

CONSTELLATION PAVO, THE PEACOCK

This is one of the 12 constellations introduced into the southern skies at the end of the 16th century by the Dutch navigators **Pieter Dirkszoon Keyser** and **Frederick de Houtman**. Pavo probably represents not the common blue, or Indian, peacock commonly seen in parks but its larger, more colourful, and more aggressive cousin, the Java green peacock which Keyser and de Houtman would have encountered in the East Indies. Pavo (Latin for peacock) was first depicted in 1598 on a globe by **Petrus Plancius** and first appeared in print in 1603 on the Uranometria atlas of **Johann Bayer**.

Although Pavo is a recent discovery and not one of Ptolemy's original 48 star-signs, there is a Greek mythology attached to the bird peacock. The peacock was the sacred bird of Hera, who drove through the air in a chariot drawn by a peacock. One day when Zeus wanted to meet his newest love Io (a nymph and priestess of Hera in Argos) his wife Hera became suspicious and put Io under the guardianship of Argus who was ideally suited to the task of watchman, since he had 100 eyes, only two were resting at any one time. Zeus sent his son Hermes to see if he could trick Argus and bring Io to him. Hermes swooped down to Earth and spent the day with Argus, telling him all sorts of stories and playing his reed pipes until, one by one, the eyes of Argus became sleepy and began to close. When Argus was finally asleep, Hermes lopped off his head and made off with Io. **Hera was devastated about the death of Argus and placed all 100 eyes of his on the tail of her peacock.**

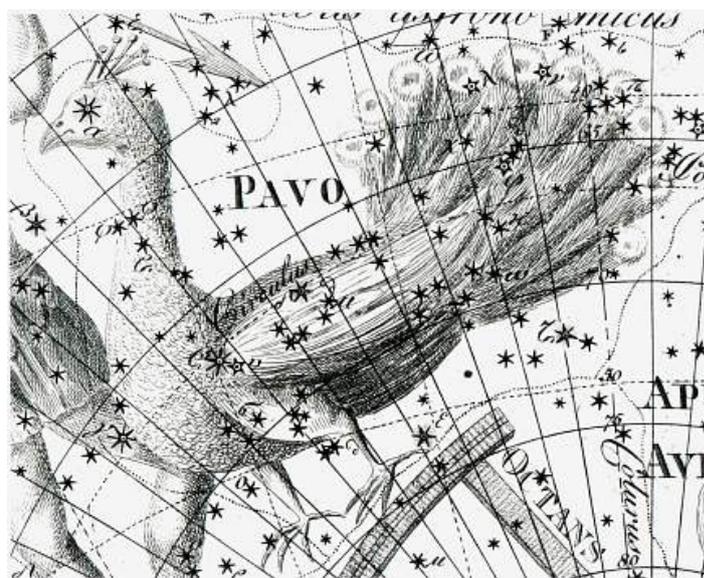
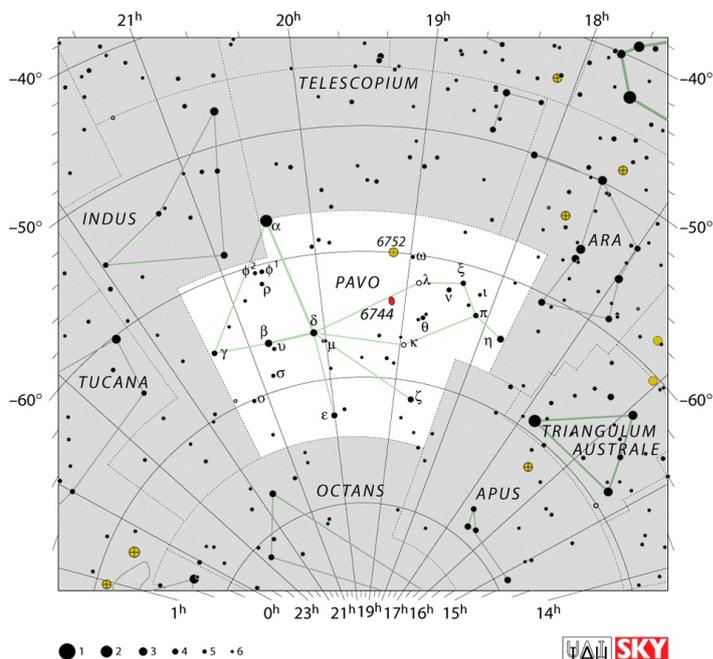
Pavo was first depicted in 1598 on Plancius' globe and first appeared in a star atlas in 1603, in Johann Bayer's Uranometria. **In Australia, a part of the constellation is known as "the Saucepan" and used as a guide to finding the south pole.**

Pavo is notable for its bright star Peacock, named by the British Her Majesty's Nautical Almanac Office in the late 1930s when the Royal Air Force insisted that all 57 bright stars in their Almanac must have names. Also the nearby solar analog Delta Pavonis, the interacting galaxies NGC 6872 and IC 4970, and several other deep sky objects.

Although Bayer depicted Pavo on his chart, he did not assign its stars the Bayer designations. French explorer and astronomer **Nicolas Louis de Lacaille** labelled them Alpha to Omega in 1756

The constellations Pavo, Grus, Phoenix and Tucana are collectively known as the "Southern Birds".

Alpha Pavonis is the constellation's brightest member, and known as Peacock. It appears as a 1.91-magnitude blue-white star, but is actually a spectroscopic binary. *Beta Pavonis* is the second-brightest star in the



Pavo flourishes a truncated tail in the Uranographia of Johann Bode (1801).



Pavo (upper right), with the other southern birds, in its first appearance in a celestial atlas, Johann Bayer's Uranometria.

constellation. A white giant of spectral class A7III, it is an aging star that has used up the hydrogen fuel at its core and has expanded and cooled after moving off the main sequence. It lies 135 light years away from our solar system

Delta Pavonis is a nearby Sun-like star some 19.9 light years distant.

Gamma Pavonis, a fainter, solar-type star 30 light years from Earth with a magnitude of 4.22 and stellar class F9V.

Lambda Pavonis is one of several variable stars of note in Pavo. A bright irregular variable ranging between magnitudes 3.4 and 4.4; the variation can be observed with the unaided eye

Six of the star systems in Pavo have been found to host planets, including HD 181433 with a super-earth, and HD 172555 with evidence of a major

interplanetary collision in the past few thousand years. The constellation contains NGC 6752, the third-brightest globular cluster in the sky, and the spiral galaxy NGC 6744, which closely resembles our Milky Way but is twice as large. Pavo is the radiant of two annual meteor showers: the *Delta Pavonids* and *August Pavonids*.

It is uncertain whether the Dutch astronomers had the Greek mythos in mind when creating Pavo but, in keeping with other constellations introduced by Plancius through Keyser and De Houtmann, the "peacock" in the new constellation likely referred to the Green Peacock, which the explorers would have encountered in the East Indies, rather than the Blue Peacock known to the ancient Greeks. **The Wardaman people of the Northern Territory in Australia saw the stars of Pavo and the neighbouring constellation Ara as flying foxes.**

Pavo is bordered by Telescopium to the north, Apus and Ara to the west, Octans to the south, and Indus to the east and northeast. Covering 378 square degrees, it ranks 44th of the 88 modern constellations in size and covers 0.916% of the night sky. The three-letter abbreviation for the constellation, as adopted by the International Astronomical Union in 1922, is "Pav". The official constellation boundaries, as set by **Eugène Delporte in 1930**, are defined by a polygon of 10 segments. As one of the deep southern constellations, it remains below the horizon at latitudes north of the 30th parallel in the Northern Hemisphere, and is circumpolar at latitudes south of the 50th parallel in the Southern Hemisphere. **Some of the stars in the constellation form an asterism known as "the Saucepan" in Australia when they are used for navigation, as they point toward the southern celestial pole.**

Pavo belongs to the Johann Bayer family of constellations, along with **Apus, Chamaeleon, Dorado, Grus, Hydrus, Indus, Musca, Phoenix, Tucana and Volans.**

NGC 6752 is a globular cluster that looks like a hoard of gems fit for an emperor's collection. This deep sky object is in fact far more worthy of admiration. At over 10 billion years old it is one the most ancient collections of stars known. It contains a high number of "blue straggler" stars, some of which are visible in this image. It is the third brightest globular star cluster in the night sky, fainter only than 47 *Tucanae* and *Omega Centauri*. The cluster has an apparent visual magnitude of 5.4 and is about 13,000 light years distant from us. NGC 6872 and IC 4970 – The image shows the spectacular barred spiral galaxy NGC 6872 that is shaped like an "integral sign". It is of type SBb and is accompanied by a smaller, interacting galaxy, IC 4970 of type S0 (just above the centre). The bright object to the lower right of the galaxies is a star in the Milky Way. They have an apparent visual magnitude of 12.7 and 14.7 and are approximately 220 million light years distant from the solar system.



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