

# FLIGHT 2 LIGHT

**a national Bush Blitz education  
and outreach initiative**



**DIY activity booklet**



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## Acknowledgement of the Traditional Owners

In the spirit of reconciliation we acknowledge First Nations people throughout Australia and their connections to land, sea and community. We pay our respect to their Elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

## What is Flight 2 Light?

Flight 2 Light is a citizen science initiative highlighting the impacts of light pollution on wildlife and ecosystems, and what we can do to help. The Flight 2 Light DIY activities are for anyone to have fun, learn and earn a Flight 2 Light badge!





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## Who are we?

Bush Blitz is Australia's largest nature discovery program – a unique multi million dollar partnership between the Australian Government through Parks Australia, and Earthwatch Australia to document plants and animals across Australia.

Since the program began in 2010 Bush Blitz has discovered more than 1,800 new species and has added thousands of species records to what is already known, increasing our scientific knowledge to help us protect our biodiversity for generations to come.



Australian Government  
Parks Australia



Australian Government  
Department of Climate Change, Energy,  
the Environment and Water

**BHP**

**earthwatch**  
AUSTRALIA





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## Light pollution

Scientists are asking Australians to help save the dark for our wildlife. Nocturnal animals across the globe are impacted every night by light pollution. From baby turtles in Queensland to the Bogong moths in Victoria, night after night nocturnal animals are getting lost because of the excessive light spilling from our cities and towns.

The rapid uptake of LED lights has done great things for the energy efficiency of households and public lighting, but if lights are not designed well or are left on unnecessarily, it can have a significant impact on our dark skies and this in turn affects our nocturnal wildlife.



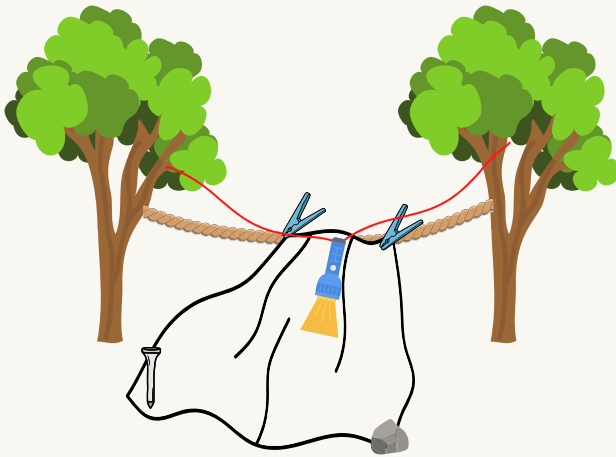
# ACTIVITY 1

Create a light trap to see how insects are attracted to artificial light



## How to set up a light trap

1. Tie rope between two trees or hang from a washing line.
2. Hang the sheet over the rope/line and secure with pegs
3. Secure the bottom corners of the sheet with tent pegs or with something heavy (eg rock)
4. Shine a bright light onto the sheet (the brighter the better).



### Equipment

- rope or washing line
- white sheet
- washing pegs
- tent pegs or weight anchors (eg rock)
- bright lamp or torch (brightest you can find)

### Preparation

- Set up light trap as per instructions

### Duration

- Allow 30 min for set up.

### Tips

- It is best to set up the light trap at the beginning of the evening and view later.
- This activity is best done when there is minimal moonlight.
- Set up the light trap as far away from any other lights (or turn your house lights off so insects aren't attracted to other artificial light).





# ACTIVITY 2

## Spotlight for nocturnal wildlife impacted by light pollution



Spotlighting is a great way to see mammals, birds, amphibians and even spiders that are out at night. By shining a head torch into the trees, bushes or even on the ground, you may see birds perching for the night, a possum climbing a branch, or spiders and scorpions.



The best way to spot animals and spiders by their eye shine. You will see pin pricks of light as the light reflects from the animals eyes. Spiders have very strong eyeshine, but don't worry they are very small and more afraid of you than you are of them!

### Equipment

- Head torch (a hand torch can be used but you won't see eyeshine unless you hold the torch up to your head)

### Preparation

- No preparation needed - but perhaps you want to determine a route for your spotlighting walk.

### Duration

- 30 min +

### Tips

- Look for droppings (poo!) on the ground to see where birds or possums may be sitting above in the trees.
- A red light will reduce the impact on animals eyes and will make them less shy.

# ACTIVITY 3

## See how much you contribute to light pollution – how can you reduce your impact?

Turn on up to 3 lights outside your Guide hall or house. If you can, choose 3 different types of lights e.g. one bright white light, one warm light, one dim light.

Come back after a little while to observe the lights. What can you see? What is attracted to the light? Record the interesting things that have been attracted to the light. Can you see a difference between what is attracted to the 3 types of light?

Now turn off the lights, and come back in 10 minutes. What can you see now?



### Equipment

- Paper & pen

### Preparation

- Turn on lights 30-60 min prior to activity.

### Duration

- 30 min

### Extension

- Take photos of the critters you see and post them on the Backyard Species Discovery project to help researchers studying our wildlife (they can also help you identify them!)  
<https://bushblitz.org.au/introducing-an-expedition-for-everyone/>

# FLIGHT 2 LIGHT

Investigation questions, fun facts and resources



## Investigation questions

What do you think the impacts of light pollution are on nocturnal mammals like the Pygmy possum?

**Clue:** what do Pygmy possums eat?

What can you do at home to reduce the amount of light pollution at night?

**Clue:** what did you learn from Activity 3?

## Fun facts

**Did you know** that moths use both the Earth's magnetic field and visual cues on the horizon to navigate during migration?

**Did you know** that artificial light can impact insects' physiology, behaviour and fitness? Also known as a "fatal attraction".

**Did you know** that dung beetles use astronomical cues to navigate for foraging and reproductive success.

## Flight 2 Light badge

Email [bushblitz@environment.gov.au](mailto:bushblitz@environment.gov.au) to let us know what you or your group enjoyed most about Flight 2 Light to receive your badge/s.

## Resources

Find some great videos about the impact of light pollution here

(<https://www.dcceew.gov.au/environment/biodiversity/conservation/light-pollution>)



Watch Bush Blitz's light pollution solutions video here (<https://www.youtube.com/watch?v=wcN8ev0dRn8>)



Watch a video on how to set up a light trap here

(<https://www.youtube.com/watch?v=SntQtJZELSM>)

