

Orion the Hunter

Learning Leaflet: Constellations

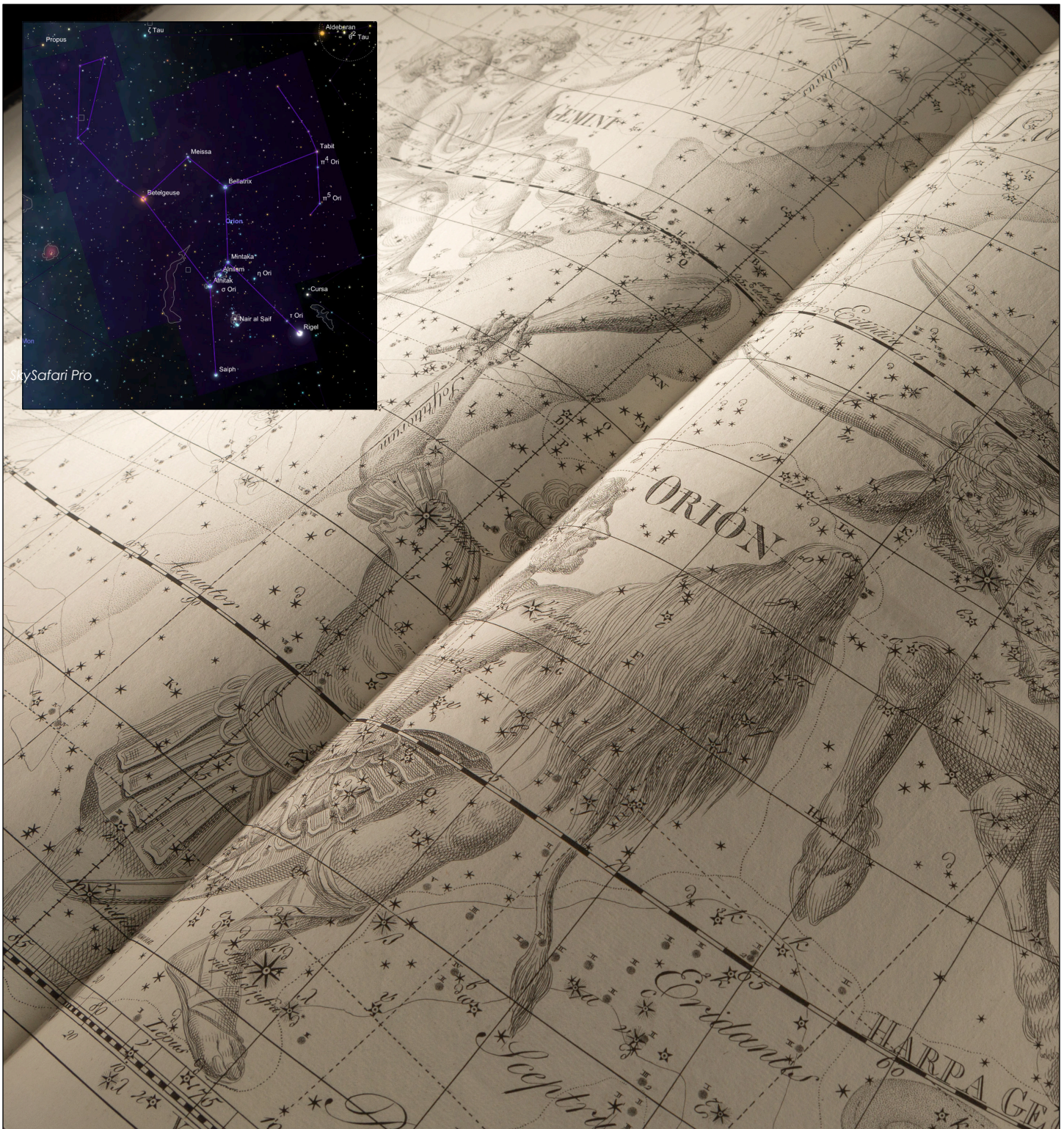
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Size: 26 of 88. Region: Equatorial. Season: Winter.
Origin: Eudoxos of Knidos, Aratos of Soli, and Ptolemy



Johann Bode, *Uranographia* (Berlin, 1801)

Exhibit: Galileo's World | Galleries: Music of the Spheres; The Sky at Night, no. 17;
Space Science after Galileo (any celestial atlas)

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Is the star pattern the same? the constellation figure?



Johann Bayer, *Uranometria* (Ulm, 1661)



Urania's Mirror (London 1825)



Galileo, *Sidereus nuncius* (Venice, 1610)

Orion the Hunter

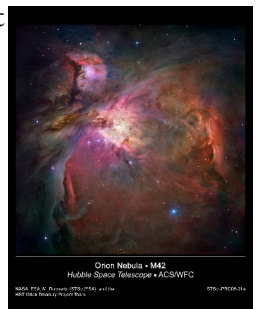
Three stars in a row make up Orion's belt, within a rectangle of four bright stars representing his shoulders and feet. Since Orion's belt of three bright stars lies nearly upon the celestial equator, Orion is visible from every inhabited part of the globe.

In Greek mythology, Orion the Hunter boasted that he would slay all animals on earth. To prevent this, Gaia sent Scorpius to kill him first. Now they move eternally on opposite sides of the starry sky.




Bayer (first published 1603) showed the star patterns as they appear from the Earth (rather than from the outside, as on a celestial globe). However, he sometimes reversed the constellation figures, drawing them as seen from the back, which created potential confusion. For example, the star Rigel, described by Ptolemy as the left foot of Orion, became Orion's right foot in Bayer's figure, even though the star pattern remained the same as seen from Earth.

When Galileo observed the belt and sword of Orion the Hunter, and the Pleiades star cluster on the back of Taurus the Bull, the background of night gave way before his eyes: his telescope resolved an astonishing number of unexpected stars never seen before, including 80 new stars near the belt and sword of Orion.

A sword hanging from Orion's belt at first sight looks like three stars, but the middle one is ill-defined. With binoculars one may discern that it is not a star, but a cloudy region, called the Great Orion Nebula (M42, mag. 4.0). A powerful telescope reveals the nebula to be a giant cloud of luminous gas, a cosmic nursery where stars are now being born. Through the Hubble Space Telescope the Great Orion Nebula becomes a colorful and awesome spectacle, over 20,000 times larger than our solar system. (Credit: NASA)



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