

“Aurora Chasing in Australia is growing in popularity and might be the perfect activity to combat travel ban blues.”

Kerri Duncan

“I’ll give you four words: Music you can see.”

Margaret Sonnemann attempts to describe witnessing the Aurora Australis, or Southern Lights, in between running errands in her home region of Tasmania’s Midlands. Despite over thirty years of experience chasing the phenomenon, publishing the *Aurora Chaser’s Handbook* and running the highly popular *Aurora Australis Tasmania* Facebook group with over 100,000 followers, she says she still struggles to explain it in a way that quite does it justice.

“One of the awe-inspiring things about the aurora and a reason it appeals to me, particularly as a naked-eye viewer, is the movement. The movement of it is really uncanny and fascinating. I think that’s one of the things that’s quite exciting about it.”

Margaret’s book makes the frank statement that “if you have never seen the Aurora Australis, you must.” Her goal is to encourage and help more Australians experience it first-hand.

“The number of people who don’t know it’s happening and don’t know how amazing it is and what a wonderful experience it is, I find that really sad. It’s like if no one realised there were sunsets happening, that would be a bit tragic.”

Happily, the word is starting to get out more, and the activity of “aurora chasing” is rapidly gaining popularity in Tasmania and beyond. In the midst of the COVID-19 pandemic, when millions of Australians may be feeling confined, stressed or restless during travel bans, this is one close-to-home activity that could provide a welcome boost to mental health and well-being.

Several recent studies have focused on the beneficial effects of spending time in nature and experiencing feelings of “awe” on mental health and wellbeing - both during pandemic-related restrictions and otherwise. Aurora chasing gets participants out and about in nature, seeking south-facing areas of low light pollution which often coincides with greenery, bodies of water and starry skies. The activity encourages patience and focus, and witnessing the impressive phenomenon can certainly inspire those wondrous feelings of awe.

“It is really quite an exhilarating, joyful, awe-inducing thing and... even scientifically we know that awe is good for you,” Margaret says.

Awe is described by psychologists as something that involves strong, positive feelings of amazement and wonder; “an emotional response to perceptually vast

stimuli that defy one's accustomed frame of reference in some domain." A 2021 study published in *Frontiers in Psychology* found positive effects on the symptoms of depression from awe-inspiring experiences and refers to nature as being one of awe's key elicitors. A 2020 study conducted in Japan during first-wave COVID-19 restrictions found people with access to or views of green spaces reported higher levels of self-esteem, life satisfaction and subjective happiness.

Some aurora chasers claim the activity simply gives them a sense of continuity and normalcy during times when life may otherwise feel chaotic and unstable due to the pandemic. The Aurora Australis Tasmania Facebook group, which welcomes anyone willing to read the rules and answer a few questions, aims to be a helpful and supportive environment with a common interest that isn't shaken by COVID-19.

"You could still be in touch with everybody, and you know the sky was there, life was fine, nothing was really different, so that was really good," Margaret says.

Susan Williamson, a member of the group, says of the hobby: "This is my exercise to maintain my mental health, my photography is my therapeutic exercise and such a big stress relief."

Another member, Jamie Douros, points out a downside of getting hooked on the experience. "I never want to miss one, haha. I would imagine that lockdowns and [the] pandemic would add to the feeling of missing out if you weren't able to head out and see one, as not many people can see them from where they live."

Margaret points out that although aurora tourism is on the rise in Tasmania, people need to keep in mind they can't just "go out at any night, at any time and there will definitely be one." Part of the appeal of the Southern Lights is the novelty that stems from its rarity and elusiveness. As Margaret puts it, "sunsets are amazing, but we see them all the time." The thrill is in the chase.

This was certainly my personal experience as a first-time aurora seeker heading to Tasmania in the chilly month of July 2021. Margaret had warned me there hadn't been a whole lot of activity lately, since we were in a phase known as a solar minimum - the period of least solar activity in the 11-year solar cycle of the Sun. But things could always change in an instant since modern methods of prediction still aren't 100% foolproof. Like many hopeful tourists, I was undeterred, ready with my hand-me-down SLR camera, tripod and scribbled-down instructions on how to use them.

I signed up to receive alerts from the Glendale Skye Auroras app, which was the recommended app of choice by Margaret and her group. The thrill of seeing a notification pop up to inform me of a "substorm onset" or "coronal mass ejection" was addictive in itself, despite not fully understanding what that meant. I soon

learned these did not necessarily mean I was going to see an aurora; luckily both the app---and the Facebook group in which Margaret posts helpful nightly hints---helped to determine whether it might be worth heading out to brave the cold and point my eyes and lens towards the southern horizon.

“At the moment I’m getting on there every night and saying, you know, ‘this is what it looks like,’” Margaret says.

I didn’t have a whole lot of luck capturing the dancing sheets of colour, which tell the tale of electrified gases on solar winds interacting with Earth’s atmosphere. I did, however, experience plenty of other unexpected joys through my attempts.

First of all, the stars were breathtaking. As the guides suggested, I travelled to areas with low light pollution, which allowed the night sky to dazzle and the Milky Way to come to life in a way that was awe-inspiring enough on its own. In between the 10-30 seconds of my camera’s shutter slowly absorbing the light necessary to capture colours in their full glory, I was forced to stop, be still, and really be present to take in the natural beauty around me. I was delighted to find that my smartphone, like many other newer models, now has the technology to successfully capture galaxies using “astrophotography” or “night-sight” modes, which require the device to be still for up to four minutes.

“Nowadays, amazingly, smartphones can catch auroras. When we first started this group, it was absolutely not the case, we would laugh when people asked if they could get it on their phones,” Margaret says.

She mentions that some people like to view the aurora in celebratory groups, where they can “kind of jump around and scream together,” but many like to be alone for the experience. She tells of a friend who works in the “really messy” field of police forensics, who uses aurora chasing as his downtime. “It’s his time to kind of heal, to be able to be out there under the stars by himself.”

The community vibe seems uplifting and motivational for those who like to share the experience. Members get really excited together when things look promising and share their frustrations when clouds or an overly bright moon are getting in their way. Newbies and experts alike post their photography attempts to an audience full of encouraging and supportive comments. Group moderators are quick to shut down any negative or unhelpful remarks.

This online community is one of the main reasons Aurora Australis has gained more attention in recent years. More photographs are being shared, more people are becoming aware of it through social media, and participants continue to grow.

“People were probably aware of [the aurora] happening because of the group, we’re getting in the media... we get phone calls from all over Australia, radio interviews all over Australia, [especially] when it looked like there was going to be a good aurora, and this is before the pandemic,” Margaret says. She suggests that the majority of members are tourists hoping to get the information they need to spot an aurora during their visit.

“Some of them have even been to see an aurora in the Northern Hemisphere, and you know they’ve spent all that money going up there when you could try Tasmania, it’s a bit closer!”

She hopes there will be more investment in this tourism niche soon - more infrastructure such as viewing platforms would be particularly helpful. Especially since things are expected to ramp up in the next four years, according to Margaret’s hot tip.

“We’re just leaving solar minimum and auroras are going to get more and more frequent, probably peaking in about four years or so... but it’ll be ramping up continuously until that point. I think it’s crazy already, I can’t imagine what it’s gonna be like when there’s a lot of activity!”

“The last solar maximum there was about an aurora a week. [It’s] more of a frequency you can count on. [And] at the times of the equinoxes, March and September, there are statistically brighter auroras. Because of the position of Earth, the auroras that do occur tend to be brighter because of the way they’re funnelled in at the poles. So I can just give you a little hint there.”

“Of course, you’ve got to contend with the weather as well. But most of Tasmania really has very small weather patterns. The best aurora I ever saw was about 20km out of Hobart, it was raining in Hobart, and nobody was seeing anything, but I had a great view.” She explains that being able to communicate these prime viewing spots in the moment has become much quicker and easier with the use of social media.

“You can tell people you can see an aurora, what’s happening there now. Of course, with an aurora you never know how long it’s going to last, that’s the other unexpected thing.”

This is what inspired Margaret to begin the group in the first place. She remembers the first time she unexpectedly saw an aurora while driving south from Launceston with her daughter in the '90s. “We got out and watched it and it was such an amazing experience that I wanted to see more. It just sort of whets your appetite and you go ‘wait a minute, these are happening all the time, and I’m missing them.’”

“So, the first thing I tried to do was find out if there was any kind of notification system, any way you could find out when one was happening. There was really nothing. So about ten years ago I realised that social media was the perfect way for people to say ‘I can see it now.’”

Even without a camera or smartphone, as Margaret first discovered, it is possible to be awe-struck by Aurora Australis with the naked eye. It won't be quite as colourful without the long exposure abilities of technology, but she says the whitish glow, and the movements of the beams, are what drew her to them in the first place.

“For many years I didn't have a camera, I was just at the time what we call a naked eye viewer, and that was fine with me because... it was just a lovely experience. I don't care if I can't see a lot of colours, although I have seen bright pops of colour, if the aurora is strong enough you can see colour with the naked eye but it's not normal [to] get that.”

For those with access to a camera, all the suggested settings are available on the Aurora Australis Tasmania Facebook page, in Margaret's book, or on aurora-watching websites online. The general consensus is to set the shutter speed to 10-30 seconds, the f-stop to 2.8, the ISO around 1600 to start with, then just “play around with it.”

“One reason photographers get so addicted to aurora photography is because you don't know what you've got while you're taking the photo. You're standing around waiting... then all of a sudden the camera finishes doing its thing, and you see this amazing display,” Margaret explains.

I can certainly attest to this addiction. Even without a successful aurora capture, the anticipation of waiting for my devices to finish their photos (I had my phone and camera going at once) was captivating and held my entire attention. Tweaking the settings and gradually improving the clarity of stars in my pictures was satisfying and rewarding. I was so focused on the task at hand, the beauty of my surroundings, and the thrill of potentially witnessing an aurora that the rest of the world disappeared for a little while. I temporarily forgot about COVID-19, border restrictions, and how many cases there were today - I was simply immersed in the moment.

If I found the attempts to capture an aurora that enjoyable, I can only imagine how amazing it would be to actually witness one. I will certainly be going back to try again.

But I'm not sure if I'll be able to wait four more years.