The reserve is the only one of its type in Australia and among just 15 in the world.

The International Dark Sky Places Program encourages dark sky-friendly outdoor lighting and practices. It formally recognises parks that are publicly or privately owned spaces which are being protected for natural conservation, sanctuaries that are fragile and remote locations in need of protecting plus urban night sky places protected for their night-time viewing amid built-up areas.

Confirmation of the reserve’s official IDA status was received in November 2019, just prior to the COVID-19 global pandemic effectively shutting down



There are so many wonders out there.

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Night sky experiences provide the perfect tourism backdrop.



In the night sky

tourism opportunities. This delayed any influx of international visitors for years and domestic visitors for a short time. However, behind the scenes Chris said the lockdowns allowed the building of support, planning of environmental conservation efforts and development of complementary tourism businesses.

“Part of the Cambrai Primary School property, Meldanda, has been turned into an astronomy paddock, a big open space where people can set up telescopes and it turns out it’s one of the best places in the state to do this,” he said.

“Some of the existing River Murray lookout sites have had signage added to advertise the night sky viewing locations and we’ve put telescope pads of concrete with an east-west line for people to set up on.”

The Cambrai township is being highlighted as an example of what a dark sky friendly town can be like. The lighting has been changed and businesses are altering their night-time lighting habits to minimise night sky light pollution.

Light pollution is a side effect of industrial civilisation, with more than 80 per cent of the world’s population and 99 per cent of American and Europeans living under constant sky glow. This can affect humans by increasing risks for obesity, depression, sleep disorders, diabetes, breast cancer and more. It can also negatively impact ecosystems for both plants and animals through reproduction and sleep. Artificial light can disrupt the migratory paths and schedules of birds, causing them to leave too early or late in the season and miss ideal nesting conditions. It can also impact birds that use moon and starlight to navigate. Light pollution can create an imbalance between predators using the light to hunt and prey needing the darkness to hide.

“In world terms, what we have here is incredibly special,” Chris said.

“It has changed the way people look at the region, it is drawing businesses to the region and creating jobs in the most unexpected ways.”

A commercial observatory is being constructed within the reserve



The River Murray Dark Sky Reserve tours with Juggle House Experiences include a guided tour of an Aboriginal archaeological cultural site in Ngaut Ngaut Conservation Park near Walker Flat.



Dinner followed by the greatest show on Earth.

boundary which allows people to rent telescope space and view the night sky remotely from anywhere in the world. A passive radar station tracking satellites using existing radio signals is also being built in the region and tourism operators are adapting and developing partnerships with each other and the community to provide unique experiences for visitors.

One such tourism operator is Kelly Kuhn, from Juggle House Experiences, who has added a stargazing tour to her range of experiences. The Dark Sky Gold Stars Sunset Dinner departs from the Mannum township and offers dining, astronomy guides, stargazing equipment, insight from Aboriginal custodians as the world’s first astronomers and a cultural site tour.



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“People are genuinely interested in not just the night sky part of our tour but in the culture of our area,” Kelly said.

“The stargazing is the drawcard, but I make a point of taking people to viewing locations in daylight and returning after our meal to view the night sky.

“It gives visitors the chance to get their bearings and see more of the Mid Murray region than they would if we started our tour after sunset.”

Kelly and her tour guides highlight the history of the local area, its industries and the wildlife along their route.

“Having an attraction like this in our region adds to our overall appeal,” she said.

“People are choosing to stay two nights and explore not just the dark sky activities but other parts of what we offer.

“We’re lucky to have such amazing day and night experiences here in the Mid Murray and we’re proud to be able to give visitors from Australia and the rest of the world a chance to appreciate it as well.”

As the Mid Murray region now settles into becoming known for its nighttime tourism potential, the Mid Murray Landcare committee and Mid Murray Council are working towards their next goal to protect the landscape. Efforts are underway to make the night sky friendly policies pioneered through the IDA classification recognised in the SA Government’s *Planning, Development and Infrastructure Act 2016* to legislate to secure the long-term future of the night sky in the region. ●



Happiness at one of the darkest locations on the planet.



Juggle House Experiences won the 'Tour and Transport' category at the 2022 SA Tourism Awards.

Key locations to view the River Murray Dark Sky Reserve

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 seven 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 inside the reserve between Youngusband 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 Sunnysdale or the Marne River mouth.

Shell Hill Reserve (near Wongulla): A small reserve and remote location to stop and look up.

Other locations: The reserve also includes the towns of Palmer, Blanchetown, Bowhill, Keyneton and Tungkillo – 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, Youngusband and Maynards Lookout between Walker Flat and Wongulla.