

Canis Major

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Canis Major

Canis Major, the Greater Dog, trails at Orion's heel in the winter sky and holds Sirius, the brightest star in the night sky by a wide margin — nearly twice as bright as the next brightest, Canopus, which never rises from Ohio. From Central Ohio's latitude of about 40°N the constellation never climbs high: Sirius culminates around 33° above the southern horizon, and the dog's hindquarters — Wezen, Adhara, Aludra — stay low enough that haze and light pollution near the horizon can wash them out even on an otherwise clear night. It is visible on winter evenings from around December through March and, like [Orion](#) just to its north, is not circumpolar from Ohio.

Finding it

Orion's Belt is the reliable way in: extend the line of its three stars down and to the left (south-east, as the sky is oriented after dark) by about eight times the Belt's own length, and it lands on Sirius — unmistakable once located, since nothing else nearby is remotely as bright. Mirzam, "the announcer," sits just west of Sirius and rises a few minutes ahead of it, historically read as heralding the Dog Star's own arrival. The rest of the figure — Wezen, Adhara, Aludra, trailing away to the south-east — forms the dog's body and hindquarters and needs a genuinely dark, low horizon to see well from Ohio.

The stars

Star	RA (h)	Dec (°)	Ma g	Spectral type	Distance (ly)	Name meaning
Sirius	6.7 52	-16. 72	-1. 46	A1 V (A0mA1 Va)	8.6	Greek, "scorching" or "searing"
Mirzam	6.3 78	-17. 96	1.9 8	B1 III, Beta Cephei variable	~500	Arabic, "the announcer"
Adhara	6.9 77	-28. 97	1.5 0	B2 Iab, blue-white supergiant	~404	Arabic, "the virgins"
Wezen	7.1 40	-26. 39	1.8 3	F8 Iab, yellow-white supergiant	~1,605	Arabic, "the weight"
Aludra	7.4 02	-29. 30	2.4 5	B5 Ia, blue-white supergiant	~1,120	Arabic; likely shares its root with Adhara
Furud (?)	6.3 39	-30. 06	3.0 2	B2.5 V, spectroscopic binary	~362	Arabic, usually read "the solitary star"
? Canis Majoris	7.0 64	-15. 63	4.1 1	B8 II	~441	sometimes called Muliphein; meaning disputed

Sirius, the Dog Star

Sirius is a main-sequence A-type star, 8.6 light-years away — among the dozen or so nearest star systems to the Sun, and by far the closest one that outshines everything else in the sky. Its brilliance is the combination of two ordinary facts: it is intrinsically about 25 times the Sun's luminosity, and it is close.

Sirius B, and predicting a star before seeing it

Sirius has a white dwarf companion, Sirius B, found by a method nearly as remarkable as the object itself. In an 1844 letter, the German astronomer and mathematician Friedrich Bessel noticed that Sirius's motion across the sky was not a straight line but a slight wobble, and deduced from that wobble alone that an unseen companion star was orbiting it — no light from a second star had been detected. Eighteen years later, on 31 January 1862, the American telescope-maker Alvan Graham Clark found it anyway, while testing a new 18.5-inch refractor built for Dearborn Observatory: the companion turned up almost exactly where Bessel's arithmetic said it should be. Sirius B is a white dwarf, the collapsed, Earth-sized core left behind after a star has burned through its nuclear fuel — one of the first ever identified, and a direct confirmation that a purely mathematical prediction had been right.

The heliacal rising, the Egyptian calendar, and the dog days

Sirius disappears from the pre-dawn sky for about seventy days a year, then reappears — its heliacal rising, the first morning it is visible again low in the east just before sunrise. In ancient Egypt that reappearance fell close to the start of the Nile's annual flood and was tracked as a fixed point in the year: because Sirius sits well off the ecliptic, its heliacal rising recurs on a cycle very close to the true 365.25-day solar year, which made it a more reliable seasonal marker than Egypt's own 365-day civil calendar, which drifted against the seasons over time. Sirius was worshipped in this role as the goddess Sopdet, described as the guarantor of the land's fertility. The Greeks and Romans, watching the same reappearance in their own more northerly summer sky, associated it instead with the season's oppressive heat — the origin of "dog days," *dies caniculares*, for the weeks around Sirius's own midsummer rising.

A red Sirius?

Several classical authors — Ptolemy in the *Almagest*, Aratus, Cicero, Germanicus, Seneca — describe Sirius as red or reddish. Sirius today is unambiguously white with a blue tinge, an A-type main-sequence star, and there is no plausible way for a star like it to change colour on a timescale of two thousand years; stellar evolution simply does not work that fast for a star like this one. Other ancient writers contradict the red description outright — Manilius and Avienius call it sea-blue, and Chinese records from the same era consistently describe it as white — so the "red Sirius" problem is not a unanimous ancient testimony contradicted by modern observation, but a genuine disagreement inside the ancient sources themselves. The most carefully argued modern account, a 1999 study by the astronomer D. C. B. Whittet, concludes that atmospheric extinction — the reddening any star undergoes when observed low near the horizon, exactly the conditions of a heliacal rising — fits the physical evidence better than any change in the star itself. That is a strong argument, not a settled one; the ancient testimony remains genuinely disputed among historians of astronomy, and this page does not pretend otherwise.

Myth and history

Greek myth gives Canis Major several identities rather than one: Hyginus's *Astronomica* names it among the hunting dogs, sometimes specifically Laelaps, a hound so fast that Zeus fixed it in the sky rather than let it run forever; other tellings simply pair it with Orion as his dog, hunting the hare (Lepus, just to its west) or facing down Taurus. None of these carries the weight of settled doctrine — this is catasterism, literary and retrospective, in the same vein as most of the Greek layer over this stretch of sky.

The constellation's deeper history runs through its brightest star rather than through Greek myth.

Babylonian astronomy called Sirius KAK.SI.SA (Sumerian) or KAK.SI.DI (Akkadian) — the Arrow Star — grouping it with nearby stars into a larger asterism sometimes read as a bow and arrow aimed across the sky, tracked in MUL.APIN for its role marking the calendar. In Egypt, as Sopdet, Sirius was one of the most consistently important stars in the whole religious calendar, paired with Sah-Orion as consort long before Sopdet was folded into Isis.

Deep sky

Canis Major has nothing to match its neighbour's showcase nebula, but M41 (NGC 2287), an open cluster about 4° south of Sirius — close enough to find by star-hopping directly off it — is an easy binocular target and visible to the naked eye under a genuinely dark sky: a loose scattering of roughly 100 stars, including a handful of orange giants standing out against the rest.

Key dates

Date	Event
c. 1000 BCE (<i>compiled; earliest surviving copy 686 BCE</i>)	MUL.APIN records Sirius as KAK.SI.DI, the Arrow Star, and uses its rising as a calendar marker.
c. 150 CE	Ptolemy catalogues Sirius in the <i>Almagest</i> , describing it — along with several other classical authors — as reddish, a description modern Sirius does not match.
10 August 1844	Friedrich Bessel writes to the Royal Astronomical Society, deducing an unseen companion from irregularities in Sirius's proper motion.
31 January 1862	Alvan Graham Clark becomes the first person to see Sirius B, while testing a new refractor for Dearborn Observatory.
1999	D. C. B. Whittet publishes the most thorough modern argument on the "red Sirius" anomaly, favouring atmospheric extinction over any change in the star itself.

Related

- [Orion](#) — the hunter Canis Major follows; find Sirius by extending the Belt.
- [Canis Minor](#) — the smaller dog, sharing the Winter Triangle with Sirius.
- [Auriga](#) — Capella, the fourth bright anchor of the Winter Hexagon that also includes Sirius.
- [Leo](#) — the zodiac sign whose "dog days" are named for Sirius's rising, not for the lion.