

Our Galaxy in Culture

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Not only have the stars of the Milky Way been often observed and used: certain cultures have seen creatures of their cosmologies in the dark parts of the visible galaxy that are caused by gas and dust blocking the light of the stars beyond. I was first exposed to this during field research concerning the Incas on the Llactapata Ridge near Machu Picchu, and it has fascinated me ever since (Gullberg 2020). Years later it was my privilege to research this phenomenon further with my colleagues Duane Hamacher, Alejandro López, Javier Mejuto, Andy Munro and Wayne Orchiston (Gullberg *et al.* 2020). I learned much from them as well as we compared observations in several cultures and discovered that the observance of “dark constellations” was not uncommon.

The Figures below highlight three cultures that made significant use of the same section of the Milky Way in this fashion. The area viewed in Figure 1 is prominent in the Southern Hemisphere’s skies and stretches left and right from the Southern Cross and Coalsack Nebula, to give them their modern astronomic names. The Incas, the Aboriginal Australians and the Moqoit of Argentina all saw creatures important to their cosmology in the same expanse that stretches roughly from the Coalsack nebula back across the constellation of Centaurus towards the constellations of Scorpius and Sagittarius.

The Incas saw seven dark constellations in all, as shown in Figure 2 (Gullberg 2020). The numbering reflects the order of the procession, which is led by Machucuay, the serpent. After him comes Han’patu, the toad, followed by Yutu, the tinamou – which is what we know as the Coalsack Nebula – followed by Yacana and Uñallamacha, a mother llama and her *cria* (baby). In sixth place is Atoq, the fox, after whom comes Michij runa, the shepherd guiding them all from the rear as they cross the sky from left to right (Gamarra *et al.* 2020; Gullberg *et al.* 2020).

The Inca dark constellations of Yacana and Uñallamacha (Figure 3) in particular can be used for cross-cultural comparison (Gullberg 2020). Figures 3, 4 and 5 all show this same part of the Milky Way, with different figures superimposed. Aboriginal Australians saw Gawarrgay, the Emu in the Sky (Figure 4; Gullberg *et al.* 2020), while the Moqoit of Argentina saw the Mañic, which was the master of South American rheas (Figure 5). The



FIGURE 1. Watercolour *Dark Regions in the Southern Milky Way* (© Jessica Gullberg). Portions of this painting are used in the figures that follow.

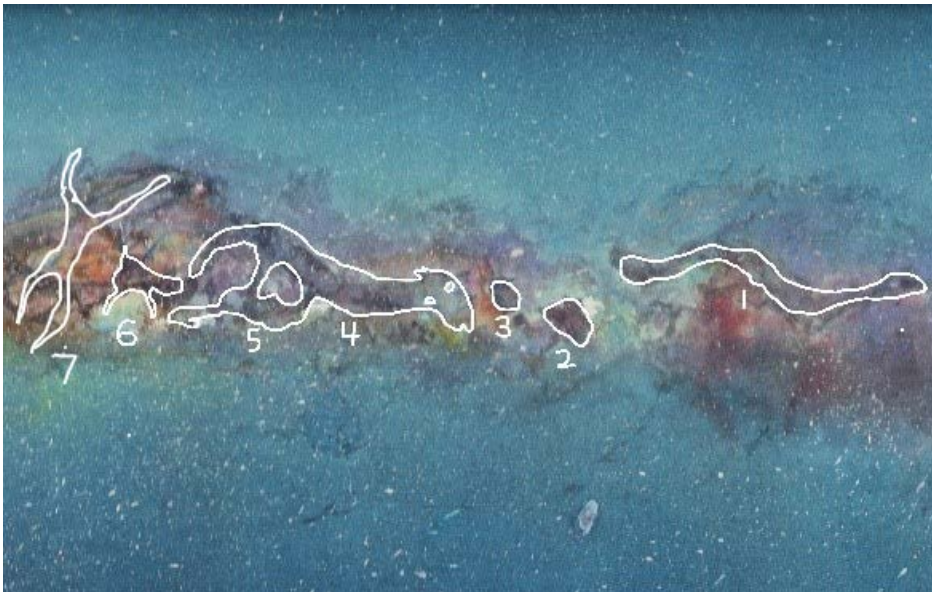


FIGURE 2. Inca dark constellations. 1: Machucuy, the serpent; 2: Han'patu, the toad; 3: Yutu, the tinamou (Coalsack Nebula) 4: Yacana, the mother llama; 5: Uñallamacha, Yacana's baby; 6: Atoq, the fox; 7: Michij runa, the shepherd (detail from watercolour *Dark Regions in the Southern Milky Way* © Jessica Gullberg, with constellation images inspired by Gary Urton and Miguel Araoz Cartagena – Urton 1981; Gamarra *et al.* 2020).



FIGURE 3. Yacana and Uñallamacha (detail from watercolour *Dark Regions in the Southern Milky Way* © Jessica Gullberg, with constellation image inspired by Gary Urton – Urton 1981).



FIGURE 4. The Emu in the Sky (detail from watercolour *Dark Regions in the Southern Milky Way* © Jessica Gullberg, with constellation image inspired by Ghillar Michael Anderson – Fuller *et al.* 2014).



FIGURE 5. The Mañic (detail from watercolour *Dark Regions in the Southern Milky Way* © Jessica Gullberg, with constellation image inspired by Alejandro López and Diego Alterleib – López 2009).

Moqoit also considered the Milky Way as forming the trunk of the *ombú*, the world tree, which connected *ombú*'s roots with the sky (Gullberg *et al.* 2020). Like the Moqoit, the Mayas thought of the Milky Way as a world tree and for them its roots were the entrance to the underworld (Gullberg *et al.* 2020).

It is quite interesting that Southern cultures on opposite sides of the Pacific Ocean saw images in the same dark patches of the Milky Way. Why did they? What motivated them to see these images in dark sections of the galaxy? Many cultures were great observers of the night sky and saw constellations among the stars, but fewer saw dark constellations. Of course, they were looking for guidance in the heavens and identified correlations between shapes in the Milky Way and significant creatures in their cultures.

Certain Aboriginal Australians also saw a kangaroo in the Milky Way (Figure 6; Gullberg *et al.* 2020), while the Tupi of Brazil see a rhea in this same part of the galaxy. An emerging theme of local creatures with long necks is interesting as these interpretations developed independently. However, not only were there dark constellations: some peoples used the brilliant patches of the Milky Way too. The Māori of New Zealand saw a watery home for a shark, and the Torres Straits Islanders of Australia saw a shovelnose shark kicking up debris from the seafloor. The Māori have multiple animal names for the Coalsack Nebula, and the Bugis of Indonesia see it as Bembé' é, the goat, and use it to foretell the weather.

In more general terms, some Native American cultures viewed the Milky Way as a pathway taken by departing spirits to the afterlife. Various cultures in southern Africa are also known to have pictured the Milky Way as a road across the heavens and this emerges as a common theme (Gullberg *et al.* 2020).



FIGURE 6. The Kangaroo in the Sky (detail from watercolour *Dark Regions in the Southern Milky Way* © Jessica Gullberg, with constellation image inspired by Ghillar Michael Anderson – Fuller *et al.* 2014).

It becomes apparent that many cultures incorporated the Milky Way into their cosmology, but as regards dark constellations those cultural resonances known so far are found primarily at southern latitudes. More research needs to be done to learn if there was similar interest among northern cultures. A good point of discussion to raise here is that if northern evidence is not found, why did these cultures not employ dark constellations in the Milky Way as did their southern counterparts? Why are there multiple examples of interest in the south and none in the north? Are there reasons for these commonalities in the south that did not influence those in more northern climes?

I am pleased with the opportunity to present some of the cultural aspects regarding the Milky Way in this Forum and welcome anyone who wishes to learn more. I hope the insight I've provided here will both fascinate and inspire further discussion about cultural use of the galaxy.

References

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