



Credit: Peter Kerverac

## Every Day Needs A Night

For billions of years, life has evolved with Earth's predictable rhythm of light and dark controlled by the length of the day. In fact, it's encoded in the DNA of all plants and animals. Humans have radically disrupted this cycle by lighting up the night. It used to be that when the sun went down, celestial sources like the moon, stars, planets and the Milky Way lit the sky. Life learned to operate under the glow of these objects. For many animals, the natural night sky signals when to eat, sleep, hunt, migrate and even when to reproduce. It is estimated that half of all species on Earth start their "daily" activities at sundown.

"Near cities, cloudy skies are now hundreds, or even thousands of times brighter than they were 200 years ago. We are only beginning to learn what a drastic effect this has had on nocturnal ecology."

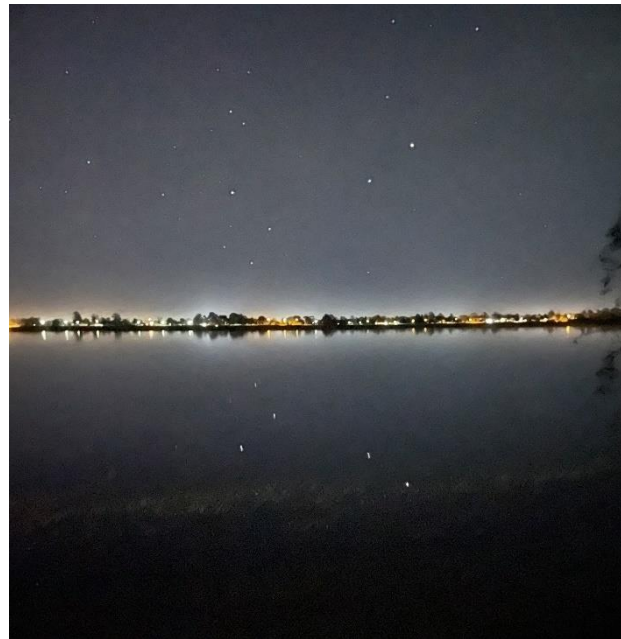
— Christopher Kyba, light pollution research scientist

## Why a Dark Sky?

The need to protect and restore the natural nighttime environment is more urgent than ever. Light pollution, defined as light where it is not wanted or needed, affects our health, the environment, wildlife, and our ability to find awe in the natural night. Research indicates that light pollution is increasing at a global average rate of two percent per year.

## About DarkSky

DarkSky Victoria is a nonprofit organization based in Victoria Australia and a Chapter of DarkSky International based in Tucson, Arizona, with 70+ Chapters across the globe dedicated to preserving and protecting the natural nighttime environment.



Credit: Judith Bailey



## Light Pollution

## Can Harm Wildlife

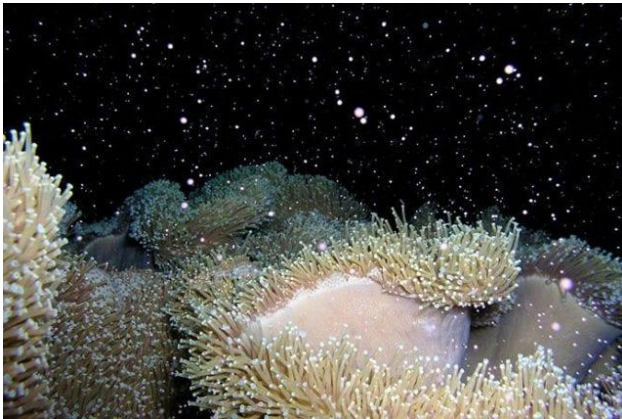


Credit: P.Kerverac Top & Bottom

## Artificial Light At Night (ALAN) Disrupts the World's Ecosystems

Plants and animals depend on Earth's daily cycle of light and dark to govern life-sustaining behaviors such as reproduction, nourishment, sleep and protection from predators. Scientific evidence suggests that artificial light at night has negative and deadly effects on many creatures, including amphibians, birds, mammals, invertebrates, and plants.

**CORAL** Spawning usually only happens once a year. In rare years, when conditions are just right, coral may spawn more than once, in two consecutive months! Spawning usually happens 3-6 nights after the full moon and always at night 3 hrs after sunset, when there is little tidal movement. This is because by this time all the sea creatures that feed on plankton are asleep, and the coral spawn has more time to settle on the reef without being eaten.



Credit: Whitsunday Escape

**TURTLES** Sea turtles live in the ocean but hatch at night on the beach. Hatchlings find the sea by detecting the bright horizon over the ocean. Artificial light disturbance can be from a single light directly opposite a nesting beach or from the collective glow of lights from a coastal community.



Credit: Queensland Government Cut the Glow

## National Light Pollution Guidelines for Wildlife

<https://www.dcceew.gov.au/environment/biodiversity/publications/national-light-pollution-guidelines-wildlife>

**INSECTS** are active at night and are attracted to lights. Zoos Victoria recently asked that unnecessary lighting to be turned off to allow the Bogong Moths (R) to reach their destination, where the Mountain Pygmy Possum (L) awakens from hibernation in Spring. Numbers of Moths had crashed for a number of reasons, one is ALAN.

Credit: J.Bailey



Credit: Zoos Victoria



Credit: Peter Kerverac



- Use only fully shielded fixtures for all outdoor lighting, so lights shine down, not up.

- Use only the right amount of light needed. Too much light is wasteful and

harms wildlife.

- Install timers and dimmer switches and turn off lights when not in use. If you must have security lighting, use motion sensors.
- Turn off lights in office buildings and homes when not in use.
- Use only lighting with a color temperature of 3000K and below to reduce the blue (cool) light that is more harmful to many animal species.
- Work with your neighbors and local governments to ensure outdoor lighting isn't harming the wildlife.

<http://darkskyvic.org>