

Pegasus

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Pegasus

Pegasus is the huge, oddly empty square that climbs into the eastern sky in late summer and stands high overhead on autumn evenings — the classic sign, for northern-hemisphere skywatchers, that the sky has turned to autumn. Three of its own stars and one borrowed from next door form the **Great Square**, one of the most useful asterisms in the sky both for star-hopping and, oddly, for testing how dark your sky actually is. Not circumpolar from Ohio: Pegasus rises in the east through summer, is prominent after dark from September through November, and has set by spring.

Finding it

The Great Square itself is the find: four modestly bright stars — Markab, Scheat, Algenib, and Alpheratz — enclosing a patch of sky that looks, at a glance, almost starless. From Markab, a bent line running through Zeta and Theta leads southwest to Enif, marking the horse's nose. Best seen September through November evenings, when the square stands high in the south after dark.

The stars

RA is in decimal hours, Dec in decimal degrees, both J2000 — the same figures the site's own chart is drawn from. Magnitudes are visual.

Star	R A (h)	De c (°)	Mag	Spectral type	Dis tan ce	Name
Markab (? Peg)	23 .0 79	15 .2 1	2.48	B9 III / A0 IV	~13 3 ly	Arabic <i>markab</i> , "the saddle"
Scheat (? Peg)	23 .0 63	28 .0 8	2.42 (slow, small variations)	M2.5 II–III red giant	~19 6 ly	Arabic <i>al-sa?id</i> , "the upper arm"
Algenib (? Peg)	0. 22 0	15 .1 8	2.83 (Beta Cephei-type pulsator)	B2 IV subgiant	~39 0 ly	Arabic <i>al-janb</i> , "the side"
Alpheratz (shared with Andromeda)	0. 14 0	29 .0 9	2.06	A0p	~97 ly	See Andromeda — officially an Andromeda star
Enif (? Peg)	21 .7 36	9. 88	2.39	K2 Ib supergiant	~69 0 ly	Arabic for "nose"
Matar (? Peg)	22 .7 17	30 .2 2	2.94	G2 II–III	~21 4 ly	Arabic <i>sa?d al-matar</i> , "the lucky star of rain"
Homam (? Peg)	22 .6 92	10 .8 3	3.40	B8 V	~20 4 ly	Arabic <i>sa?d al-humam</i> , roughly "the lucky star of the high-minded"

Biham (? Peg)	22 6. 3.53	A2 V + M	~92	Arabic <i>saʿd al-biham</i> , "the lucky stars of the young animals"
	.1 20	dwarf, binary	ly	
	70			

The Great Square and the star-count exercise

Four stars close the square: Markab, Scheat, and Algenib belong to Pegasus, but the fourth corner, Alpheratz, was formally reassigned to Andromeda when the International Astronomical Union fixed the modern 88 constellation boundaries in the 1920s. It still visually completes the square, and the site's own chart draws it once and shares it between both figures' outlines — a nice case of the sky not caring where a human committee drew a line.

The square's real usefulness, beyond star-hopping, is as a naked-eye light-pollution gauge. It covers a wide patch of sky that is genuinely low on bright stars, so how many faint ones you can count *inside* its four corners is a rough, quick read on how dark your sky is: roughly zero to two stars is a badly light-polluted sky, three to seven is average suburban, eight to eleven is good, and a dozen or more — up into the 20s or 30s under truly dark skies — is excellent. It costs nothing and takes under a minute, which makes it one of the few astronomy exercises anyone can do standing in a driveway.

51 Pegasi b

On 6 October 1995, Swiss astronomers **Michel Mayor** and **Didier Queloz**, using the ELODIE spectrograph at the Observatoire de Haute-Provence, announced a planet orbiting 51 Pegasi, a Sun-like star roughly 50 light years away — the first exoplanet ever confirmed around a star like our own. (A pair of planets around a pulsar had been found in 1992, but a dead star's remnant is nothing like the Sun.) The planet, a "hot Jupiter" roughly half Jupiter's mass on an orbit of just four days, was a genuine surprise: nothing like it existed in the solar system, and its discovery kicked off three decades of exoplanet hunting. Mayor and Queloz shared the 2019 Nobel Prize in Physics for the find. In 2015, as part of the IAU's first public NameExoWorlds vote, the star and planet were formally named **Helvetios** (Latin for "Swiss," a nod to the discovery team) and **Dimidium** ("half," for the planet's mass).

Deep sky

Object	Catalog	Type	Notes
—	M15 (NGC 7078)	Globular cluster	~34,000 ly away, magnitude 6.4; contains Pease 1, the first planetary nebula ever found inside a globular cluster.
Deer Lick Group's centerpiece	NGC 7331	Spiral galaxy	~38 million ly away; often shown as a stand-in for what the Milky Way might look like from outside.
Stephan's Quintet	NGC 7317–7320	Compact galaxy group	Four galaxies genuinely interacting roughly 300 million ly away; the fifth, NGC 7320, is now known to be a much closer foreground galaxy merely lined up with the others by chance.

Myth and history

Pegasus was born, according to **Hesiod's *Theogony*** (c. 700 BCE), from the blood of Medusa at the instant [Perseus](#) beheaded her — sprung fully formed along with the warrior Chrysaor, his brother. Later tradition has Pegasus striking the ground with a hoof on Mount Helicon and opening the spring Hippocrene, sacred to the Muses, and carrying Zeus's thunderbolts. One popular pairing is worth correcting plainly: Perseus never rides Pegasus in any ancient source. That role belongs to **Bellerophon**, a separate hero of a later generation, who tamed Pegasus with a golden bridle from Athena and rode him against the Chimera; the idea of Perseus astride Pegasus is a modern, post-classical conflation of two different stories. Ptolemy lists Pegasus among the *Almagest's* 48 constellations, and Eratosthenes and Hyginus both record its catasterism.

The Great Square has a documented Babylonian identity, unlike some of its neighbors: **MUL.APIN**, the Babylonian star-list compiled by around 1000 BCE, records **Iku**, "the Field" — a square marked out by these same four stars, used as a fixed marker for the start of the agricultural year. It is one of the oldest continuously recognizable star patterns on record, predating the Greek horse by many centuries. Chinese astronomers split the same territory differently again: Alpheratz and Algenib together formed **Bi**, "the Wall" — read as the eastern wall of the Emperor's palace grounds, or his private library — while Markab and Scheat formed **Shi**, "the Encampment," one of the imperial palace buildings; both gave their names to lunar mansions used to track the Moon's monthly path. The neighboring Babylonian fish figures, which also touched on this stretch of sky, are described in more detail on the [Pisces](#) page.

Key dates

Date	Event
c. 1000 BCE	MUL.APIN records Iku, "the Field" — the Great Square, already a fixed seasonal marker.
c. 700 BCE	Hesiod's <i>Theogony</i> records Pegasus's birth from Medusa's blood.
c. 150 CE	Ptolemy catalogues Pegasus among the 48 constellations of the <i>Almagest</i> .
1920s	The IAU's modern constellation boundaries formally reassign Alpheratz to Andromeda.
6 October 1995	Mayor and Queloz announce 51 Pegasi b, the first exoplanet found around a Sun-like star.
2015	51 Pegasi and its planet are formally named Helvetios and Dimidium.
2019	Mayor and Queloz receive the Nobel Prize in Physics for the discovery.

Related

- [Andromeda](#) — shares its corner star, Alpheratz, with the Great Square.
- [Perseus](#) — the hero at whose hand Pegasus was born.
- [Cepheus](#) — Andromeda's father, and the fourth corner of the same story.
- [Pisces](#) — the Babylonian fish figures that bordered this same stretch of sky.