Southwest Sky Country A Wilderness Society guide to Dark Sky in Lutruwita/Tasmania's Southwest Wilderness Society Life. Support.

All of life, all of it, has evolved with dark skies and a day/night cycle - the circadian rhythm. Night skies connect us with the ancient rhythms of life, and are essential to our understanding of landscape: rivers, mountains, sea and sky.

Lutruwita/Tasmania is a unique and special place at night. The lives of all living things here are considerably less impacted by light pollution than in other places on earth. Lutruwita/Tasmania's unique ecological systems depend on the circadian rhythm and Palawa/Tasmanian Aboriginal People's connections to milaythina wurangkili/ Sky Country hold important teachings about place and spirituality.

Protecting the night - *liwari* in palawa kani - from light pollution is critical for healthy environments, wildlife and our wellbeing.

palawa kani is the language of Tasmanian Aboriginies. Key palawa kani words to learn include:

milaythina wurangkili - Sky Country liwari - night pulana - star laway teeney - Milky Way nuyina - Aurora Australis

What is light pollution?

Light pollution is the human-made alteration of outdoor light levels from those occurring naturally.

Introducing light where there's always been dark skies changes the environment in ways that we are only just beginning to understand. Under the influence of artificial light, the natural world and the food cycles that keep all of us alive are being disrupted. It can also cause harm through wasted energy and negative health impacts relating to excessive wakefulness.

Light pollution is the fastest growing pollutant in the world, increasing by at least 49% around the planet between 1992 and 2017, and by 400% in some regions. Increasing urban and regional populations and electrification, as well as the adoption of cool white LEDs, is responsible for this rapid growth.

We can measure light pollution through night sky luminance, and 'artificial sky glow'. A study called the 'New World Atlas of Artificial Sky Brightness' shows more than 80% of the world and more than 99% of the U.S. and European populations live under light-polluted skies. The Milky Way is hidden from more than one-third of humanity, including 60% of Europeans and nearly 80% of North Americans.

It is important to remember this altered condition doesn't only impact humans, but applies to all of the species inhabiting these locations.



Lutruwita/Tasmania's opportunity

With relatively low light pollution and accessible night skies, Lutruwita/Tasmania has a unique opportunity to preserve and strengthen connections to milaythina wurangkili/Sky Country and liwari night time environments through considered management of light pollution for the benefit of all.

In good news - light pollution is possibly the simplest form of pollution to manage - reducing it is as simple as flicking off a switch, or changing a lighting system. The change is instantaneous. However, introducing light pollution is equally as easy and instant - making the management of maintaining dark skies and connection to Sky Country very important.

The Tasmanian Wilderness World Heritage Area

A great deal of the darkness found in Tasmania is located in the Tasmanian Wilderness World Heritage Area (TWWHA). Covering 1.5 million hectares the TWWHA stretches from the state's wild south coast to Cradle Mountain in the North and from the towering forest giants of the Styx to beyond the Franklin and Gordon rivers to the West. The TWWHA is truly unique; recognised for its outstanding natural and Aboriginal cultural heritage values. It's one of only two places on earth meeting 7 of the possible 10 World Heritage criteria, and the only one in the world to meet all 4 natural criteria.

A commitment to managing light pollution is a commitment to holistically preserving the precious natural and cultural values of this significant area.



What is a Dark Sky Sanctuary?

The International Dark Sky Places program, run by DarkSky International (DSI), preserves night skies around the world by working with communities, land managers, municipalities, and the public to certify and protect dark places for humans and wildlife alike.

A Dark Sky Sanctuary is described by DSI as follows: "An IDA Dark Sky Sanctuary is public or private land that has an exceptional or distinguished quality of starry nights and a nocturnal environment that is protected for its scientific, natural, or educational value, its cultural heritage and/or public enjoyment.

...The typical geographic isolation of Dark Sky Sanctuaries significantly limits opportunities for public outreach, so a sanctuary designation is specifically designed to increase awareness of these fragile sites and promote their long-term conservation."

Why do we need one?

- Protect our dark sky asset through responsible lighting polices and public education.
- Protect wildlife and ecosystems from the negative effects of light pollution
- Increases the sustainable tourism potential of Astrotourism in the TWWHA - tourism based on activities geared toward the enjoyment of darkness
- Reduce energy consumption through responsible lighting.

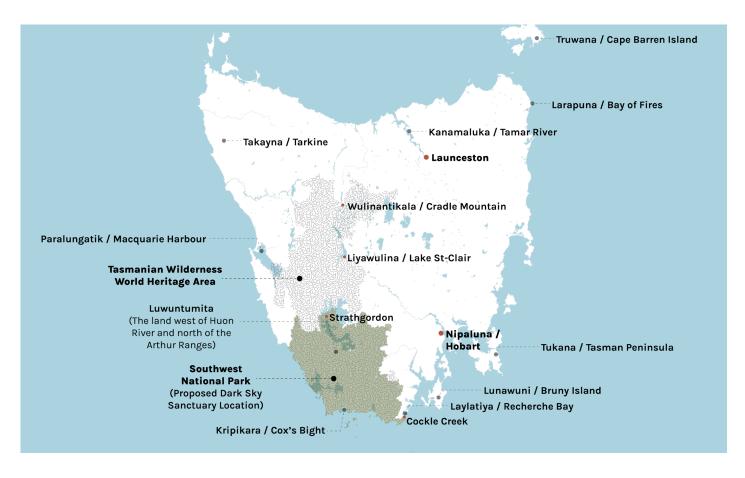
The Southwest Dark Sky

Lutruwita/Tasmania's largest expanse of wilderness is located in Southwest National Park – a remote and rugged landscape in the heart of the TWWHA. This area is a distinctive place to visit, and is home to important coastal, forest and sub alpine ecosystems.

Due to geographic isolation and minimal development, the Southwest night time light levels are not subject to much disturbance from human activity. In most areas of the Southwest ecological function is not influenced by artificial light, and the night sky is gloriously unimpeded.

However, without effective management of dark conditions maintained through adequate protection, the steady growth of light pollution in Lutruwita/Tasmania will begin to negatively impact milaythina wurangkili and liwari night time environments.

Designating a Dark Sky Sanctuary requires cooperation from all landholders and land managers to commit to the management and policies required for certification. The relatively straightforward land tenure of the Southwest lends itself to Southwest Sky Country being the first place designated as a Dark Sky Sanctuary in Lutruwita/ Tasmania. This would be one of the largest, and darkest, Dark Sky Sanctuaries on Earth.



What to look for in the darkness

nuyina - the aurora australis

nuyina is the palawa kani name for what is sometimes called the 'Southern Lights'. Lutruwita/Tasmania is one of the best places in the southern hemisphere to witness an elusive and ethereal aurora.

The experience of standing under *nuyina* is sacred and requires our respect. The Tasmanian Aboriginal Community finds connection with the spirits of their ancestors in its glow, and it is humbling to revere the otherworldly power of its beams.

Auroras occur when charged particles burst from the sun, creating a solar wind. When this solar wind is drawn towards the North and South poles it brings particles that interact with gases in the Earth's atmosphere, sparking beautiful displays of light.

Southern auroras are particularly elusive and subtle – there is a thrill to experiencing them as no one knows precisely when an aurora might occur, so it is always worth keeping an eye to the southern horizon. When they do show up, they may only be a faint glow to the naked eye, with long shutter speeds helpful for capturing green beams and purple glows.

The following resources might prove useful in your search:

'Aurora Australis Tasmania' Facebook group 'Aurora Australis Tasmania Alert NOW' Facebook page Bureau of Meteorology's 'Space Weather Services' 'My Aurora Forecast' or 'SpaceWeatherLive' app

milaythina wurangkili - Sky Country

milaythina wurangkili – the pulana (stars), the moons and the planets, holds significant cultural value for Palawa/ Tasmanian Aboriginal People, as it does for people all over the world.

Western Astronomy provides connections to a fascinating trove of science and folklore, underpinning our understanding of physics and philosophy - where we come from, where we are, and where we are going.

For Palawa ancestors and knowledge holders Lutruwita/
Tasmania's milaythina wurangkili holds similarly
foundational knowledges and stories. The stories
connect across realms – Country (the terrestrial
landmass), Sea Country and Sky Country. Throughout the
Southwest are key storytelling places where Sky Country
acts a mnemonic, preserving and informing complex
knowledge systems – including a story shared at Kripikara
/ Cox's Bight on the South Coast where the first Palawa
person comes from pulana (the stars).

In a constantly changing landscape, access to Sky Country powerfully connects today's Palawa people to the same knowledge store and storytelling device that their ancestors have drawn upon for many thousands of years, give or take a few satellites.

Managing light pollution to preserve liwari and milaythina wurangkili for years to come recognizes our shared reverence for the night sky and the continuation of culture.



Nocturnal critters

Lutruwita/Tasmania's forest ecosystems are equally as alive at night as they are during the day. By paying careful attention you could encounter some rare and wonderful characters few visitors get to see or hear.

Light pollution alters the environment these species have evolved to flourish in - changing conditions alter predation patterns, sleep cycles and sensory worlds. With just a glimpse of this world, you will become aware of how dark skies are important for sustaining these unique relationships.

Marsupials

Many of Lutruwita/Tasmania's marsupials are active at night. Keeping things dark is best for them, and best for seeing them. Keep an eye out for Eastern Quolls, Spotted Tail Quolls, Antechinus, Ringtail and Brushtail possums, Pademelons and Tasmanian devils.

The circadian rhythm doesn't only trigger these marsupial's actue nightly routines. Research shows circadian rhythms is linked to marsupial breeding seasons, making managing light pollution even more important for maintaining communities.

Bats

There are eight species of bat in Lutruwita/Tasmania - all are active at night and very special. Bats feed on a range of insects, including many pest species, playing a crucial role in many ecological systems. However, areas of light disadvantage them - as they are relatively slow flying and navigate via echolocation, in the light predators can more effectively hunt them. Bats, and their role in ecosystems across Lutruwita/Tasmania, are susceptible to light pollution - the Tasmanian long-eared bat won't leave its tree hollow until it is pitch dark.

Birds

As night falls in coastal areas over summer you might hear or see short-tailed shearwaters returning to their colonies, before taking off in autumn for their northern migration to the Arctic. These incredible birds use the moon to navigate - sadly, they can become disorientated by artificial light and are vulnerable to injury by collisions with vehicles or infrastructure as a result.

Listen for the sounds of nocturnal birds - the 'more-pork' of the Southern Boobook Owl, or the 'cush-cush-sh-sh' of distinctively husky screeches of the critically endangered Masked Owls. While there is limited research on the effects of ambient light pollution on these birds, they are also susceptible to injuries or death from disorientation caused by 'harsh' artificial light.







Things that glow

Insects

Glow worms - Arachnocampa tasmaniensi - are found in caves and rock overhangs in Lutruwita/Tasmania's Southwest. Their immature stages (larvae) produce light known as bioluminescence to attract prey into their sticky webbed snares. Studies demonstrate Tasmanian glow worms synchronize their bioluminescence to a circadian rhythm that allows a community to all glow at once – possibly allowing them to become more efficient in attracting flying insects.

Also keep an eye out for a glow in the dark millipede, only recently discovered in Tasmania's Southwest!

Fungi

Lutruwita/Tasmania has some of the best biodiversity for fungi in the world. If you look carefully in damp forest on dark nights in autumn, you may be able to find glowing fungi like the Ghost Mushroom (Omphalotus nidiformis) growing on rotting tree trunks and stumps.

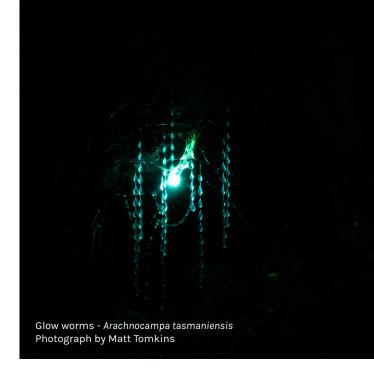
You'll need to get down low to notice the dim light it emits, and take a longer exposure photograph to see the light emitted over a longer period.

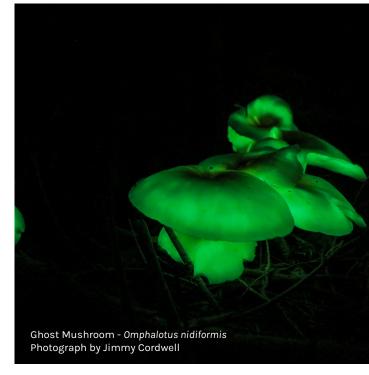
Zooplankton

Noctiluca scintillans – latin for 'sparkling night light', are tiny plankton which emit blue light in self-defence. They can bloom and light up the water in brilliant blues at all times of the year and are often referred to as 'bioluminessence'.

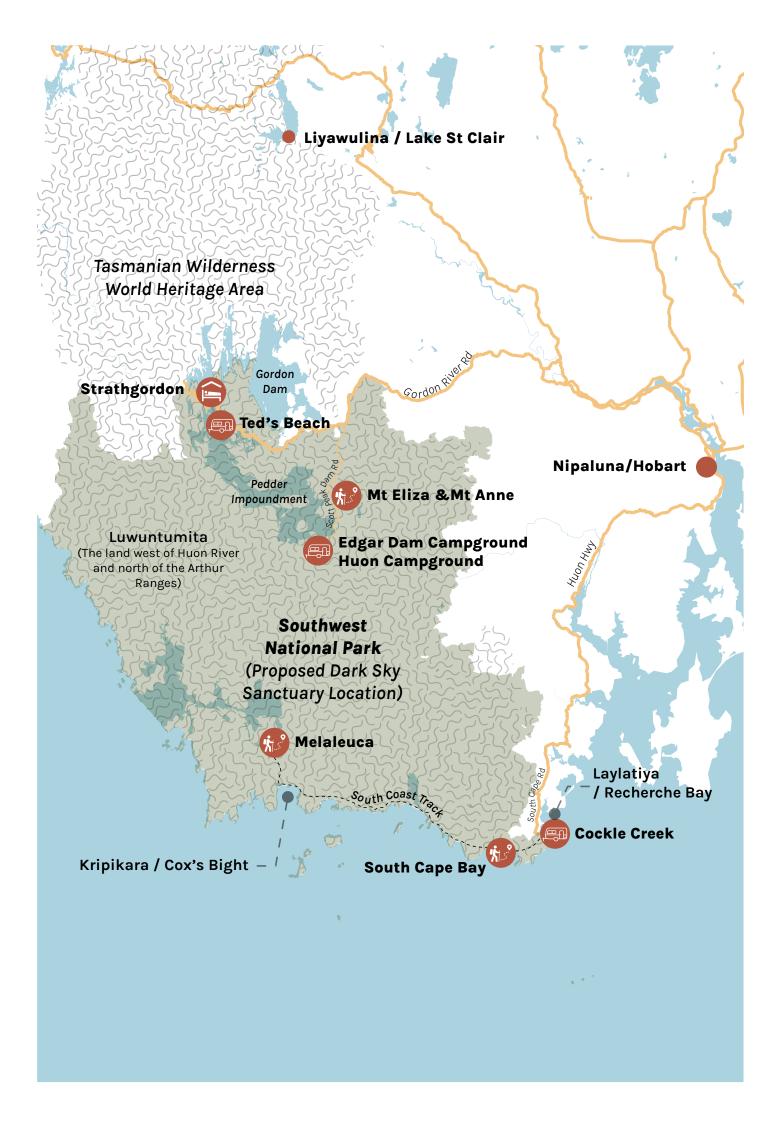
These phytoplankton are new to Lutruwita/Tasmania - blooms have been increasing across the island and sadly as creatures go, they are more of the unwanted kind – they consume food stocks required by other species and when they die they release ammonia, which can kill local fish communities.

Keep an eye out along coastlines in the Southwest, particularly in protected bays.









Getting there:

In this guide, we recommend accommodation, vehicle and walk-in camp sites in the Southwest that provide accessible, safe opportunities for all to experience Sky Country and the local night time environment.

We have selected these sites so that there's no need for you to drive at night. If you do, you are sharing the roads with Lutruwita/Tasmania's native wildlife. Cruelly, their lives are in your hands - so take it slow and watch out for animals on the road. Vehicle lights also only contribute further to local light pollution, so set up camp or check in early and wait for night to fall!

North - Luwuntumita via Gordon River Road

Take the Gordon River Road (B61) West from Mount Field to reach Strathgordon, 2 hrs 15 minutes from Hobart, offering a small accommodation hub with nearby options for camping and hiking.

The Gordon River Road is a narrow ribbon through the largely untracked region of forests, imposing mountain ranges and buttongrass plains, providing access to Southwest National Park, the Pedder Impoundment and the Gordon Dam. Please be aware that there is no further access to fuel beyond Westerway.

South - Via Laylatiya / Recherche Bay and Cockle Creek

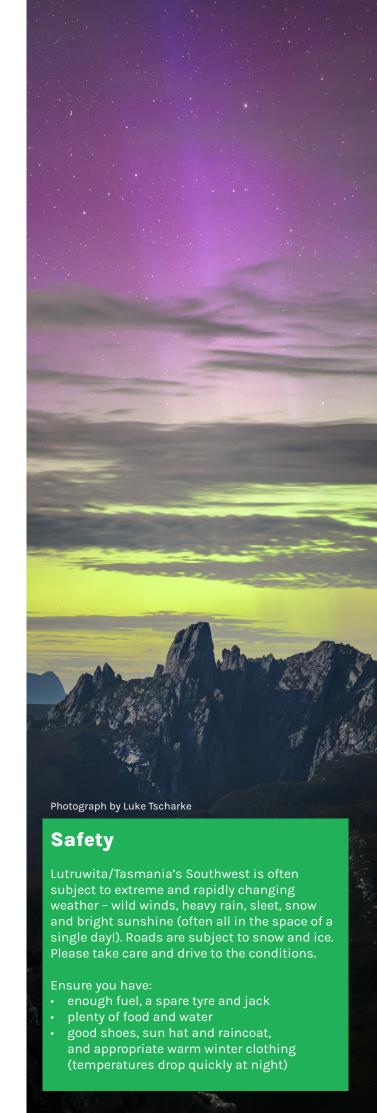
To get to Cockle Creek, drive 2 hours South of Hobart via Geeveston on the Huon Hwy (A6). Take C635 past the Hastings Cave turn off and then South Cape Road (C636 - the most southerly road in Australia) to Cockle Creek. The last stages of the road are gravel and fairly rough but can be negotiated by two-wheel drive vehicles.

At Cockle Creek, vehicle access camp sites are available, with the option to continue into the Southwest National Park via walking track. Please be aware there is no further access to fuel beyond Southport.

South - Via Melaleuca and the South Coast Track

Direct access to Melaleuca is via light plane or private boat. Par Avion operate from Cambridge, a 15 minute drive East of Hobart, and offer daily and custom flights to Melaleuca. From Melaleuca a series of remote overnight walks, including the iconic South Coast Track, can allow you to gain access to spectacular darkness.

Areas here, such as *Kripikara /* Cox's Bight, and Louisa Bay are of signficant cultural value, and so should be treated with utmost respect



Accessing darkness from the north 3. Mt Eliza & Mt Anne



1. Strathgordon

Set on the shores of the Pedder Impoundment, Strathgordon was built to house workers constructing hydro dams. The workers' village has been transformed into the Pedder Wilderness Lodge, a hotel and restaurant with guest rooms and self-contained apartments.

Strathgordon is a good base for exploring some of the most accessible parts of Southwest National Park. When night falls, views South across the Pedder Impoundment are easily accessed from the resort, or from nearby walking trails.

2. Ted's Beach, Edgar Dam and Huon Campgrounds

These three campgrounds make great bases for exploring the variety of nearby short or longer walks. In the evening your nocturnal hosts may even pay you a visit - look out for Possums, Pademelons and maybe even a Tasmanian Devil.

Ted's Beach

Ted's Beach campground is located on the shore of the Pedder Impoundment, 3 km East of Strathgordon via sealed road. There are toilets and barbeques available, and this is a site recommended for vehicle camping - the ground is quite hard for tents. The lakeside experience is fantastic at night, while nearby walking track Jack's Track provides an opportunity to gaze from a higher vantage point.

Edgar Dam Campground & Huon Campground

Both Edgar Dam and Huon Campground are accessed off unsealed Scotts Peak Dam Road (C607). Edgar Dam Campground is on the water's edge, whilst Huon Campground is located in a rainforest setting, and is the best option for tents. Red Knoll Lookout is close by to these campsites and is one of the best places to visit to easily experience the grandeur of Lutruwita/Tasmania's rugged World Heritage Area.

On the edge of the Pedder Impoundment, rising above expansive buttongrass moorlands, stands the picturesque Mount Anne. At 1423m, Mount Anne is the tallest mountain in the South West, and walkers are rewarded with stunning views.

The start of the Mount Anne Circuit is a carpark at Condominium Creek - be warned, it is exposed and difficult walking. Campsites along the circuit provide incredible remote opportunities to view the night sky, or High Camp Memorial Hut or Shelf Camp are accessible out-and-back overnight sites from Condominium Creek.

Accessing darkness from the south

4. Cockle Creek and South Cape Bay



Sitting on beautiful Recherche Bay, Cockle Creek is the southernmost point to which you can drive in Australia. Short walks around Cockle Creek, as well as longer walks into Southwest National Park, provide excellent opportunities to experience the night time environment.

The overnight hike to South Cape Bay emerges atop coastal cliffs peering out to South East Cape (Tasmania's southernmost point) and along the wild South coast. Campsites including Lion Rock and South Cape Rivulet provide excellent opportunities to experience uninterrupted southern skies. Beyond here is only ocean and Antarctica.

5. Melaleuca and the South Coast Track



Deep in the far Southwest corner of Tasmania is the tiny settlement of Melaleuca. Originally established for tinmining by the King family, it can only be reached by light plane, boat or by fantastic multi-day walks on the South Coast or Port Davey Tracks.

This area has great significance for the Tasmanian Aboriginal community, particularly as it relates to a significant Creation Story on the South Coast.



The Dark Sky Campaign

The Tasmanian Wilderness World Heritage Area - in particular the wild Southwest - is home to some of the clearest, darkest, and most special skies on earth. Here, like nowhere else, you can stare into the depths of the universe and observe a skyscape overhead of crisp comparison to those of deep time.

While urban and densely populated areas are increasingly polluted with light, the remote corners of the globe's highest ranked World Heritage wilderness is primed for protection and international recognition. Just like the Tasmanian Devil and Huon pine, the rich dark skies of this special area are iconic, and of international significance worthy of protection.

The case for a Dark Sky Sanctuary is two-fold: one, it presents the opportunity to recognise this high class dark sky wilderness of Southwest Lutruwita/Tasmania, by quickly - and urgently - embracing the global move to cease and revert pollution of the night sky. Second, the dark skies of an internationally recognised landmark demonstrate opportunities for outside of the TWWHA - our homes and settlements, particularly those in Lutruwita/Tasmania, are the homes of a raft of species relying on intact and preserved dark sky country.

This is an opportunity for conservation, tourism and to protect Sky Country. With your support, we can make it happen.

How you can help

You can help by supporting the call for the dark skies and night time environment of the Southwest to be protected in a Dark Sky Sanctuary. You can do this by:

- Share your experiences widely. Tell your friends and family what you saw. We always love hearing supporter stories. Tag the Wilderness Society #naturewelove on your online social channels. You can also write to us via the email or postal address on this page.
- The creation of the Southwest Dark Sky Sanctuary will need political will. Contact your local political representative through the details under Useful Addresses and encourage them to support the protection of dark skies.
- Join an event and learn more about the joint campaign for a Dark Sky Sanctuary in the TWWHA and Southwest National Park

Useful addresses

- Come say hello at 130 Davey Street, Hobart
- Drop us an email at tas.campaign.team@ wilderness.org.au
- Tag us on Instagram, @twslutruwita or @ wilderness_aus
- Post us your stories: to Wilderness Society Tasmania Dark Skies, GPO Box 716, Nipaluna/ Hobart, Tasmania
- Or let the papers know: mercuryedletter@ dbl.newsltd.com.au (southern Tasmania), editor@examiner.com.au (northern Tasmania), or letters@theadvocate.com.au (northwestern Tasmania)
- Visit our website to find out more, including how you can get in touch with your local representatives: https://www.wilderness.org. au/southwest-sky-country

The Wilderness Society, April 2024

wilderness.org.au

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DISCLAIMER: Visitors should be aware that natural hazards occur in Lutruwita/Tasmanian forests. The Wilderness Society accepts no liability for any injuries or damage resulting from such hazards.

Photograph by Dylan Mancinelli / Tracks Less Travelled



