THE HARMONY DEBATES

Exploring a practical philosophy for a sustainable future

Edited by Nicholas Campion

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Harmonising the Land and Sky in Aboriginal Dreamings

Trevor Leaman

This chapter explores the ways in which Aboriginal and Torres Strait Islander peoples see the realms of Earth, sea and sky as aspects of a unified 'cosmoscape' – in which the skyworld is every bit as real as Earth, complete with rivers and forests inhabited by fish, birds, animals and ancestral beings.[1] Certain important stars and asterisms were seen as the skyworld counterpart of terrestrial animals and their annual appearance and movement through the night sky informed people of the seasonal migrations, lifecycles, abundance and food resource availability of the animals they represented.[2] The examples I deal with here are only a handful of the many Dreamings which harmonise the celestial cycles of the animal constellations in the sky with the lifecycles of their terrestrial counterparts and serve to demonstrate the keen-eyed observations of the natural world by the Indigenous First Australians.

Reflecting the many diverse biogeographic regions and habitats across the continent, and the Dreamings connecting them to the people of that country, a single star or asterism can represent a different animal 'constellation' to each of the many language groups. There is, therefore, no single Aboriginal astronomy – each of the 250 or more language groups has its own Dreamings associated with the land, sea and sky, but they all interconnect through the songlines which criss-cross the land.

The Celestial Emu

Perhaps the best known of the Aboriginal constellations is the Emu in the Sky or Celestial Emu. The Celestial Emu is found in the dark dust lanes of the Milky Way between the Southern Cross (head), Scorpius-Sagittarius (body) and Ophiuchus-Aquila (feet) (Figure 1, left). This constellation is found right across the continent, but the best studied version of the Dreaming narrative associated with it comes from the Wiradjuri, Kamilaroi and Euahlayi peoples of central west New South Wales.[3] His form can also be seen among the extensive rock art sites around the Sydney Basin.

Figure 1: The Celestial Emu, Image: Wikimedia Commons/Barnaby Norris

The Celestial Emu is one of the easiest of all the Aboriginal constellations to find and recognise. Look for the dark dust lanes of the Milky Way between the Southern Cross (the head of the emu, marked by the Coalsack Nebula) and Scorpius (the big bulge of the emu's body). His legs stretch further still across the sky, making it a very large constellation. The emu rock engraving at Elvina Track, Ku Ring Gai National Park, Sydney is thought to be a representation of the Celestial Emu (Figure 1, right).

The orientation of the Celestial Emu in the sky after sunset was used to inform Aboriginal people of the lifecycle of the terrestrial emus, and specifically when it was the best time to collect eggs, an important protein resource.[4] The first appearance of the Celestial Emu in April-May (Figure 2A) signifies the start of the Emu breeding season when the females chase the males before mating. When the Celestial Emu is horizontal in the sky in June (Figure 2B), this is the time when terrestrial Emus are nesting and laying eggs. This is the best time to harvest emu eggs, but when doing so the Aboriginal people take only enough for their needs and leave a couple of eggs behind in each nest to ensure the viability of the breeding population. When the Celestial Emu starts to dip head-down in July (Figure 2C), this signifies that it is too late to harvest eggs as they now contain chicks ready to hatch.

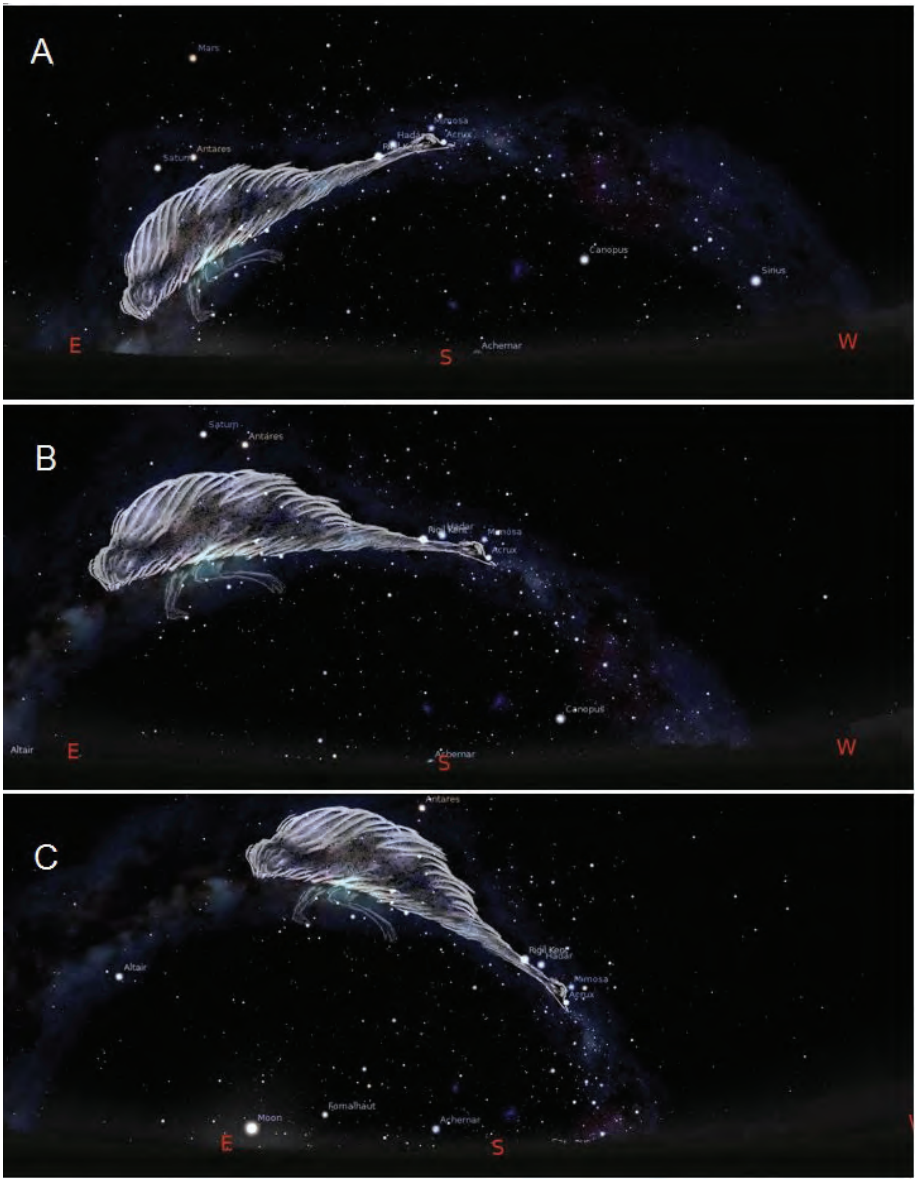

Figure 2: The orientation of the Celestial Emu in the sky.
Image: Stellarium/Robert Fuller.

Figure 3: Neilloan the Mallee Fowl. Image: Stellarium/Wikimedia Commons.

NEILLOAN AND *MARPEANKURRK*

To the Wergaia people of northern Victoria, the star Vega, in the western constellation of Lyra, the Harp, is *Neilloan*, the Mallee Fowl.[5] The star's first appearance in the east after sunset, or acronychal rise, in late winter-early spring coincides with the males preparing the nest for the breeding season. The females start to lay eggs around the time Vega crosses the meridian at sunset (dusk meridian crossing) in September, and hence when *Neilloan* reaches its highest elevation in the sky (Figure 3). The first chicks of the season start to hatch in November, coinciding with the last appearance of Vega in the north-western sky after sunset (heliacal set).[6]

Also from Wergaia country is an important Dreaming associated with the star Arcturus, in the western constellation of Boötes, the Herdsman.[7] The dreaming tells of a time long ago when the people were suffering under a big drought, *Marpeankurrk* wandered away from camp to die in peace. Whilst awaiting the inevitable, she noticed a trail of ants disappearing down a hole. She dug down to uncover an ant's nest full of larvae (*bitturr*), an important high-protein food source She started eating the *bitturr* and noticed her strength returning. By showing

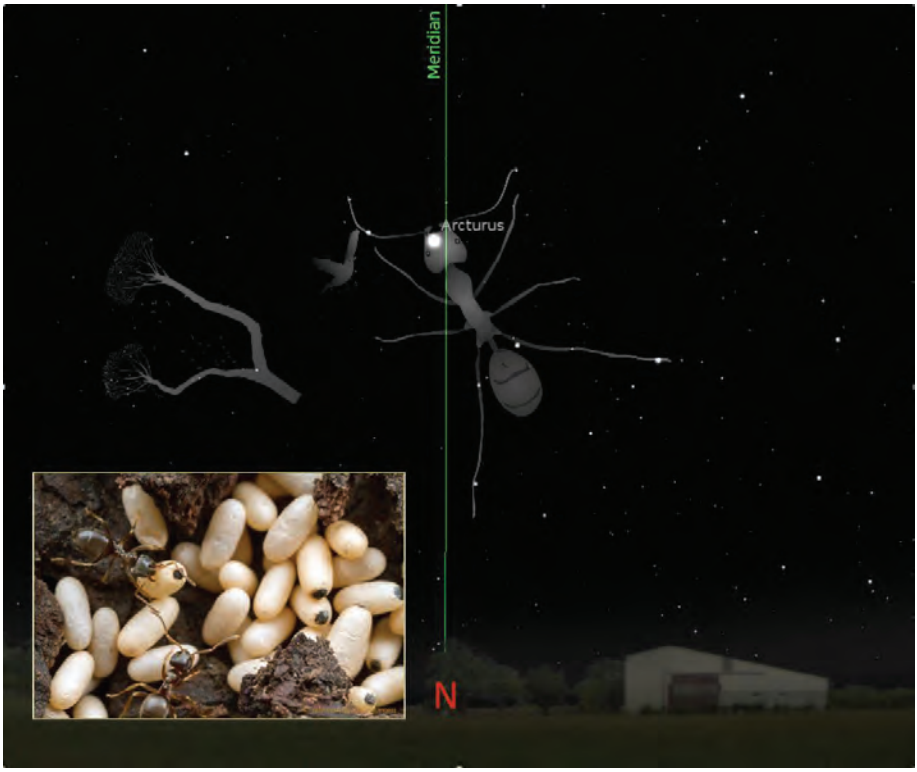

Figure 4: The dusk meridian crossing of the star Arcturus.
Image: Stellarium/Wikimedia Commons

other members of her family how to find more *bitturr* she ensured their survival. To commemorate her deed, she was placed in the sky on her passing to become the star we know as Arcturus, but to the Wergaia it was always *Marpeankurrk*, the 'Wise Woman Star'. Its dusk meridian crossing in August (Figure 4) served as a reminder to her people of her deed, and tells them the time of year when *bitturr* was available as a food source.[8] The orange hue of Arcturus also mimics the colour of the species of ant from that particular region of northern Victoria.

The Pleiades or Seven Sisters

The asterism known as the Pleiades or Seven Sisters (Figure 5), is linked to many important Dreamings across Australia. It is a very young (in astronomical terms: about 115 million years old) and prominent open cluster of stars in the zodiacal constellation of Taurus, the Bull. Along the east coast, the first predawn

Figure 5: The Pleiades. Image: Wikimedia Commons.

appearance (heliacal rise) of the Pleiades in early June signifies the beginning of the northern migration of humpback whales and orca from their summer feeding grounds in Antarctica to their winter breeding grounds in Northern NSW and Southern Queensland, The acronychal setting (last appearance in the west just before sunrise) of the Pleiades in late October to early November coincides with the southerly migration back to Antarctica, with young calves in tow and orca in pursuit.

In the central desert, the heliacal rise of the Pleiades signified the 'official' start of winter and the peak in the dingo breeding cycle.[9] Dingoes were important to the desert Aboriginal people, both as a source of warmth against the cold winter nights and as a source of food when other foods were scarce during droughts. Seeing the Pleiades in the dawn sky told them it was time to look for dingo pups. The Seven Sisters were also totemically-linked to many other plants, insects and animals through interrelated Dreamings, such as bush tomatoes (*kutjera*), honey ants (*tjala*) and thorny devils (*mingari*).[10]

The Tree Goanna

According to the Wiradjuri and related language groups of central New South Wales, the bright orange star Antares, and associated stars making up the western

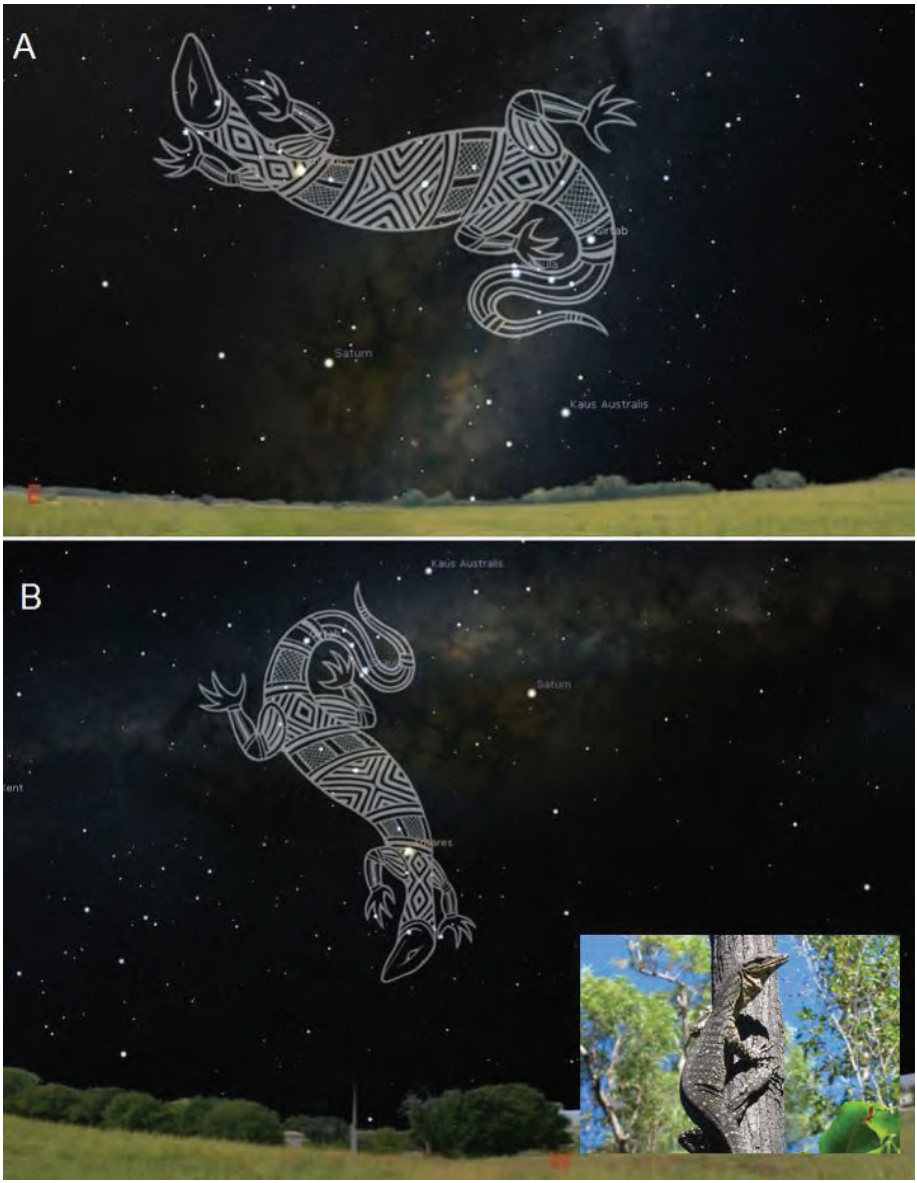

Figure 6: The Tree goanna.
Image: Wikimedia Commons/Stellarium/Scott "Sauce" Towney.

constellation of Scorpius, the Scorpion, was *Guggaa,* the tree Goanna.[11] This constellation informed the Wiradjuri of the best time of year to hunt the tree Goanna. When the *Guggaa* was first seen to rise in the dusk sky in July-August,

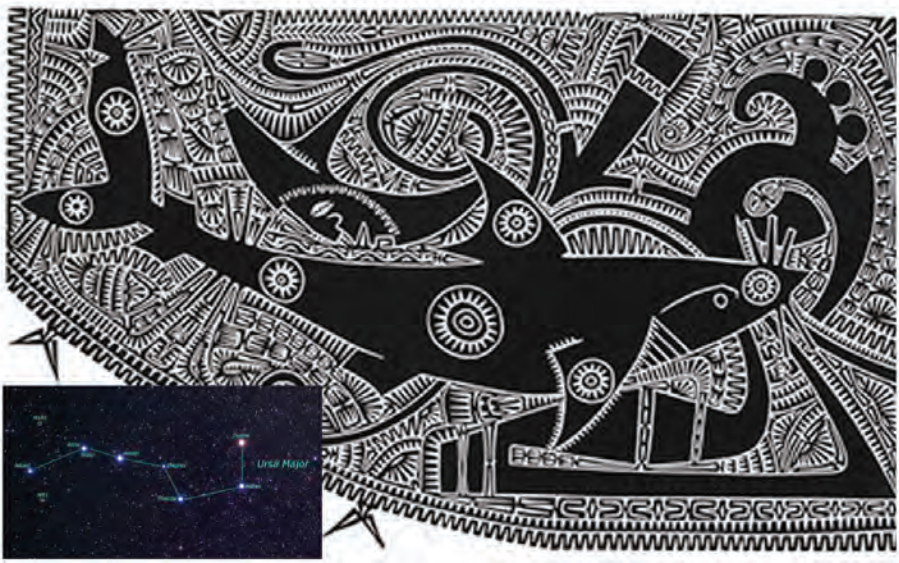

Figure 7: Baidam, the Shark. Image: Brian Robinson/Summer Ash

and hence was about to 'climb up' his 'celestial tree' (Figure 6A), it was deemed the wrong time of year to hunt the goanna as it was still lean and thin from lack of food availability over winter. However, when it was seen to be facing downwards in the western sky at dusk in October-November (Figure 6B), it informed the people that it had now 'climbed down' from the 'celestial tree' after feasting on eggs and chicks from nesting birds, and thus its terrestrial kind were likewise full of the nutritious fat that was both an important food source and valuable medicine.

Baidam the Shark

In the astronomical traditions of the Torres Strait, the shark constellation, *Baidam* (also spelt as *Beizam*), is made up of the stars in the asterism of the Big Dipper, which is part of the constellation of Ursa Major, the Big Bear.[12] When these stars appear in the northern sky in the direction of New Guinea in July-August, Islanders know the mating season of the shark is starting. This is when sharks are more plentiful close to shore, so the Islanders are extra wary and vigilant when wading into the shallow waters close to the shoreline. The appearance of *Baidam* also informs the Islanders of a seasonal change, and that it is the time to plant banana, sugar cane, and sweet potato.

Figure 8: A seasonal resource calendar for the Walmajarri people.
Image: CSIRO

Encoding the Knowledge

Traditionally, Aboriginal and Torres Strait Islander people would encode this seasonal astronomical and ecological knowledge in song, dance and ceremony.[13] Today, there are efforts to also record and preserve this knowledge in the form of colourful and informative regional resource calendars (CSIRO; Figure 8) each specific to a language group and region.[14] Each chart may contain and convey several layers of interrelated information, such as the name for the season and time of year, the seasonal quality (wet/dry, hot/cold, predominant wind direction, etc.) what animal, plant or insect is abundant for each season and other Dreaming relationships including the appearance of important seasonal stars heralding these changes. These colourful charts are being used in the classroom to help pass on this important and vital cultural knowledge to the younger generations, both Indigenous and non-indigenous.

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