

THE CONSTELLATION MUSCA, THE FLY

Musca Australis (Latin: Southern Fly) is a small constellation in the deep southern sky. It was one of twelve constellations created by **Petrus Plancius** from the observations of **Pieter Dirkszoon Keyser** and **Frederick de Houtman** and it first appeared on a 35-cm diameter celestial globe published in 1597 in Amsterdam by Plancius and **Jodocus Hondius**. The first depiction of this constellation in a celestial atlas was in **Johann Bayer's** *Uranometria* of 1603. It was also known as *Apis* (Latin: bee) for two hundred years. *Musca* remains below the horizon for most Northern Hemisphere observers.

Also known as the Southern or Indian Fly, the French *Mouche Australe ou Indienne*, the German *Südliche Fliege*, and the Italian *Mosca Australe*, it lies partly in the Milky Way, south of *Crux* and east of the *Chamaeleon*. De Houtman included it in his southern star catalogue in 1598 under the Dutch name *De Vlieghe*, 'The Fly'

This title generally is supposed to have been substituted by **La Caille**, about 1752, for Bayer's *Apis*, the Bee; but **Halley**, in 1679, had called it *Musca Apis*; and even previous to him, **Riccioli** catalogued it as *Apis seu Musca*. Even in our day the idea of a Bee prevails, for **Stieler's** Planisphere of 1872 has *Biene*, and an alternative title in France is *Abeille*. When the Northern Fly was merged with *Aries* by the International Astronomical Union (IAU) in 1929, *Musca Australis* was given its modern shortened name *Musca*. It is the only official constellation depicting an insect.

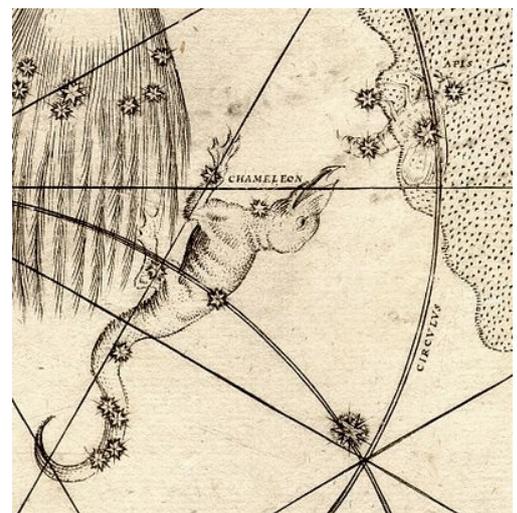
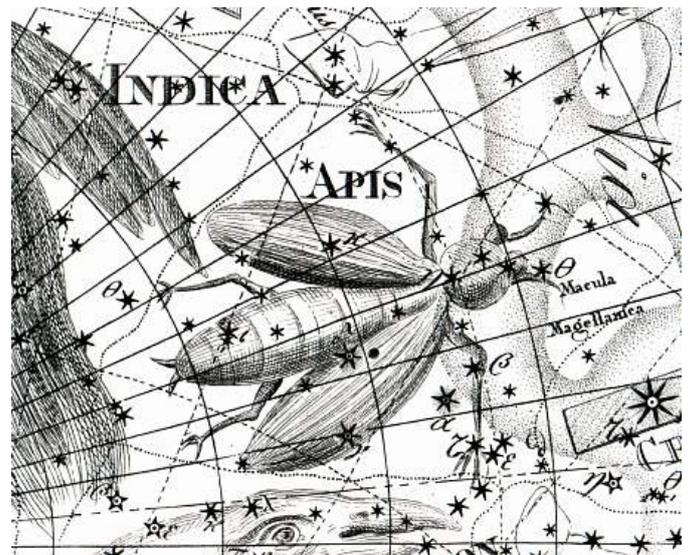
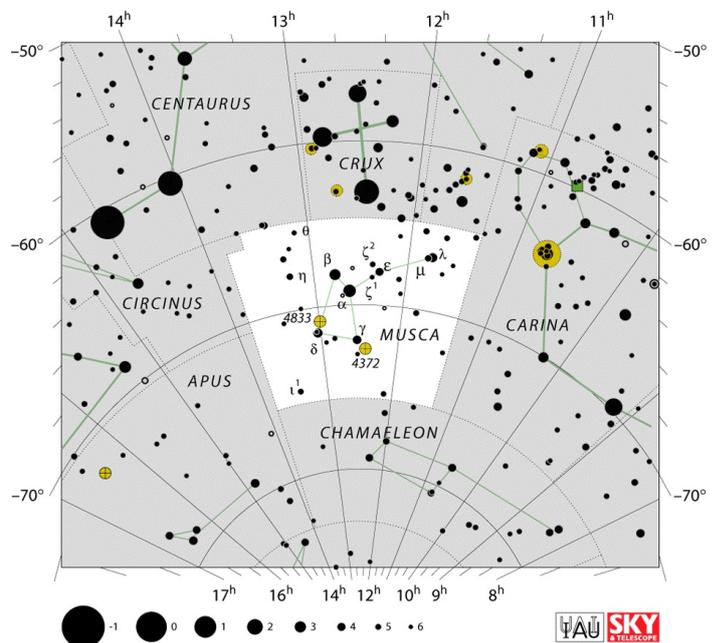
Julius Schiller, who redrew and named all the 88 constellations united *Musca* with the *Bird of Paradise* and the *Chamaeleon* as mother *Eve*.

Gould assigned to it 75 stars, of magnitudes from 2.9 to 7; culminating about the middle of May.

Many of the constellation's brighter stars are members of the Scorpius–Centaurus Association, a loose group of hot blue-white stars that appear to share a common origin and motion across the Milky Way. These include Alpha, Beta, Gamma, Zeta2 and (likely) Eta Muscae, as well as HD 100546, a blue-white Herbig Ae/Be star that is surrounded by a complex debris disk containing a large planet or brown dwarf and possible protoplanet. **Two further star systems have been found to have planets. The constellation also contains two Cepheid variables visible to the naked eye. Theta Muscae is a triple star system, the brightest member of which is a Wolf–Rayet star.**

A 1603 celestial globe by **Willem Blaeu** depicts *Musca* as providing nourishment for the nearby constellation *Chamaeleon*, its tongue trying to catch the insect.

The Wardaman people of the Northern Territory in Australia perceived the main stars of *Musca* as a ceremonial boomerang, a sacred area surrounding the constellation *Crux* depicts the lightning creation beings and where they teach Wardaman customs. Alpha and Beta also signified a ceremonial headband, while Gamma and Delta represented two armbands. In Central Australia, the Arrernte and Luritja people living in Hermannsburg viewed the sky as divided between them, east of the Milky Way representing Arrernte camps and west denoting Luritja camps. The stars of *Musca*, along with *Fomalhaut*, Alpha *Pavonis*, and Alpha and Beta *Gruis* were all claimed by the Arrernte





Frederick de Houtman (1571 – 1627) was a Dutch explorer who sailed along the Western coast of Australia en route to Batavia, nowadays known as Jakarta in Indonesia. He made pioneering observations of the southern stars that contributed to the creation of 12 new southern constellations.

Musca is bordered by Crux to the north, Carina to the west, Chamaeleon to the south, Apus and Circinus to the east and Centaurus to the northeast. Covering 138 square degrees and 0.335% of the night sky, it ranks 77th of the 88 constellations in size. The three-letter abbreviation for the constellation, as adopted by the International Astronomical Union in 1922, is 'Mus'. The official constellation boundaries, as set by **Eugène Delporte** in 1930, are defined by a polygon of six segments. The whole constellation is visible to observers south of latitude 14°N.

De Houtman in his Introduction to his Catalogue states that he made some observations of the southern stars on his first voyage in 1595-97 and revised and increased the number on his second voyage, 1598–1602. He included 111 stars lying in the 12 newly invented southern constellations. The bulk though, was devoted to filling out the existing Ptolemaic figures – in particular, he gave positions for 56 stars in Argo Navis and 48 in Centaurus, of which 52 were new.

He listed Crux as a separate constellation (“De Cruzero”) for the first time. The 12 new southern constellations as listed by de Houtman, with their present-day names in brackets, are as follows: Den voghel Fenix (Phoenix); De Waterslang (Hydrus); Den Dorado (Dorado); De Vlieghe (Musca); De vlieghende Visch (Volans); Het Chameljoen (Chamaeleon); Den Zuyder Triangel (Triangulum Australe); De Paradijs Voghel (Apus); De Pauww (Pavo); De Indiaen (Indus); Den Reygher – literally “the heron” (Grus); Den Indiaenschen Exster, op Indies Lang ghenaeamt – literally “the Indian magpie, named Lang in the Indies” (Tucana). In addition, he listed stars in the pre-existing constellations of Ara, Argo Navis, Centaurus, Corona Australis, Crux, Lupus, Columba (which he called De Duyve met den Olijftak – literally “The dove with olive branch”), the tail of Scorpius, and southern Eridanus, which he termed “den Nyli”, the Nile.

FACTINOS

Musca has several notable stars and deep sky objects, among them Nova Muscae 1991, the binary system with a black hole, the Spiral Planetary Nebula (NGC 5189), the Hourglass Nebula (MyCn 18), the globular clusters NGC 4833 and NGC 4372 and the Dark Doodad Nebula. Musca contains one star with known planets and has no Messier objects. There are no meteor showers associated with the constellation. The brightest star in the constellation is Alpha Muscae, with an apparent visual magnitude of 2.69. Musca belongs to the Johann Bayer family of constellations with Apus, Chamaeleon, Dorado, Grus, Hydrus, Indus, Pavo, Phoenix, Tucana and Volans.

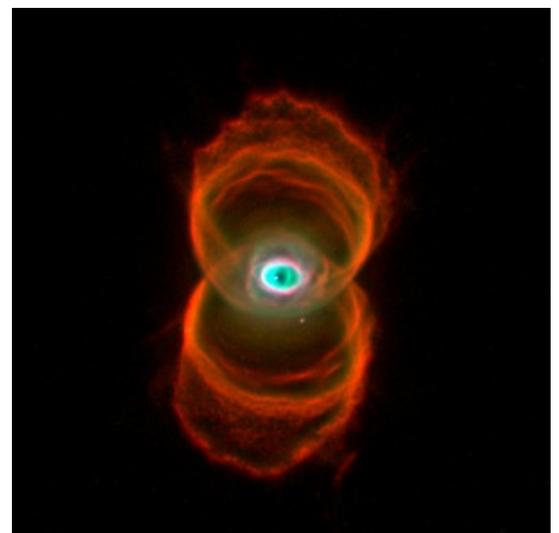


Dark Doodad Nebula

The black hole in Nova Muscae 1991 has seven times the Sun’s mass, while the companion star’s outer layers were likely blown off by the supernova explosion that produced the black hole. The Nebula is located next to the globular cluster NGC 4372, and just south of the famous Coalsack Nebula in the constellation Crux. Named by **Dennis di Cicco** visiting Australia in 1986 .



The NASA/ESA Hubble Space Telescope celebrates the holiday season with a striking image of the planetary nebula NGC 5189. The intricate structure of the stellar eruption looks like a giant and brightly coloured ribbon in space. Image: NASA, ESA and the Hubble Heritage Team (STScI/AURA)



The Hourglass Nebula (MyCn18) is a young planetary nebula located about 8,000 light years away. This artificially colored image was taken with the Wide Field and Planetary Camera 2 aboard NASA’s Hubble Space Telescope. Image: NASA, R. Sahai, J. Trauger (JPL), and The WFPC2 Science Team