

= Pavo (constellation) =

Pavo is a constellation in the southern sky with the Latin name for peacock . It is one of twelve constellations conceived by Petrus Plancius from the observations of Pieter Dirkszoon Keyser and Frederick de Houtman . Pavo first appeared on a 35 @-@ cm (14 in) diameter celestial globe published in 1598 in Amsterdam by Plancius and Jodocus Hondius and was depicted in Johann Bayer 's star atlas Uranometria of 1603 . French explorer and astronomer Nicolas @-@ Louis de Lacaille gave its stars Bayer designations in 1756 . The constellations Pavo , Grus , Phoenix and Tucana are collectively known as the " Southern Birds " .

The constellation 's brightest member , Alpha Pavonis , is also known as Peacock and appears as a 1 @. @ 91 @-@ magnitude blue @-@ white star , but is actually a spectroscopic binary . Delta Pavonis is a nearby Sun @-@ like star some 19 @. @ 9 light @-@ years distant . 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 the Milky Way but is twice as large . Pavo is the radiant of two annual meteor showers : the Delta Pavonids and August Pavonids .

= = History and mythology = =

= = = History of the modern constellation = = =

Pavo was one of the twelve constellations established by Dutch astronomer Petrus Plancius from the observations of the southern sky by Dutch explorers Pieter Dirkszoon Keyser and Frederick de Houtman , who had sailed on the first Dutch trading expedition , known as the Eerste Schipvaart , to the East Indies . It first appeared on a 35 @-@ cm (14 in) diameter celestial globe published in 1598 in Amsterdam by Plancius with Jodocus Hondius .

The first depiction of this constellation in a celestial atlas was in German cartographer Johann Bayer 's Uranometria of 1603 . De Houtman included it in his southern star catalogue the same year under the Dutch name De Pauww , " The Peacock " .

Pavo and the nearby constellations Phoenix , Grus and Tucana are collectively called the " Southern Birds " .

An alternate Latin name for the constellation was Junonia Avis .

= = = The peacock in Greek mythology = = =

According to Mark Chartrand , former executive director of the National Space Institute , Plancius may not have been the first to designate this group of stars as a peacock : " In Greek myth the stars that are now the Peacock were Argos [or Argus] , builder of the ship Argo . He was changed by the goddess Juno into a peacock and placed in the sky along with his ship . " Indeed , the peacock " symboliz [ed] the starry firmament " for the Greeks , and the goddess Hera was believed to drive through the heavens in a chariot drawn by peacocks .

The peacock and the " Argus " nomenclature are also prominent in a different myth , in which Io , a beautiful princess of Argos , was lusted after by Zeus (Jupiter) . Zeus changed Io into a heifer to deceive his wife (and sister) Hera and couple with her . Hera saw through Zeus 's scheme and asked for the heifer as a gift . Zeus , unable to refuse such a reasonable request , reluctantly gave the heifer to Hera , who promptly banished Io and arranged for Argus Panoptes , a creature with one hundred eyes , to guard the now @-@ pregnant Io from Zeus . Meanwhile , Zeus entreated Hermes to save Io ; Hermes used music to lull Argus Panoptes to sleep , then slew him . Hera adorned the tail of a peacock ? her favorite bird ? with Argus 's eyes in his honor .

As recounted in Ovid 's Metamorphoses , the death of Argus Panoptes also contains an explicit celestial reference : " Argus lay dead ; so many eyes , so bright quenched , and all hundred

shrouded in one night . Saturnia [Hera] retrieved those eyes to set in place among the feathers of her bird [the peacock , Pavo] and filled his tail with starry jewels . "

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 .

= = = Equivalents in other cultures = = =

The Wardaman people of the Northern Territory in Australia saw the stars of Pavo and the neighbouring constellation Ara as flying foxes .

= = Characteristics = =

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 . In the equatorial coordinate system , the right ascension coordinates of these borders lie between 18h 10.4m and 21h 32.4m , while the declination coordinates are between ? 56 @. @ 59 ° and ? 74 @. @ 98 ° . 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 .

= = Notable features = =

= = = Stars = = =

Although he depicted Pavo on his chart , Bayer did not assign its stars Bayer designations . French explorer and astronomer Nicolas @-@ Louis de Lacaille labelled them Alpha to Omega in 1756 , but omitted Psi and Xi , and labelled two pairs of stars close together Mu and Phi Pavonis . In 1879 , American astronomer Benjamin Gould designated a star Xi Pavonis as he felt its brightness warranted a name , but dropped Chi Pavonis due to its faintness .

Lying near the constellation 's northern border with Telescopium is Alpha Pavonis , the brightest star in Pavo . Its proper name ? Peacock ? is an English translation of the constellation 's name . It was assigned by the British Her Majesty 's Nautical Almanac Office in the late 1930s ; the Royal Air Force insisted that all bright stars must have names , the star hitherto having lacked a proper name . Alpha has an apparent (or visual) magnitude of 1 @. @ 91 and spectral type B2IV . It is a spectroscopic binary system , one estimate placing the distance between the pair of stars as 0 @. @ 21 astronomical unitS (AU) , or half the distance between Mercury and the Sun . The two stars rotate around each other in a mere 11 days and 18 hours . The star system is located around 180 light years away from Earth .

With an apparent magnitude of 3 @. @ 43 , Beta Pavonis is the second @-@ brightest star in the 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 the Solar System .

Lying a few degrees west of Beta is Delta Pavonis , a nearby Sun @-@ like but more evolved star ; this is a yellow subgiant of spectral type G8IV and apparent magnitude 3 @. @ 56 that is only 19

@. @ 9 light years distant from Earth . East of Beta and at the constellation 's eastern border with Indus is Gamma Pavonis , a fainter , solar @- @ type star 30 light years from Earth with a magnitude of 4 @. @ 22 and stellar class F9V . Other nearby stars in Pavo are much fainter : SCR 1845 @- @ 6357 is a binary system with an apparent magnitude of 17 @. @ 4 consisting of a red dwarf and brown dwarf companion lying around 12 @. @ 6 light years distant , while Gliese 693 is a red dwarf of magnitude 10 @. @ 78 lying 19 light years away .

Pavo contains several variable stars of note . Lambda Pavonis is a bright irregular variable ranging between magnitudes 3 @. @ 4 and 4 @. @ 4 ; this variation can be observed with the unaided eye . Classed as a Gamma Cassiopeiae variable or shell star , it is of spectral type B2II @- @ IIIe and lies around 1430 light years distant from Earth . Kappa Pavonis is a W Virginis variable ? a subclass of Type II Cepheid . It ranges from magnitude 3 @. @ 91 to 4 @. @ 78 over 9 days and is a yellow @- @ white supergiant pulsating between spectral classes F5I @- @ II and G5I @- @ II . NU and V Pavonis are pulsating semiregular variable red giant stars . NU has a spectral type M6III and ranges from magnitude 4 @. @ 9 to 5 @. @ 3 , while V Pavonis ranges from magnitude 6 @. @ 3 to 8 @. @ 2 over two periods of 225 @. @ 4 and 3735 days concurrently . V is a carbon star of spectral type C6,4 (Nb) with a prominent red hue .

Located in the west of the constellation and depicting the peacock 's tail are Eta and Xi Pavonis . At apparent magnitude 3 @. @ 6 , Eta is a luminous orange giant of spectral type K2II some 350 light years distant from Earth . Xi Pavonis is a multiple star system visible in small telescopes as a brighter orange star and fainter white companion . Located around 470 light years from Earth , the system has a magnitude of 4 @. @ 38 . AR Pavonis is a faint but well @- @ studied eclipsing binary composed of a red giant and smaller hotter star some 18000 light years from Earth . It has some features of a cataclysmic variable , the smaller component most likely having an accretion disc . The visual magnitude ranges from 7 @. @ 4 to 13 @. @ 6 over 605 days .

= = = Planetary systems and debris disks = = =

Six stars with planetary systems have been found . Three planets have been discovered in the system of the orange star HD 181433 , an inner super @- @ earth with an orbital period of 9 @. @ 4 days and two outer gas giants with periods of 2 @. @ 6 and 6 years respectively . HD 196050 and HD 175167 are yellow G @- @ class Sun @- @ like stars , while HD 190984 is an F @- @ class main sequence star slightly larger and hotter than the Sun ; all three are accompanied by a gas giant companion . HD 172555 is a young white A @- @ type main sequence star , two planets of which appear to have had a major collision in the past few thousand years . Spectrographic evidence of large amounts of silicon dioxide gas indicates the smaller of the two , which had been at least the size of Earth 's moon , was destroyed , and the larger , which was at least the size of Mercury , was severely damaged . Evidence of the collision was detected by NASA 's Spitzer Space Telescope . In the south of the constellation , Epsilon Pavonis is a 3 @. @ 95 @- @ magnitude white main sequence star of spectral type A0Va located around 105 light years distant from Earth . It appears to be surrounded by a narrow ring of dust at a distance of 107 AU .

= = = Deep @- @ sky objects = = =

The deep @- @ sky objects in Pavo include NGC 6752 , the third @- @ brightest globular cluster in the sky , after 47 Tucanae and Omega Centauri . An estimated 100 light years across , it is thought to contain 100 @, @ 000 stars . Lying three degrees to the south is NGC 6744 , a spiral galaxy around 30 million light years away from Earth that resembles the Milky Way , but is twice its diameter . A type 1c supernova was discovered in the galaxy in 2005 ; known as SN2005at , it peaked at magnitude 16 @. @ 8 . The dwarf galaxy IC 4662 lies 10 arcminutes northeast of Eta Pavonis , and is of magnitude 11 @. @ 62 . Located only 8 million light years away , it has several regions of high star formation . The 14th @- @ magnitude galaxy IC 4965 lies 1 @. @ 7 degrees west of Alpha Pavonis , and is a central member of the Shapley Supercluster .

= = = Meteor showers = = =

Pavo is the radiant of two annual meteor showers : the Delta Pavonids and August Pavonids . Appearing from 21 March to 8 April and generally peaking around 5 and 6 April , Delta Pavonids are thought to be associated with Comet Grigg @-@ Mellish . The shower was discovered by Michael Buhagiar from Perth , Australia , who observed meteors on six occasions between 1969 and 1980 . The August Pavonids peak around August 31 and are thought to be associated with the Halley @-@ type Comet Levy (P / 1991 L3) .