

## **Astronomy and Landscape-A Cultural Journey**

### **John Goldsmith**

John is a member of “The World at Night”, an international photographic project dedicated to produce and present a collection of stunning photographs and time-lapse videos of the world’s landmarks against the celestial attractions. “The World at Night” is part of the International Year of Astronomy 2009 and has recently featured at the IAU Symposium 260 “The Role of Astronomy in Society and Culture” at UNESCO, Paris. John also is producer of the “Celestial Visions”, an astronomical photography exhibition at the Cosmology Gallery, Gravity Discovery Centre, featuring images of the cosmos with famous places, world heritage sites and landscapes of great scenic beauty, e.g., Comet Hale-Bopp above the Pyramids of Giza and Stonehenge. John notes: "The night sky provides a shared and common experience available for everyone. This common experience provides links between cultures throughout the world, both past, present and future."

Ninety five people (RSWA members, their families, interested scientists, and members of the public) attended the third on the series of events Celebrating the International Year of Astronomy 2009 at the Kings Park Administration Building on Monday 18th May 2009 to hear John Goldsmith present a well-illustrated talk on “Astronomy and Landscape – a cultural journey”. This summary of the talk has been drawn from notes and images provided by John Goldsmith.

John commenced his presentation by demonstrating his photographic equipment, and tracking apparatus.



**John with camera and tracking apparatus in front of some photographic images.**

One of the opening images and time-lapse video was of Earth Hour 2009 across the Swan River towards Perth, when Perth turned off its night lights for one hour. The time-lapse video showed the dramatic dimming of Perth City lights.



**Earth hour 2009, centered on Perth City.**

John then moved on to illustrate how he uses astronomical photography as a means to explore the universe, relate landscapes and the Cosmos, and explore how astronomical knowledge influences human culture. Using images from his Celestial Visions Exhibition at the Cosmology Gallery, Gravity Discovery Centre, which features iconic landscapes such as Wolfe Creek Meteorite Crater, Bungle Bungles, the Pyramids and Stonehenge, other World Heritage sites and landscapes of great scenic beauty, and metropolitan settings as a backdrop, John took the audience through a display of some of the most spectacular and noteworthy celestial apparitions of the past 20 years.

Through description and display, John explored the connection between the Celestial realm and Earthly experience focusing his presentation on four main themes: “Sun and Moon”, “Celestial Wilderness”, “Ancient Skies” and “Celestial Cities”. Diverse astronomical events were featured including major comets, meteor showers, eclipses of the Moon and Sun, views of our own Galaxy, the Milky Way, and many other astronomical events.

The “Sun and Moon” featured images of sunrise, the annular solar eclipse of 1991 and a total eclipse of the moon: the Sun being a profound symbol of unity for all civilisations throughout the millennia, while the moon being symbolic of cyclic renewal in nature.

“Celestial Wilderness” revealed brilliant stars and other apparitions glowing in magnificently dark skies, above wild and remote landscapes. This series of images featured the stars as they appear above famous and beautiful Western Australian landscapes including the southern stars and the Bungle Bungles in the Kimberley of Western Australia, a planetary alignment above Wolfe Creek Meteorite Crater, the Leonid meteor shower above The Pinnacles, a time-lapse video of stars and Wave Rock, the Southern Cross and Cradle Mountain, a photo-mosaic of Comet Hyakutake (1996), and a long time exposure to show stars rotating around the South Celestial Pole, centred over a track in the desert. An Australian Indigenous perspective of the landscape and the night sky was illustrated at Wolfe Creek Meteorite Crater (Djaru and Walmajari language groups). This massive crater (approximately 900 metres in diameter and about 300,000 years old) is represented in contemporary local Indigenous art.

“Ancient Skies” explored links between ancient cultures and the stars. John illustrated rare images of Comet Hale-Bopp (discovered in 1995). The comet’s orbit indicates it last appeared some 4000 years ago and is not expected to return for another couple of thousand years. The comet’s appearance in ancient times inspired John to photograph it above two of the most famous ancient monuments, the Giza Pyramids and Stonehenge.



**Stars rotating around the South Celestial Pole, framed and centered over The Pinnacles.**



**Stars rotating around the South Celestial Pole, centered over a red desert track.**

“Celestial Cities” included contemporary images of the urban and city setting to frame astronomical events, including the spectacular appearance of Comet McNaught in January 2007. The series also includes special astronomical events, which contrast with the city and urban views of the night sky. The contrast emphasizes the impact of civilization on our view of the Cosmos, now partially obscured by light pollution.

John went on to describe how the subject of astronomy and culture was being explored through conferences, exhibitions, and via the Cosmology Gallery, at the Gravity Discovery Centre. Recent examples of exhibitions included “The World at Night” (TWAN) which held its first main exhibition at Nehru Planetarium, India, and the Square Kilometer Array, Out There! Exhibition, recently hosted by The University of Western Australia.

There also were opportunities for astronomical photographers to participate in the national competitive exhibition called “The Winning Sky Photos: The David Malin Awards”. The exhibition is named in honour of Australia’s internationally acclaimed scientific imager, Dr David Malin.

John concluded his presentation with the fact that “the night sky provides a shared and common experience available for everyone. This common experience provides links between cultures throughout the world, both past, present and future”.

More information on Astronomy and its connection with Culture can be found in the following links:

<http://www.twanight.org/>;

<http://www.astronomywa.net.au/>;

<http://www.gdc.asn.au/>

<http://iaus260.obspm.fr/>

<http://iaus260.obspm.fr/>

[www.parkes.atnf.csiro.au/news\\_events/astrofest/](http://www.parkes.atnf.csiro.au/news_events/astrofest/)



**Comet McNaught over Perth in January 2007.**