

Many constellations exist, but not all use stars

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When we look up into the clear, night sky, there are celestial shapes many of us recognize.

Perhaps the most recognizable are the Big and Little Dipper, classically known as Ursa Major and Ursa Minor — the big and little bears. They, and 46 other constellations, were first recorded by Ptolemy in about 150 A.D.

The 48 constellations remained relatively unaltered until 1536, when a lasting addition was made to Ptolemy's work.

Caspar Vopel, a German globe maker, named two new constellations: Coma Berenices and Antinous. He named the two shapes to cover an area in the sky which contained no recognized constellations.

Other astronomers followed suit in the following years until, in 1801, Johann Elert Bode published a list of 99 constellations. His list included Machina Electrica (electric generator), Officina Typographica (print shop) and Telescopium Herschelii (Herschel's telescope). But his list was not universally accepted.

In 1919, the International Astronomers' Union met, with the conflicting lists of constellations one of the first items addressed. Eighty-eight constellations were chosen from historical sources to become the official IAU constellation list.

The big and little bears made the list, while electric generator, print shop, and Herschel's telescope were among the constellations left out. The 88 constellations chosen remain the recognized constellations by the IAU to this day.

Despite all the attention to the shapes stars make in the night sky, some ancient people actually created constellations using the

space between stars.

The Incas of South America recognized two types of constellations: luminous and dark. Luminous constellations were similar to those we recognize — stars in geometric patterns. The Inca's luminous constellations depicted inanimate objects. The dark constellations, however, used the dark spaces among the light of the Milky Way galaxy and depicted the living creatures familiar to the Incas.

The Milky Way appears more radiant in the southern sky than it does in the north. When viewing the Milky Way galaxy, much of it appears to be a luminous cloud accented with the brighter points of stars. Certain sections appear to be much darker, however. In these areas, gas and dust block much of the light from the galaxy behind. It was these areas where the Incas observed their dark constellations.

The most noticeable and familiar of the dark cloud constellations is Yacana in which a young llama suckles at its mother's breast while the mother appears to keep watch. Other notable dark cloud constellations from Incan tradition include the fox, toad, serpent and shepherd.

Half a world away from the Incas, the Aborigines of Australia had the Emu, a dark constellation which overlapped the Incan constellation of the partridge.

So although the constellations of the IAU are the officially recognized constellations of most of the scientific community, it is not a comprehensive list. Some constellations are not even made of stars at all.

Interested in learning more about astronomy? Join us at dusk on July 16 in the Niabi Zoo parking lot in Coal Valley for a free, public observing event.