



TOTAL ECLIPSE OF THE PARK



On Thursday 20 April 2023 just before 11.30am, a rare astronomical event occurred over the World Heritage listed Nyinggulu (Ningaloo) Coast, 1200 kilometres north of Perth. Eyes around the world were glued to the region when, for 62 seconds, the moon was directly in front of the sun in perfect alignment, plunging the area into near darkness with just the sun's glowing outer atmosphere, known as the corona, visible around the moon.

by **Conor Doherty, Greg Mair
and Felicity Kelly**





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While a total solar eclipse occurs somewhere on Earth about every 18 months, it is rare that the narrow path of totality occurs over a populated area of land.

The Nyinggulu (Ningaloo) Coast and town of Exmouth were in the path of a 100 per cent eclipse with nearby Onslow and Coral Bay experiencing 99 percent darkness. Years of planning went into preparing the region for the huge influx of scientists, eclipse chasers, astro-tourists and those just curious who were expected from around the globe.

Up to 20,000 people were predicted to be in Exmouth and surrounds on 20 April—well exceeding the permanent population of around 3000 residents, and the usual 6000-person peak at the height of tourist season.

The event was logistically complex given distance and the demands on facilities and infrastructure from such large crowds. Planning and management involved collaboration amongst 14 State Government agencies, local and Commonwealth governments, business and the community to ensure the event was safe and enjoyable.

The Department of Biodiversity, Conservation and Attractions (DBCA) manages the national parks and conservation estate across the Nyinggulu (Ningaloo) Coast and had a considerable task to prepare for the level of visitation anticipated.

PROTECTING OUR PARKS AND KEEPING VISITORS SAFE

The Nyinggulu (Ningaloo) Coast was inscribed on the World Heritage list in

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Main Ningaloo solar eclipse totality.

Right Tourists view the eclipse from the beach at Coral Bay.

Photos – Department of Jobs, Tourism, Science and Innovation

Inset Photographing the eclipse.

Photo – Judy Dunlop

Left Totality in Cape Range National Park.

Photo – Greg Mair/DBCA

2011 due to its incredible natural beauty and biological diversity.

The World Heritage Area includes Cape Range National Park, Ningaloo Marine Park and Jurabi and Bundegi Coastal Parks and is bordered by Nyinggulara National Park and Nyinggulu Coastal Reserves, which were considered some of the best places to view the eclipse.

DBCA, together with Traditional Owners, jointly manages lands and waters situated within the path of totality including Nyinggulara National Park, Cape Range National Park and Ningaloo Marine Park. Managing the unprecedented influx and ensuring people were kept safe and environmental and cultural values were protected was a priority.

To ensure a safe and enjoyable visitor experience and ensure the natural and cultural values of the lands and waters were treated with respect and care, additional staff were brought to the region from across the State, as well as additional operational vehicles, vessels and charter aircraft.

ON THE GROUND

A controlled access system was put in place between 17 and 23 April for Cape Range National Park and Jurabi Coastal Park. Access was on a first in, first served basis for day users, with local residents, commercial tour operators and their clients, Yardie Homestead clients, and people with campground bookings allowed through control points.

Only those with campground bookings, local residents and commercial tour operators could access Nyinggulara National Park.

Exmouth District Conservation Employee Zoe Gillam said temporary closures occurred at some popular snorkelling sites and beaches in Cape Range National throughout the week as capacity was reached.

“Capacity numbers were monitored by park rangers based on carpark availability, risk of disturbance to vegetation and emergency access,” Zoe said.

“Although visitors had travelled to Exmouth specifically for the once in



Above left Total solar eclipse coordination centre, Exmouth.

Above Watching the eclipse from a stand up paddle board in Coral Bay.

Photos – Department of Jobs, Tourism, Science and Innovation

Right Waiting for totality.

Photo – Judy Dunlop

Fast facts

- Exmouth's population swelled to around 15,000 people with accommodation in the town during the week of the eclipse at a premium, with significant numbers of international and interstate visitors.
- Including day-trippers, it is estimated visitation peaked at 18,700 people in Exmouth to experience the total solar eclipse.
- Milyering Discovery Centre in Cape Range National Park experienced the highest level of visitation on record at 1300 people on 19 April (the previous record was 825).
- Vehicle entry through Cape Range National Park gate: 18 April – 744, 19 April – 905, 20 April – 550, 21 April – 809.
- 125 DBCA staff, six vessels and 48 vehicles were deployed to the Exmouth Region for the week.
- The Time and Date website recorded 10.5 million views of its eclipse live stream. This was one of many different sites beaming the eclipse globally.

a lifetime event, many still wanted to experience the other natural attractions the Ningaloo Coast had to offer.

“On the day of the solar eclipse there was a line-up of excited eclipse chasers waiting eagerly at the entrance gate to the national park at first light, however things quickly slowed down as the morning went on and visitors found their perfect eclipse watching spot and patiently waited for the special moment.”

Zoe said the energy in the national park on the day of the eclipse was calm.

“The roads were quiet and everyone was very respectful of one another and the natural environment. Even the wildlife began to grow calm as the sky began to darken,” she said.

REFLECTIONS FROM AN ECLIPSE CHASER

‘Busier than usual but still manageable and enjoyable’ was how Jean-Charles Dumas described visiting Cape Range National Park.

Jean-Charles travelled from Perth to the Nynggulu (Ningaloo) Coast with his partner, Jutta Kober, specifically to experience the total solar eclipse from the path of totality. They spent a week in the area, mostly snorkelling and trail running in Cape Range National Park.

“I’ve been going to the region regularly for more than 20 years and visiting the national parks for scuba diving, snorkelling, running, rock climbing and hiking,” Jean-Charles said.

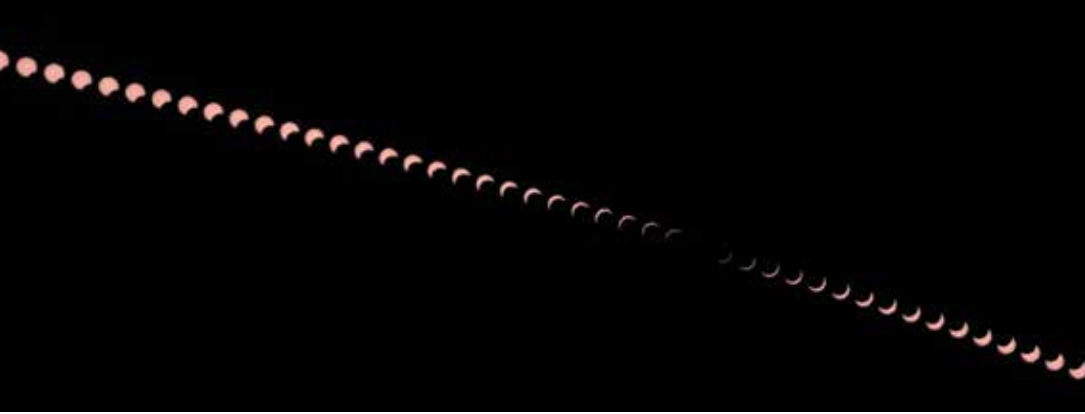
“It was noticeably busier than previous times but not to the point where it was chaos. It actually wasn’t bad at all.

“We pulled up to the rangers at one point and asked if we could park on the side of the road where one of the carparks was full. They told us where we could park without impeding traffic.

“It was a really good experience. It seemed really well managed.”

The pair had carefully planned their eclipse day viewing experience.





“We really wanted to be in Cape Range National Park, but the problem was that you could be in the totality but on the side of it where you’d only get a shorter experience,” Jean-Charles said.

“So we drove to one of the bays and hiked about 12 kilometres into the national park where you could intersect the actual centre of the eclipse where you’d get the full 60 seconds.”

Their plan worked perfectly and they arrived at their viewing destination about an hour before totality with not another visitor in sight.

“Just before totality we went out into the open and waited for it and it was spectacular. It exceeded all my expectations,” Jean-Charles said.

RESEARCH DURING AN ECLIPSE

Many scientists and researchers took the opportunity to travel to Exmouth to build their knowledge of this spectacular phenomenon.

One group from the University of Hawaii launched a kite-mounted imaging spectrometer to examine the physical properties of the sun’s corona.

They used a ‘Cody’ box kite weighing in at 22 kilograms and spanning 6.5-metre. The scientific payload weighed about 12 kilograms. The team was led by Dr Shadia Habbal, an astronomer

and physicist who specialises in space physics. Dr Habbal focuses on the origin and evolution of the solar wind, solar magnetic fields and eclipse polarimetric observations.

After the marathon journey bringing a multi-national team to Exmouth as well as about 400 kilograms of equipment, the kite and imaging spectrometer was successfully launched during the eclipse and Dr Habbal was very pleased with the expedition.

“My postdoc loved the place so much that he didn’t want to go back,” she said. “We all had wonderful memories of your part of the world and your people.”

ECLIPSE LEGACY FOR NINGALOO

The Western Australian Government made a significant investment planning and preparing for the total solar eclipse including a number of legacy items of future benefit to the local communities and national parks.

Following the huge success of the total solar eclipse and the exposure the event gave the Nyinggulu (Ningaloo) Coast across Australia and around the world, a five-hour direct flight between Melbourne and Exmouth’s Learmonth Airport began running twice a week from 1 May 2023.

The direct flight saves travellers from Melbourne more than three hours’ travel time compared to flying to Learmonth via Perth, making it quicker and easier to experience all the Nyinggulu (Ningaloo) Coast has to offer.

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Top left Phases of the eclipse.

Photo – Roger Groom/Astro Photography

Above far left A kite-mounted imaging spectrometer was launched in Cape Range National Park.

Photo – Michael Heydon

Above left Jutta Kober and Jean-Charles Dumas enjoyed the clipse from Cape Range National Park.

Above Cape Range National Park darkened as totality was reached.

Photos – Jean-Charles Dumas

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