

Australian sky-gazers in awe of rare total eclipse (Update)

November 13 2012, by Greg Wood



The Diamond Ring effect is shown following totality of the solar eclipse at Palm Cove in Australia's Tropical North Queensland. Sky-gazers in northern Australia donned protective glasses as the clouds parted Wednesday to allow them to witness one of nature's greatest phenomena—a total eclipse of the sun.

Tens of thousands of sky-gazers flocked to Australia's tropical north Wednesday to watch the moon block out the sun in one of nature's

greatest phenomena—a total solar eclipse.

All eyes and cameras turned to the heavens as the clouds parted over the state of Queensland and the moon slowly moved between the Earth and the sun, creating a missing "bite" that gradually increased in size.

Clouds had threatened to spoil the party and huge cheers erupted when they cleared to give awe-struck eclipse hunters a perfect view of totality—when the moon completely covers the sun and a faint halo or corona appears.

"Wow, insects and birds gone quiet," one tourist, Geoff Scott, tweeted. Another, Stuart Clark, said: "This it it. Totality now. Utterly beautiful."

The path of the eclipse got under way shortly after daybreak when the moon's shadow, or umbra, fell in the Garig Gunak Barlu National Park in the Northern Territory, about 250 kilometres (155 miles) east of Darwin.

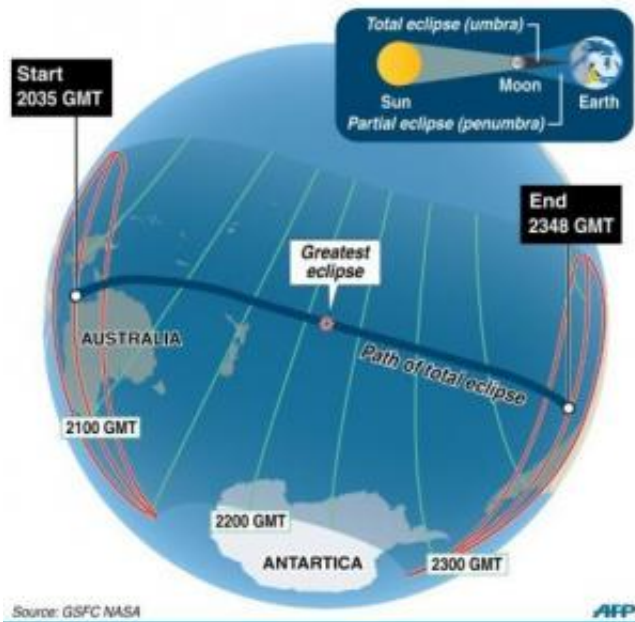
The umbra then moved eastward before hitting north Queensland—one of the few places it could be viewed by humans and where tourists and scientists gathered to witness the region's first total solar eclipse in 1,300 years.

Totality lasted just over two minutes from 6.38am (2038 GMT Tuesday), with eclipse watchers donning special glasses to protect their eyes.

When it happened the early chatter of birds and animals was replaced by an eerie silence as the moon overtook the sun, casting a shadow that plunged the land into darkness, with temperatures dropping.

Total solar eclipse of November 13

Starts in Australia and ends in the South Pacific



The trajectory of the total solar eclipse.

"Day into night, unbelievable, goosebumps, speechless, amazing," said Palm Cove eclipse watcher Simon Crerar.

The rare spectacle drew crowds of tourists, with the Queensland state government estimating that 50,000-60,000 people made the trip.



Equipment is made ready to be used for a direct feed of the total solar eclipse to NASA on the foreshore at Palm Cove in Tropical North Queensland.

They included three charter flights with 1,200 scientists from Japan while six cruise ships were moored off the coast and hot air balloons dotted the skies.

While certain cultures see eclipses as somehow magical, Fred Espenak, an American astrophysicist and world authority on eclipses, told the Australian Broadcasting Corporation that they can be predicted with pinpoint accuracy.

"Certainly within 100 to 200 years we can predict when an eclipse will occur to within a second," he said.

"But the pattern of occurrence is a complicated one. They don't repeat on a time schedule like the seasons of the year."

He explained that when a total eclipse occurred "the darkest part of the moon's shadow sweeps across the earth's surface".

"Total solar eclipses occur once every one to two years but are only visible from less than half a percent of the earth's surface," he said.

Scientists were studying the effects of the eclipse on the marine life of the Great Barrier Reef and Queensland's rainforest birds and animals while psychologists were monitoring the impact on humans.

Eclipses have deep spiritual meaning for Aborigines, with the moon often seen as a man and the sun as a woman.

"Some believe the sun is in love with the man but he does not reciprocate these feelings so the sun chases him around the sky," said Duane Hamacher, an expert on Aboriginal astronomy who watched the spectacle from Cairns.

"On rare occasions, she manages to grab him and in a jealous rage tries to kill him but he convinces the spirits that hold up the sky to save him, which they do."

The last total eclipse was on July 11, 2010, again over the South Pacific. The next will take place on March 20, 2015, occurring over Iceland, the Faroe Islands and Norway's far northern Svalbard archipelago, according to Espenak.

(c) 2012 AFP

Citation: Australian sky-gazers in awe of rare total eclipse (Update) (2012, November 13) retrieved 7 July 2024 from <https://phys.org/news/2012-11-sky-gazers-eye-heavens-total-eclipse.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.