

Oregon after dark

From riverside stargazing to brewery astronomy, **Yvette Cook** discovers four exciting ways to connect with the cosmos under Oregon's famously dark skies

Lying on a tartan picnic blanket with our heads almost touching, I gaze up with an unusual level of awe. Above us, the jewels of Antares, Arcturus and Mizar shine among a scatter of diamond-like stars. The gentle lapping of the river is broken only by the crackle of the campfire. An hour earlier, Captain Scott Heesacker had been hurtling us down the Willamette River in his jet boat in pursuit of the setting Sun, while bald eagles soared overhead, oblivious to our excited whoops. Now, that adrenaline and noise have faded.

Dr Cassandra Fallscheer gestures towards the sky. "The stars are our clock and our calendar," she says. Under Oregon's dark skies, it's easy to see why

Yvette's four-night Oregon stargazing adventure started on the Willamette River



humans have looked up to the sky for guidance for thousands of years.

Stretched out on a tiny island, I watch stars emerge one by one as Fallscheer talks us through the sky. A sense of calm settles in, as though I'm being read a bedtime story. I'm spotting stars I've never noticed before, tracing constellations I've always struggled to find and, lying flat on the ground, appreciating the vastness of the Universe in a completely new way.

Oregon is home to some of the darkest skies in the United States, thanks to its sparsely populated landscapes, high elevations and dry climate. It's little wonder that astrotourism is flourishing here, from observatory visits and astrophotography workshops to ►

MORGAN SOMMER, GETTY IMAGES/YVETTE COOK



Mount Bachelor at sunset, the backdrop to Yvette's night photography lesson



Land of contrasts: Yvette's journey took her from high desert dirt roads to snow-covered peaks



▲ Getting set up at Sparks Lake, where Yvette gained a fresh appreciation of how the landscape and sky interact

► nocturnal kayaking. Over the next four nights, I'll discover how these experiences offer different ways to connect with the cosmos.

The next day, I cross the snow-covered volcanic peaks of the Cascades into the high desert of central Oregon, imagining them silhouetted beneath the Milky Way. Away from the city of Bend, the skies reach Bortle class 2 (second-darkest on the Bortle scale of sky brightness), with clear summer nights the norm. Yet astronomy rarely conforms to an itinerary, and with two nights of cloud forecast, my astrophotography session looks increasingly unlikely.

Getting the big picture

Photographer Toni Toreno of Bend Photo Tours remains optimistic, steering us towards higher ground where breaks in the cloud are expected. I admit I'm worried that spending the evening peering at a camera screen will distance me from the night sky rather than draw me closer.

"Photography changes the way you look at everything," she says. "The lens can capture much more than your eyes." As we drive towards Mount Bachelor, the fading light paints the volcano against the indigo sky streaked with pink-grey lenticular

clouds. Toni pulls over and my first lesson comes earlier than expected: night-sky photography begins long before the stars appear.

Working in manual mode, she talks me through exposure, composition and making the most of the equipment I have. "Wow, that's beautiful," she shouts excitedly when she sees my photo, an unexpected confidence boost so early in the night.

At Sparks Lake, we set up our tripods. The clouds never quite lift, denying us the Milky Way we'd hoped for. Rather than chasing the perfect conditions, Toni encourages me to look closer: the curve of the shoreline, a lone pine, the Moon threading through its branches. "During the long stints between taking photos, you can enjoy the landscapes and see the shooting stars," she says as I experiment with my settings. "Then you get excited, wondering if you caught it on your camera."

We never did see the Milky Way, yet I leave with something unexpected. "It's not all about the image," says Toni. "The whole experience being out here draws you closer to the Universe."

Looking for compositions has made me notice how the landscape and the sky interact, and how quickly the heavens change overhead. Rather than pulling



Dozens of Apollo astronauts trained in central Oregon's otherworldly lava fields



Oregon's unique landscape was thought to closely match the lunar surface

How Oregon became 'Moon country'

The lava fields of Oregon helped NASA's Apollo astronauts train to walk on the Moon

Long before humans left footprints on the Moon, astronauts left boot prints in Oregon. In the 1960s, NASA brought Apollo crews, including Neil Armstrong and Buzz Aldrin, to the lava fields of central and southern Oregon. At the time, scientists were debating the composition of the Moon's terrain and believed Oregon's volcanic landscapes offered one of the closest comparisons. The region became known as 'Moon country'.

Training wasn't just focused on practising moonwalks. Astronauts learned field geology, studied volcanic landforms and prepared for scientific experiments. It also helped them learn how carefully to navigate the lunar landscape, with one astronaut falling on the sharp rocks, ripping his glove and puncturing his protective suit.

Among the sites they visited was the Fort Rock Basin in southern

Oregon, 64km (40 miles) from the Oregon Outback International Dark Sky Sanctuary with its Bortle class 1 skies. Closer to Bend and Sisters are the Newberry Volcano and McKenzie Pass, both easy to visit during the day. You too can walk across the same volcanic terrain that helped prepare astronauts for humanity's first journeys to another world, before experiencing some of Oregon's finest night skies.



▲ The Hopobservatory in Bend houses a 16-inch telescope open to the public in the grounds of Worthy Brewing Company



Yvette enjoys a craft beer tasting paddle before heading to the dome



The dome is open to the public four nights a week and free to visit

me away, the camera has encouraged me to pay closer attention.

The following evening brings a very different kind of stargazing. At Bend's Hopobservatory, the owner of Worthy Brewing Company has added a 16-inch reflecting telescope and observatory to his brewery, combining craft beer with public astronomy in an effort to make the night sky more accessible.

Drinking in the night sky

Waiting for darkness to fall, I fuel my anticipation by making my way through a tasting paddle of Oregon beers. At 9pm, I climb to the dome, where volunteer

William welcomes visitors with the enthusiasm of someone who genuinely loves introducing people to the night sky. Drinks stay outside – no risking spilt beer near the telescope.

Clouds limit tonight's observing to just the Moon, although climbing the slightly wobbly ladder to the eyepiece, I'm reminded that the Moon never loses its appeal, each visit revealing new details across its cratered surface. A wedding party wanders up from the brewery, followed by a family from Mexico and a local couple. Some have never looked through a telescope before, yet each steps away smiling, chatting excitedly and bombarding William with ►



Black Butte Ranch at the foot of an extinct volcano, where the stargazing tours blend science with stories

► questions about meteorites, satellites and where to find darker skies.

"The whole point of the facility is public outreach," William tells me. "It's a nice scope, but if we placed it on a remote mountaintop, who would come?" His point is difficult to argue with. While dedicated astronomers happily travel to dark-sky sites, many people can't or don't. Here, astronomy reaches people where they already are. That accessibility creates an opening to discuss light pollution, and William explains how better-directed lighting and simply switching lights off can help preserve dark skies.

Clouds may have denied us much of the night sky tonight, but what stays with me is the stream of people climbing the observatory steps out of curiosity. Some arrive for a beer and leave talking about constellations. If experiences like this can spark interest, and an understanding of why protecting the night sky matters, then perhaps that is every bit as valuable as a perfect night's observing.

Telling stories of the stars

The importance of outreach is reinforced at my next stop, the small city of Sisters on the eastern edge of the Cascade Range, Oregon's second community to be certified as an International Dark Sky Community by DarkSky International.

"The city already had lighting policies in place," Jennie Sharp of Starshine, an outdoor adventure company, tells me. "People were already feeling really good about dark skies and wanted to save them." String lights are turned off by 11pm in Sisters and, as Sharp explains, education is central to maintaining the dark-skies commitment.

"I'm not a scientist, I'm a storyteller," she confesses. As a teacher with a passion for nature, she runs free events for the community funded by the local tourism board, also drawing in the Sisters Astronomy Club who bring their telescopes along.



On her evening stargazing tour at Black Butte Ranch, a handful of families and friends gather with red torches and picnic blankets beneath clear skies, with the extinct Black Butte volcano nearby. Over the next hour, she effortlessly blends science with stories, explaining the ecliptic, Earth's wobble and how to navigate sky maps, weaving in tales of coyotes among the night sky and the zodiac.

Questions flow throughout, everyone is given a laminated guide explaining how they can protect dark skies at home, and guests are invited to peer through the telescope. Feeling the mountain chill, as I head to my accommodation to warm my hands, Sharp's words linger: "When we look into the night sky, we're looking into the past."

Reflecting on my four nights of astrotourism, I'm struck by how each experience offered a different way of looking up. Photography taught me to look more carefully, the Hopservatory showed how astronomy can reach new audiences, and storytelling gave the sky a history and new meaning. They also taught me

▲ The small city of Sisters is an International Dark Sky Community that actively tackles light pollution

What to know before you go

Heading to Oregon's dark skies? Here's how to get the best out of your stargazing trip

Travel Oregon, the state's tourism board, has a wealth of information on where to stargaze, including the location of designated dark-sky areas, how to join free summer star parties and trip ideas (www.traveloregon.com). This includes accommodation, such as Antelope Basecamp, the state's first DarkSky Approved Lodging.

NW Jet Boat Charter runs bespoke sunset and stargazing packages from \$400 (£300) for two people (www.nwjetboatcharter.com) and Bend Photo Tours runs its bespoke night photography tour for \$325 (£242) for up to two people (www.bendphototours.com). The Hopservatory is free to visit (donations welcome) for 1-2 hours, four nights a week (www.worthygardenclub.org/hopservatory). Starshine's Black Butte Ranch stargazing tours cost \$30pp (£23pp) (www.starshine-theater.com).

For stargazing in Oregon, it can get cool once the Sun sets, so take extra



NW Jet Boat Charter provides telescopes and binoculars on the sunset stargazing river trip

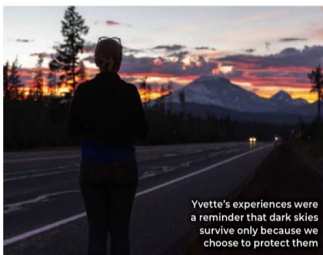
layers, along with appropriate footwear, such as walking boots, and a hat and gloves. Insect repellent can also come in handy in the warmer months. A red-light headlamp will help preserve your night vision, while a star chart or stargazing app

(in night mode) is crucial for identifying constellations and celestial objects.

The nearest international airport to Bend is Portland (257km/160 miles), with direct flights from the UK. Car hire is fairly essential to get around Oregon.



Astronomer Dr Fallscheer sets up a solar scope as the Sun sets on an amazing day



Yvette's experiences were a reminder that dark skies survive only because we choose to protect them



Yvette Cook is an award-winning travel journalist, eclipse chaser and stargazer

that connection with the night sky doesn't depend on perfect conditions. Clouds can hide the Milky Way, but that encourages you to notice different things.

When I look back on the trip, though, the moment I keep returning to was on the first evening. As Captain Heesacker eased the boat to a halt on the Willamette River, he cut the engine, leaving only the gentle sound of the water. "I count 120 heartbeats," Dr Fallscheer said. "That's my connection with the Universe." I laid back on the deck and did the same. For two minutes, there was nothing to distract me. No telescope, no camera, no checklist of constellations – just Fallscheer's stories, the stars overhead and the

knowledge that people have looked up at this same sky for thousands of years. It was like looking up from inside a snow globe, immersed in a tiny world, while connected to something unimaginably vast.

Then the captain started the engine and we were racing back to the dock, the cool night air rushing past as the stars wheeled overhead.

It reminds me that dark skies survive only because people choose to protect them. Perhaps the greatest gift of astrotourism is not simply showing us the Universe, but giving us a reason to care enough to preserve our view of it. 🌌

► **Yvette was a guest of Travel Oregon**