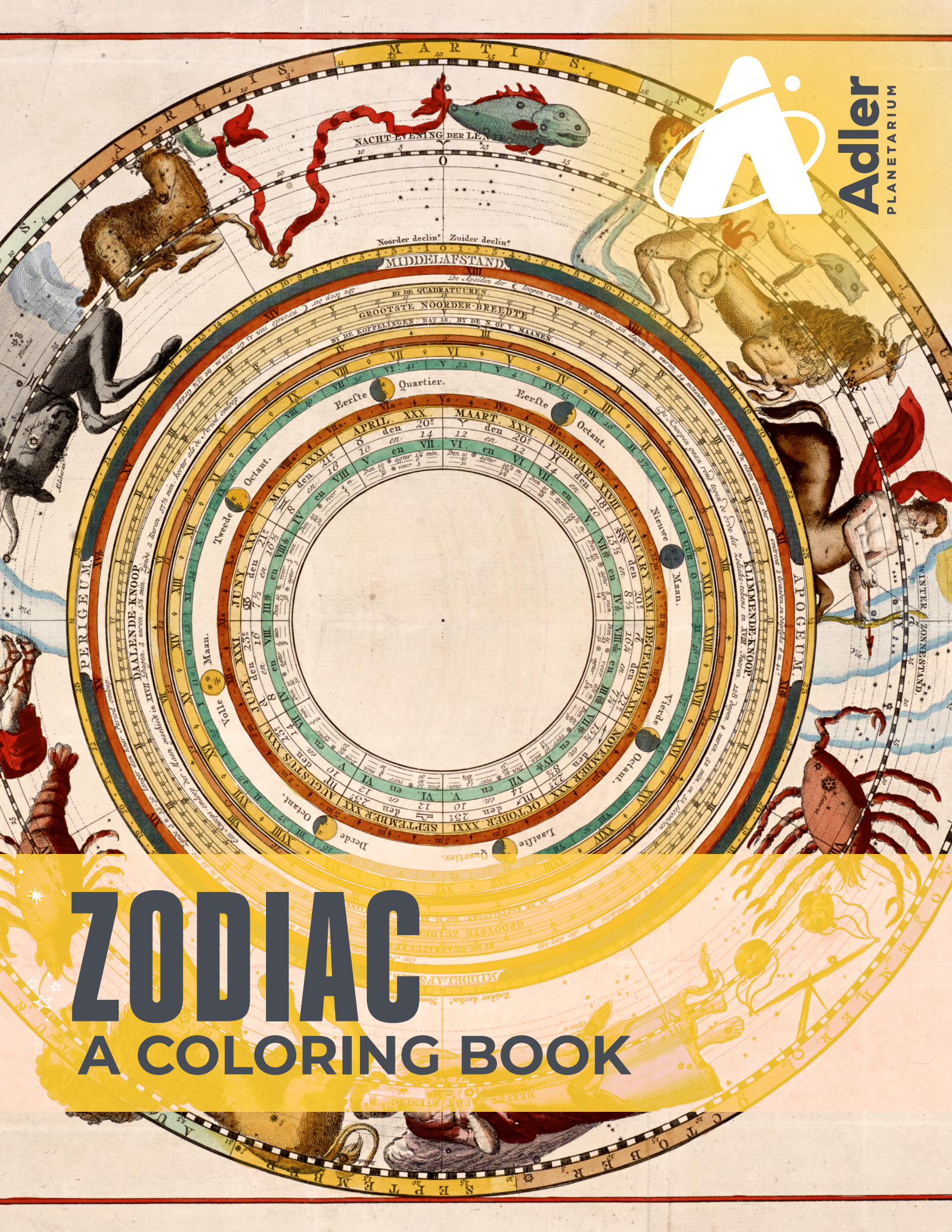




Adler
PLANETARIUM



ZODIAC

A COLORING BOOK



This book features depictions of the Western zodiac constellations sourced from the collections of the Adler Planetarium. They illustrate how the same constellations have been represented through history in a variety of artistic styles.

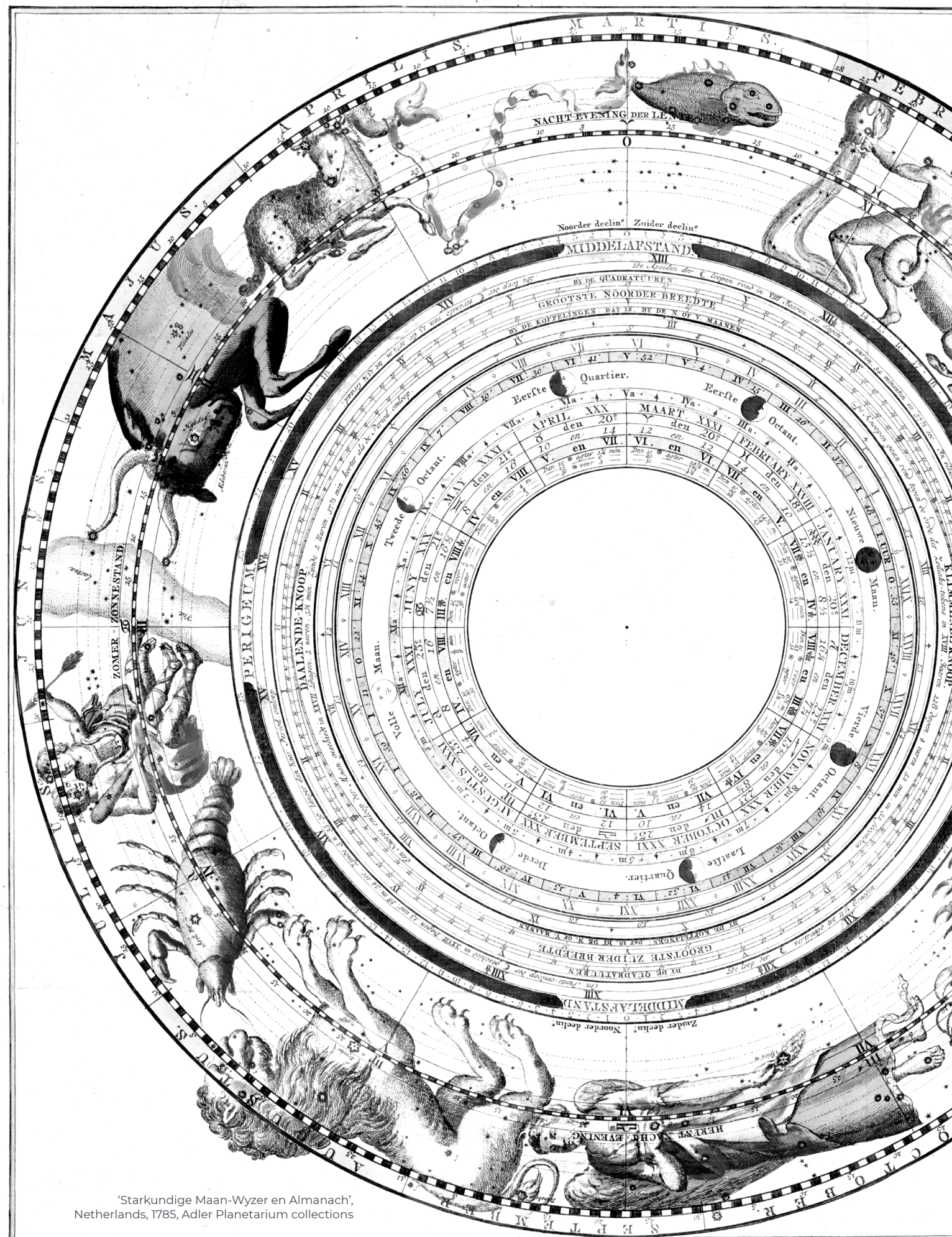
Because of their place in our sky, the zodiac constellations have played a special role in the history of Western astronomy and astrology. They form an imaginary band of constellations in the sky centered on the ecliptic — the apparent path of the Sun across the sky, and where the Moon and planets of our solar system are also observed from Earth.

The Western zodiac constellations as we know them today have their roots in the ancient civilizations of Mesopotamia and were included in the works of scholars and instrument makers in both ancient Greece and the Islamic world, making possible the development of calendars, timekeeping, and the study of planetary motion. In the 16th century, the zodiac became a part of Western celestial mapping and in the 1920s the twelve constellations of the zodiac became part of a standard list of 88 constellations established by the International Astronomical Union.

In Western astrology, the zodiac has acted as a crucial feature to those seeking to interpret connections between what is happening in the sky, earthly events, and the temperaments and fortunes of individuals. In fact, it must be noted that several other systems of constellations were developed and used around the world. In Eastern Asian culture, the concept of 'zodiac' includes a cycle of animals ascribed to specific calendar years. There are many zodiacs, and no limits to the imagination for coming up with new ones.

Constellations are creations of human culture, and as such, their meanings, depictions, and significance change over time both as cultures change, and as astronomy advances. One additional constellation, Ophiuchus — often referred to as the 13th member of the Western zodiac, is included here to illustrate this.

We hope that this coloring book will contribute to an appreciation of the human exploration of the universe in its various forms and cultural manifestations. These images were edited to make space for you to pick up your favorite coloring tools and make your mark on the collective interpretations of the zodiac. Share your zodiac constellation coloring book pages with us on social media! Tag **@adlerplanet** + **#SpaceColoringBook** with a picture of your artistic creation on your favorite social media channels!





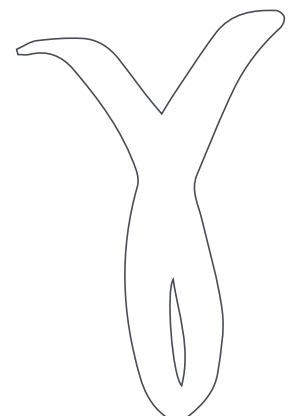
ARIES, THE RAM

Between 500-100 BCE, when the zodiac and the Western constellations as we know them today were taking shape, the Aries constellation contained the vernal equinox—the point where the Sun is located in the sky when springtime begins in the Northern Hemisphere. The vernal equinox is an important element in the construction of calendars, and so the Western zodiac starts in Aries.

In Greek mythology, Aries is associated with the myth of Jason and the Argonauts' quest for the fleece of a golden, winged ram—eventually turned into a constellation with the wings left off. The illustration on top, taken from a 19th-century star chart, shows a typical depiction of Aries, with the ram in a crouched position. The depiction at the bottom is from an early printed book where it served to illustrate the text, not to show the actual positions of the stars as observed in the sky.



'The Constellations - No.1: Aries, Cetus, Pegasus, Andromeda, Aquarius', 1830, Adler Planetarium library





TAURUS, THE BULL

The image on top, from a 17th-century celestial atlas, presents a typical depiction of Taurus, the Bull as if seen looking down at the surface of a celestial globe. It portrays the animal advancing towards Orion the Hunter (a prominent Western constellation based on Greek mythology), visible in the lower right corner.

The bull's face lies over a V-shaped group of stars called the Hyades. The V can be extended to two bright stars marking the tips of the bull's horns. The star corresponding to the left eye of the bull is Aldebaran, a name of Arabic origin meaning "follower" because Taurus appears to be following the Pleiades, a star cluster to the left of the bull's ear.

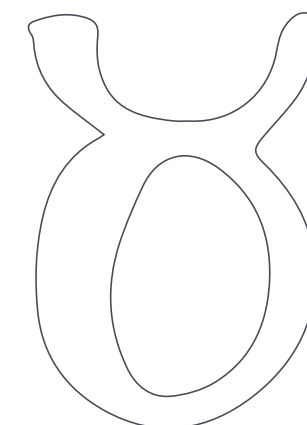
The second illustration, dating to the late 15th century, shows Taurus in a similar fashion, but here the star symbols have a purely decorative function.



Johannes Hevelius, *Firmamentum Sobiescianum, sive, Uranographia* (Gdansk, 1690), Adler Planetarium library



Clarissimi uiri Iginij Poeticon astronomicon (Venice, 1482), Adler Planetarium library





GEMINI, THE TWINS

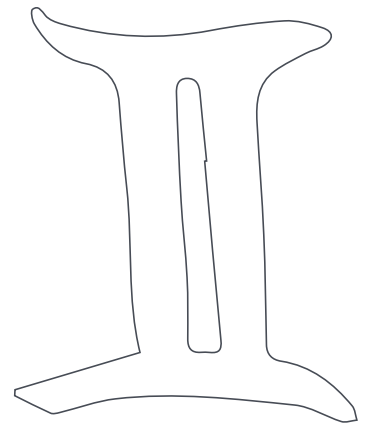
Gemini represents Castor and Pollux, the twin sons of Zeus in Greek mythology. Castor and Pollux are also the names given to the two brightest stars in this constellation, each marking the head of a twin.

The depictions of Gemini included here differ substantially in style. The illustration on top, from a 17th-century star map, presents the Twins unclothed. The other image, from an 18th-century celestial atlas, is more elaborate and associates this area of the sky with Hercules and Apollo. The club held by the twin on the left represents Hercules, while the lyre and the arrow held by the other twin are attributes of Apollo.

In both depictions, the Twins are shown in a close embrace. Castor and Pollux were said to always consult each other on every action, without ever getting into a quarrel.



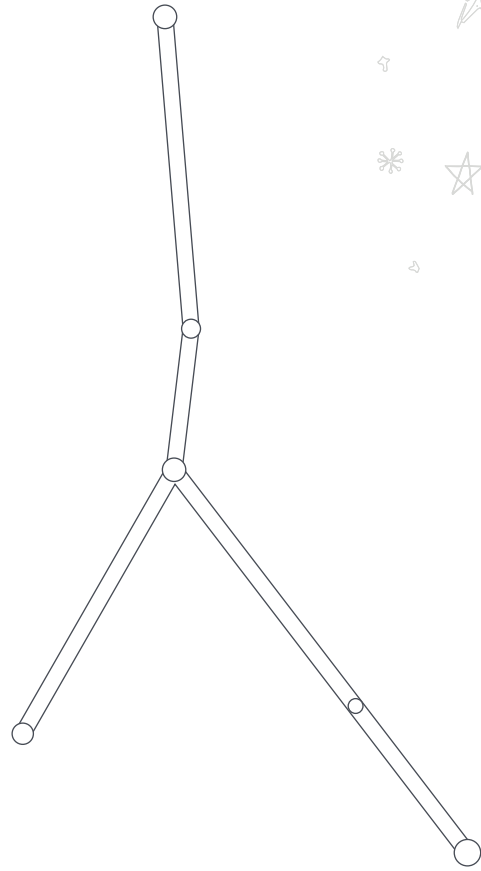
Caspar Hersbach, 'Eigentliche verzeichnus deises im Jahr 1618...', Cologne, Germany, 1618, Adler Planetarium collections



Jean Fortin, *Atlas céleste de Flamsteed* (Paris, 1795), Adler Planetarium library



CANCER, THE CRAB

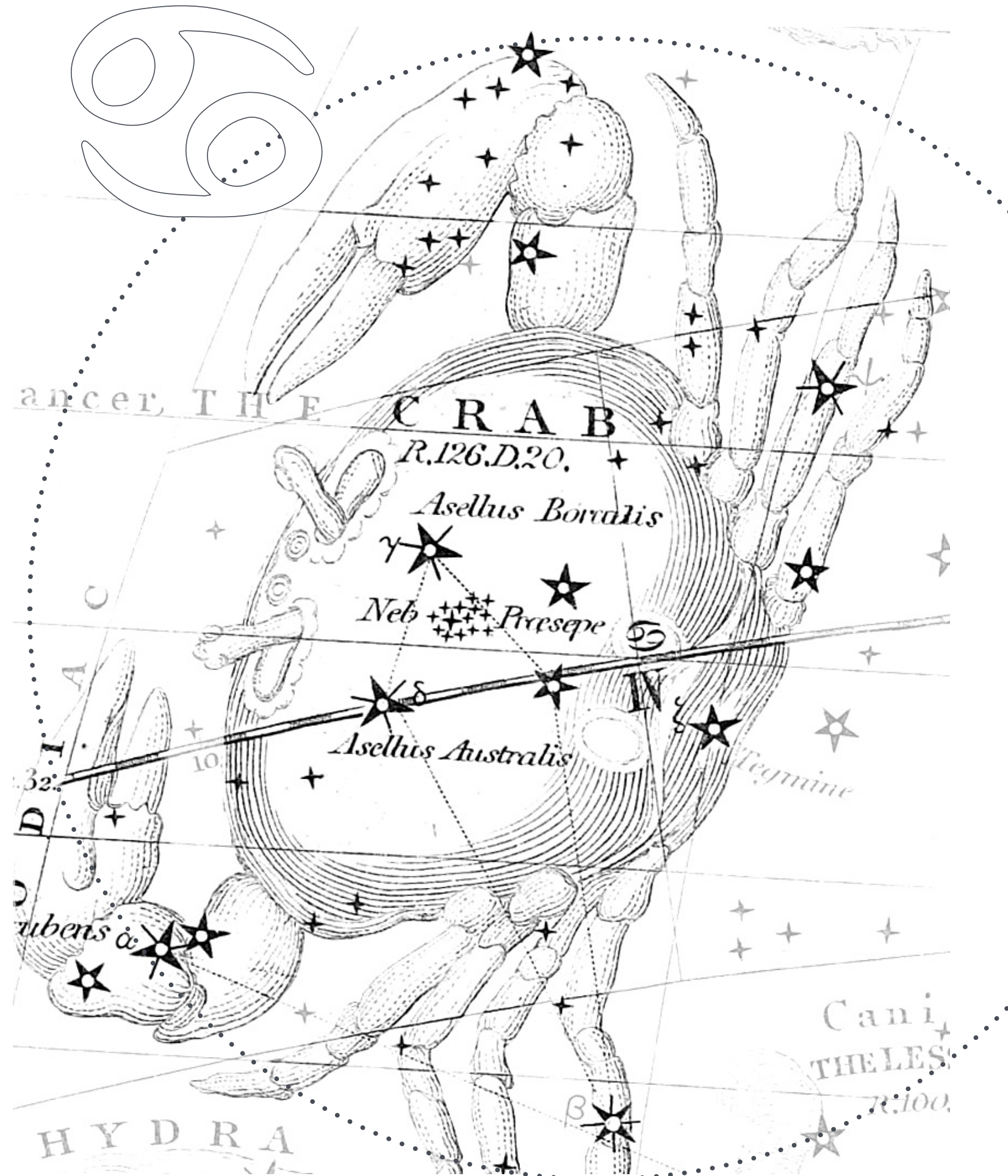


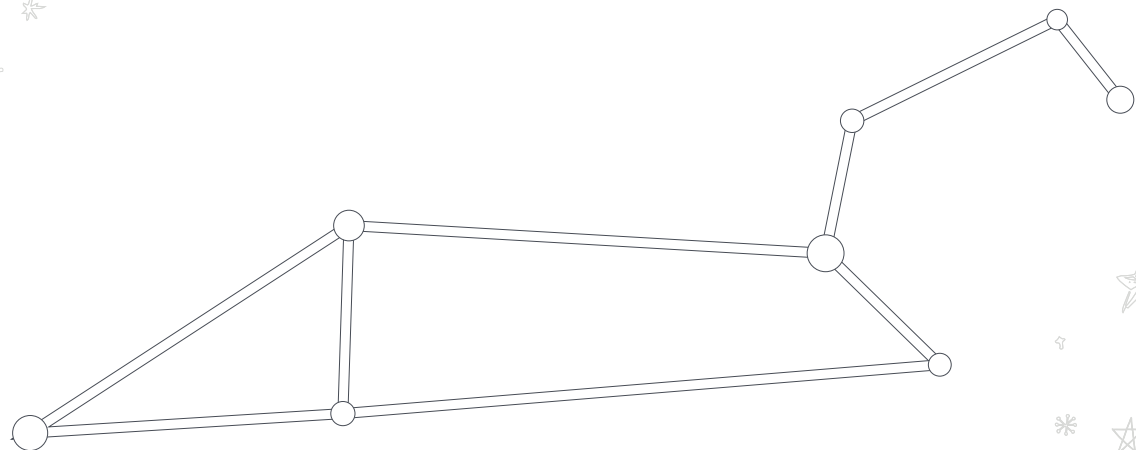
In Greek mythology the Crab emerged from a swamp while the hero Hercules fought against Hydra, a multi-headed monster. Upon being bit on the foot by the Crab, Hercules crushed it, and the animal was then placed among the stars.

This illustration is taken from a 19th-century star chart and shows the Crab with a remarkable degree of realism. Earlier depictions sometimes showed Cancer as more of a lobster than a crab. Of note in this image is the star cluster known as the Beehive, roughly at the center of the Crab's shell, labeled with its Latin name, 'Praesepe'.

The constellation Cancer was once of great importance as the Sun was positioned in Cancer during the June solstice, marking the beginning of summer in the Northern Hemisphere (changing over time and now taking place with the Sun in Taurus). The circle over which the Sun passes overhead at noon during the June solstice is still named the Tropic of Cancer for this reason.

Elijah H. Burritt, *Atlas, designed to illustrate the geography of the heavens*, 1835, Adler Planetarium collections

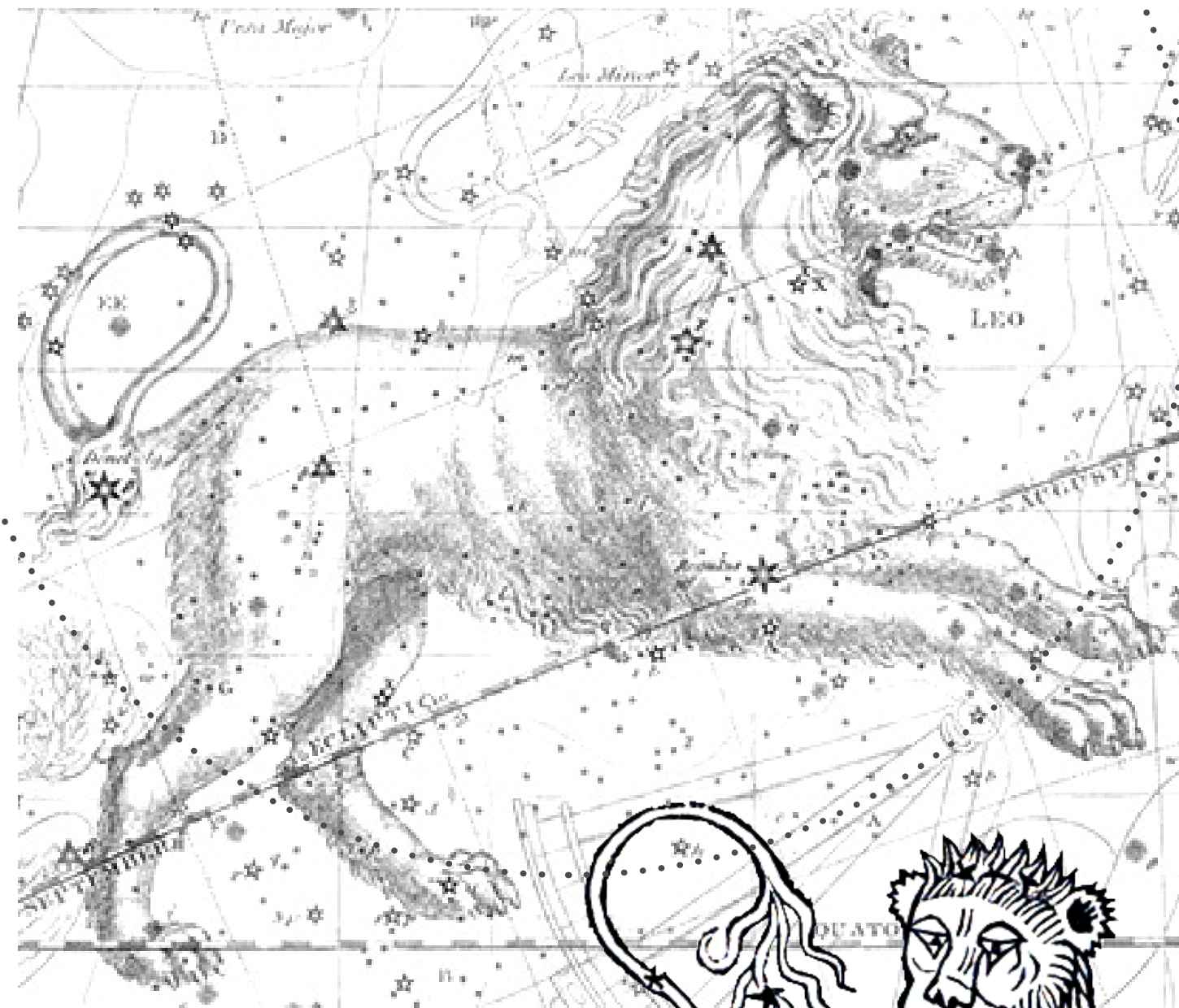




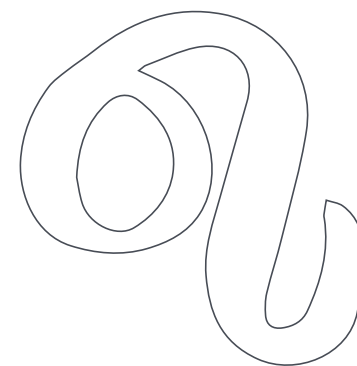
LEO, THE LION

In the ancient civilizations of Mesopotamia, the lion represented the power of kings and artistic representations of this animal were often used as symbols of protection. Given its importance, it's unsurprising that Mesopotamians saw a lion in the sky. In Ancient Greece, this constellation would become associated with the lion slain by Hercules as part of his twelve labors.

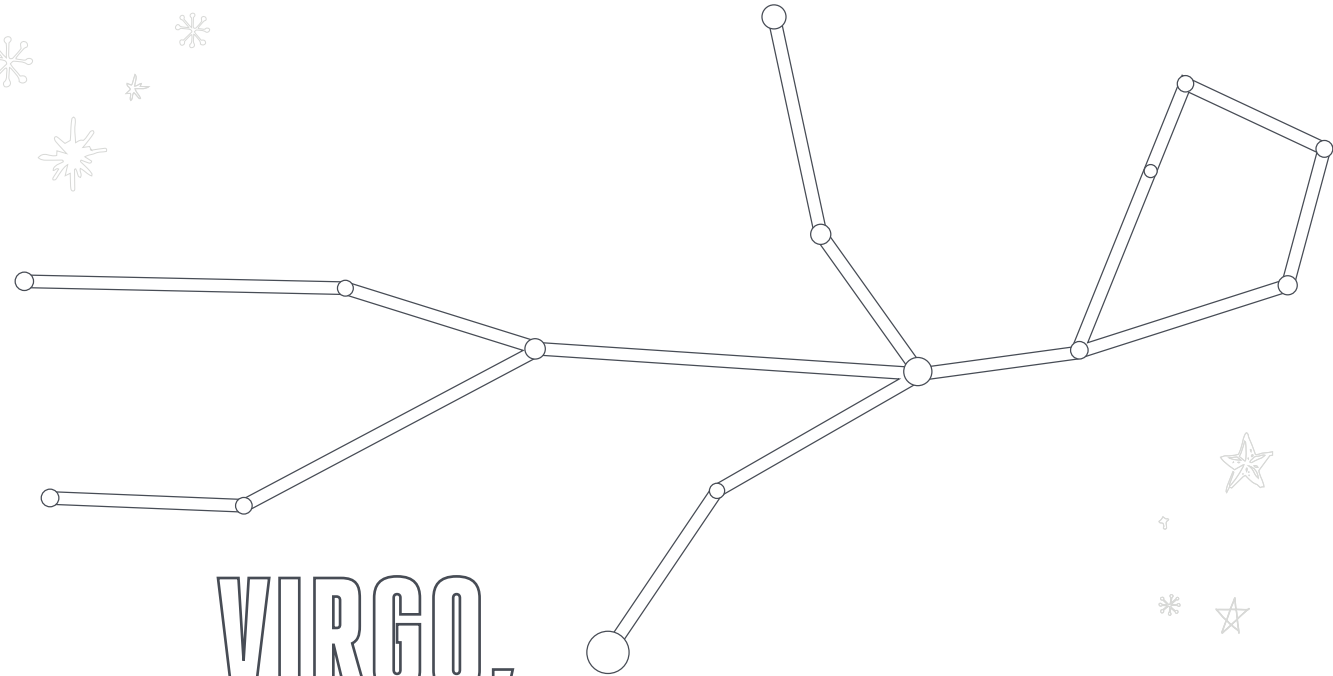
Leo is one of the very few Western constellations where the pattern formed by its brightest stars does look roughly like the animal depicted - a crouched lion. However, as is often the case with old depictions of animal constellations, the resemblance between renditions of Leo and an actual lion varies significantly. The 19th-century star map on top shows a somewhat realistic lion, though it also resembles a hopping dog. The 15th-century rendition at the bottom offers a more fanciful portrayal, which nonetheless captures the imposing character of the animal.



Alexander Jamieson, *A celestial atlas* (London, 1822), Adler Planetarium library



Arati phaenomena (Venice, 1488), Adler Planetarium library



VIRGO, THE VIRGIN

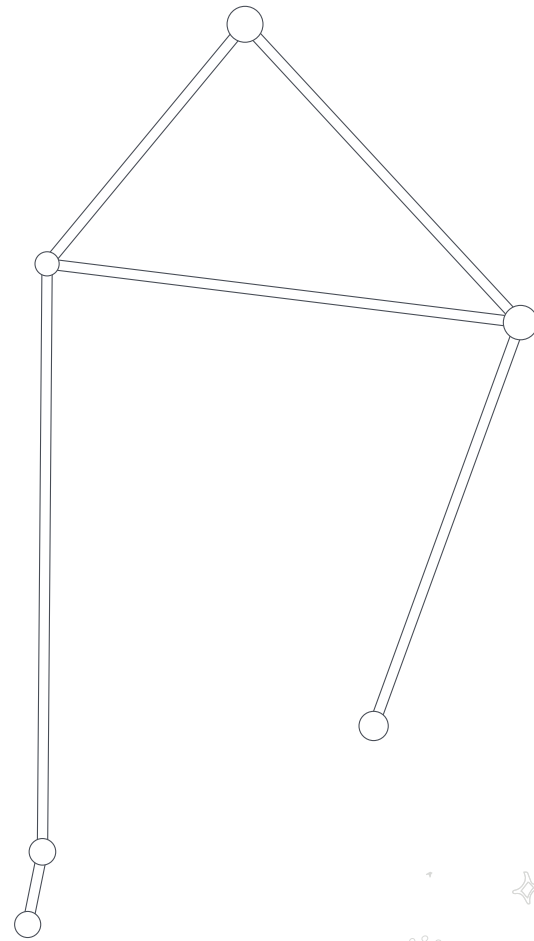
Virgo, the Virgin is one of the largest modern Western constellations. It has been associated with Shala, the Sumerian goddess of fertility and compassion; with Demeter, the Greek goddess of harvest and fertility; and then again with Ceres, Demeter's Roman counterpart. The Latin name of Virgo's brightest star, Spica (meaning "ear of grain") aligns with these attributions. Representations of Virgo often feature a winged female figure holding an ear or sheaf of wheat placed over Spica, as in the 19th-century illustration on top.

The second illustration, in which the stars are purely decorative and not accurately depicted, dates to the 15th century and shows Virgo holding what looks like a sheaf of wheat in one hand and a caduceus (a staff entwined by two serpents) in the other hand. The caduceus is commonly associated with the act of healing.





LIBRA, THE SCALES

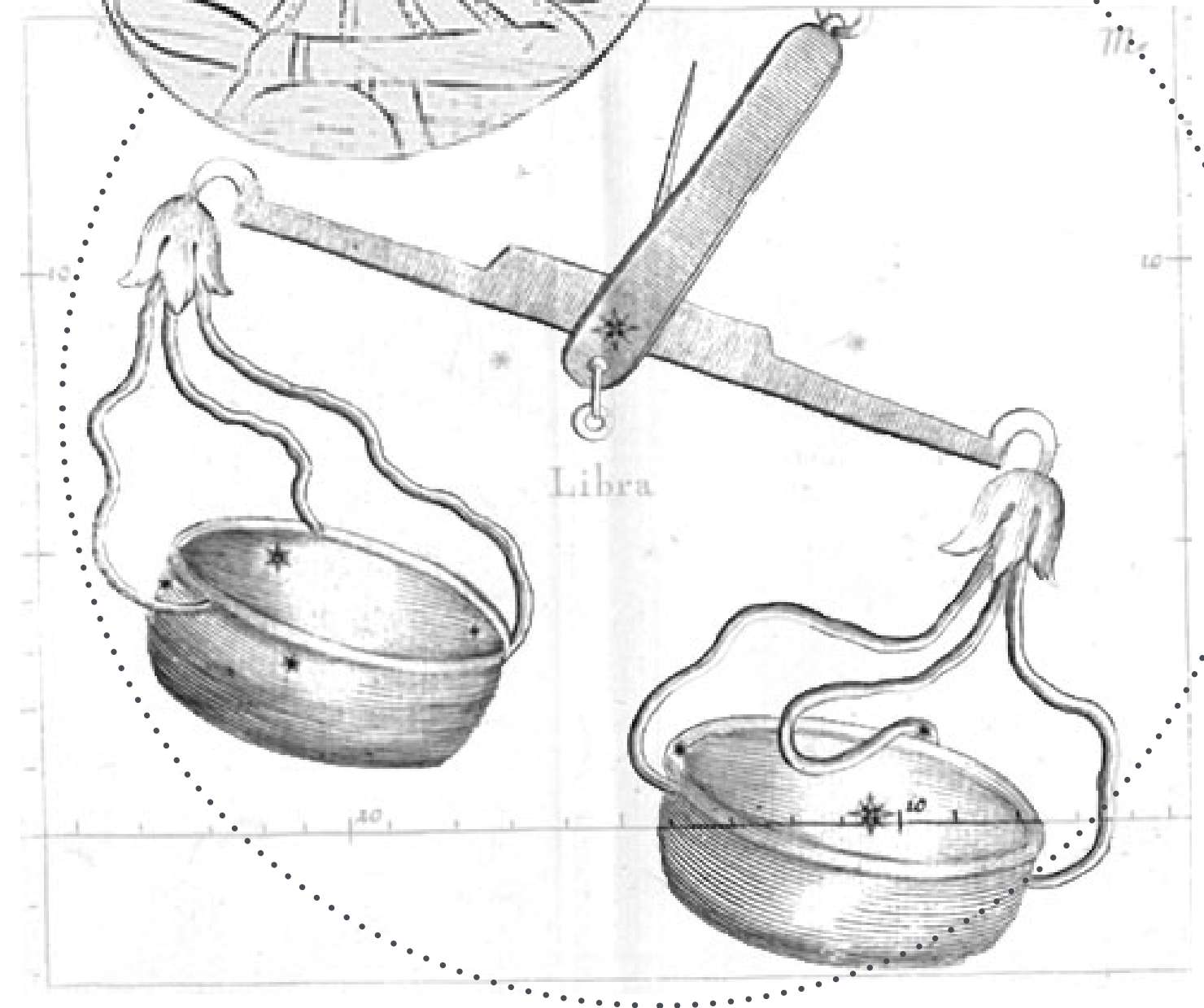
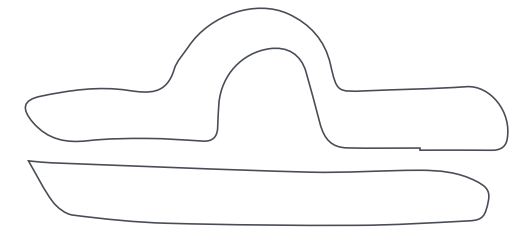


Libra stands out in the Western zodiac as the only constellation representing a human-made object, a pair of scales, while all the other zodiac constellations are associated with either animals or mythical entities. Libra was once part of Scorpius, the Scorpion, with two of its brightest stars marking the Scorpion's claws. This is reflected in their names: Zubeneshamali, from the Arabic for 'the northern claw', and Zubenelgenubi, 'the southern claw'.

In ancient times the Sun was in Libra at the September equinox, marking the beginning of fall in the Northern Hemisphere (which now happens with the Sun in Virgo). The length of day and night are equal in the equinoxes, and that might have favored the association of this area of the sky with a pair of scales symbolizing the balance between daytime and nighttime. The larger illustration shown here is from an 18th-century star chart and presents a typical depiction of Libra. The other rendition, taken from a 17th-century Persian celestial globe, is less common; it includes a human figure that holds the scales like a yoke.



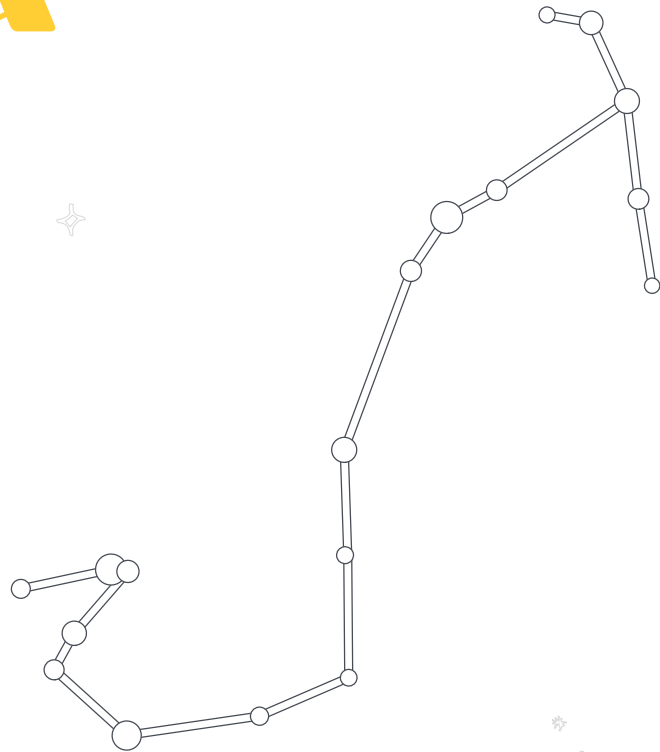
Celestial globe, unknown maker,
Iran, 1603-4, Adler Planetarium collections



Nicolas Bion, *L'usage des globes celestes et terrestres*
(Paris, 1721), Adler Planetarium library



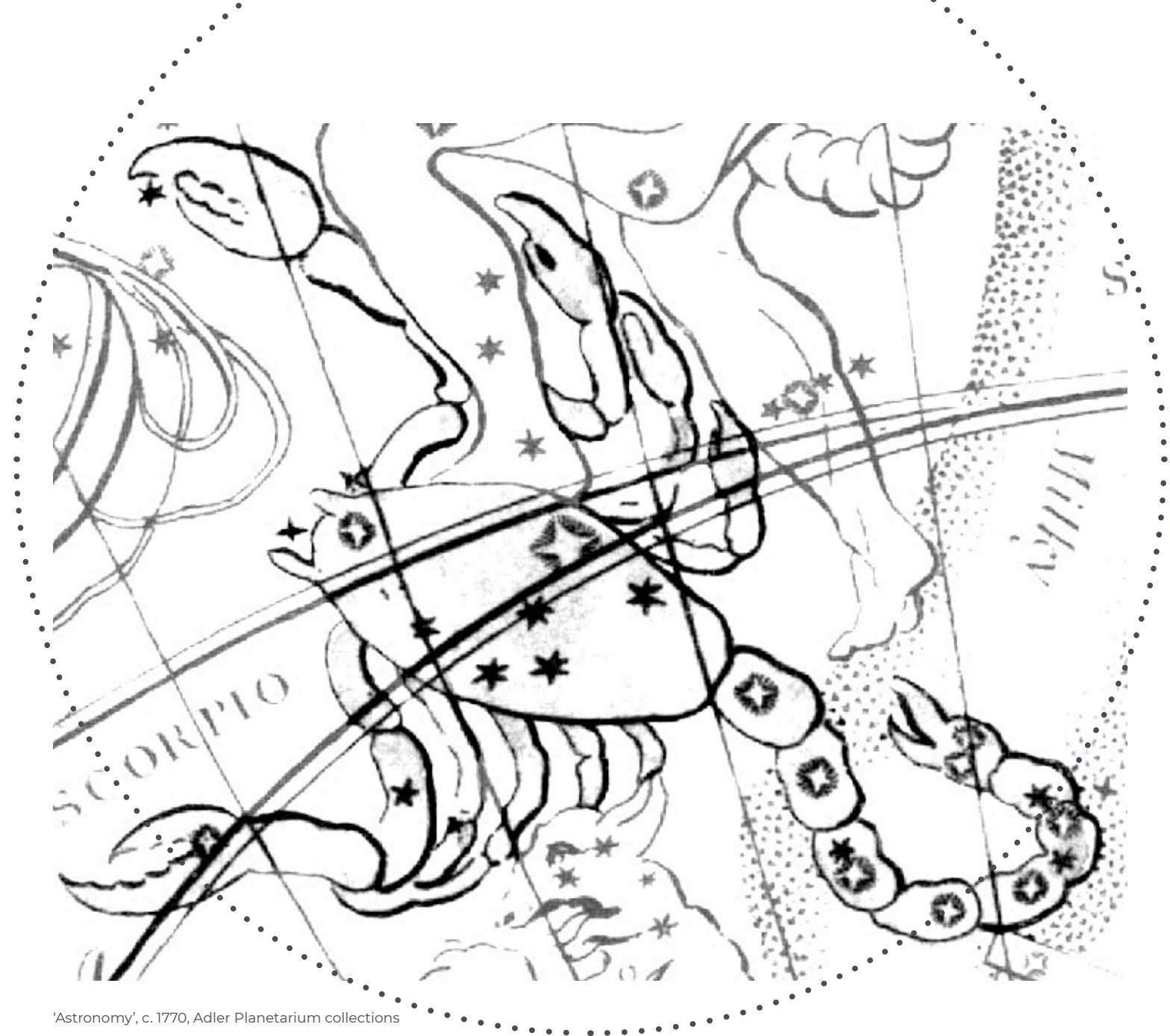
SCORPIUS, THE SCORPION



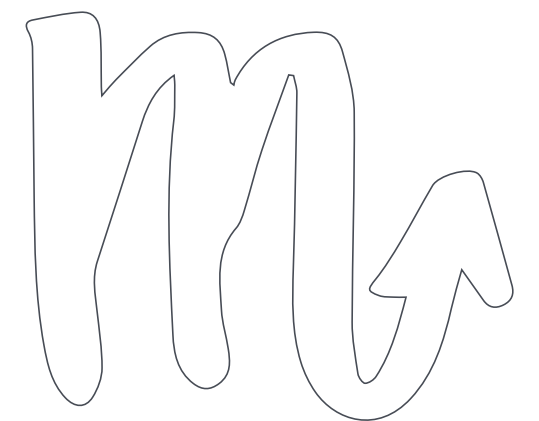
In Scorpius (Scorpio in Western astrology), the brightest stars of the constellation clearly suggest the form of the scorpion it is named for. It is not difficult to discern the tail and stinger of a scorpion in the curved line of stars that stands out in this area of the sky with the bright, reddish-orange star named Antares at its heart. Its name alludes to a resemblance in color to the red planet Mars (“Ares” in Greek).

The association of this area of the sky with a scorpion actually goes back in time to Mesopotamia. For the ancient Greeks, it represented the scorpion that stung Orion, the Hunter — with the apparent rotation of the celestial sphere giving the impression that Scorpius and Orion are chasing each other endlessly from opposite sides of the sky for all eternity.

The illustration included here is taken from an 18th-century star map. Similarly to one of the previous illustrations for Taurus the Bull, it shows Scorpius from an external perspective, as if seen looking down at a celestial globe.



'Astronomy', c. 1770, Adler Planetarium collections

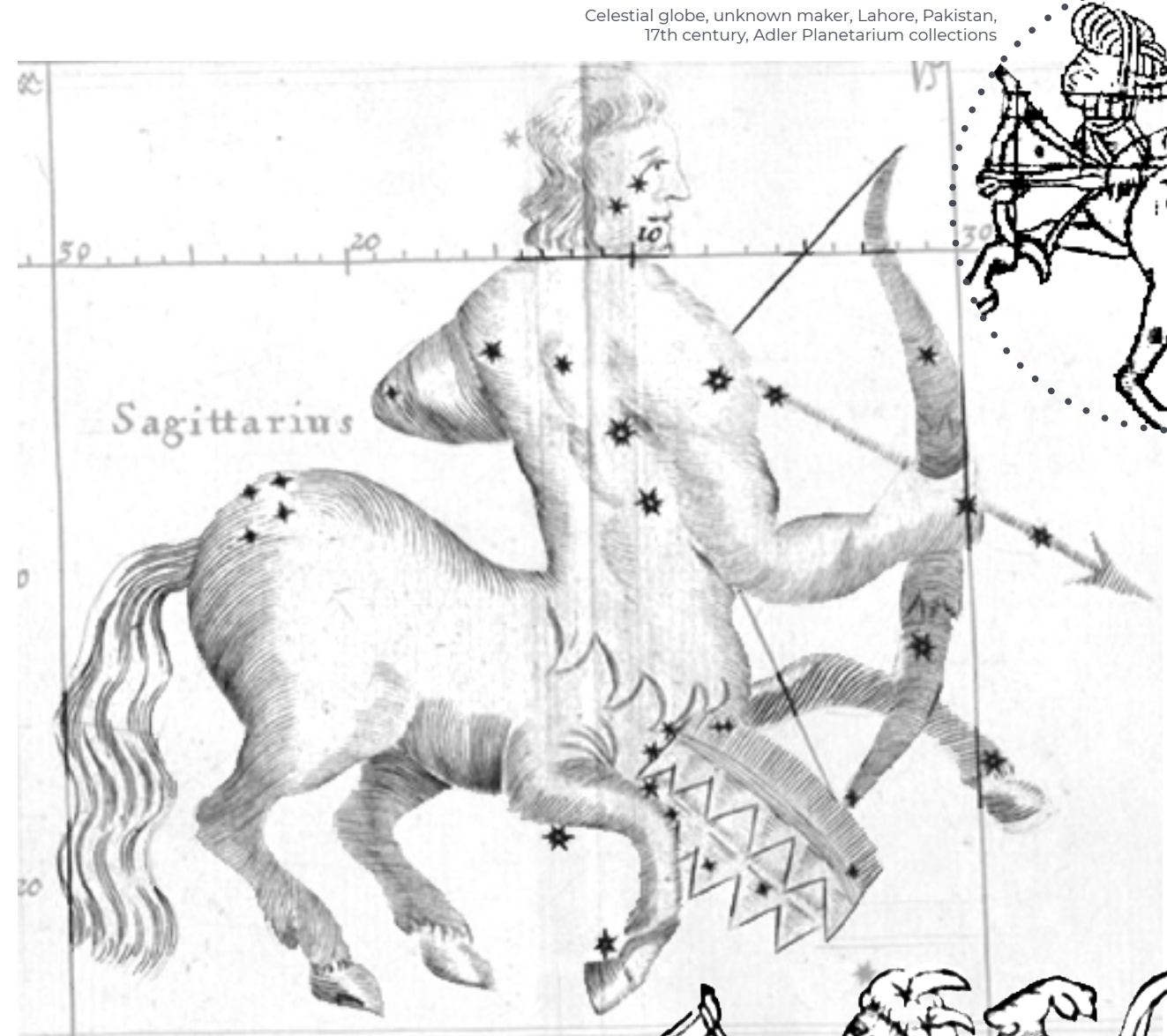
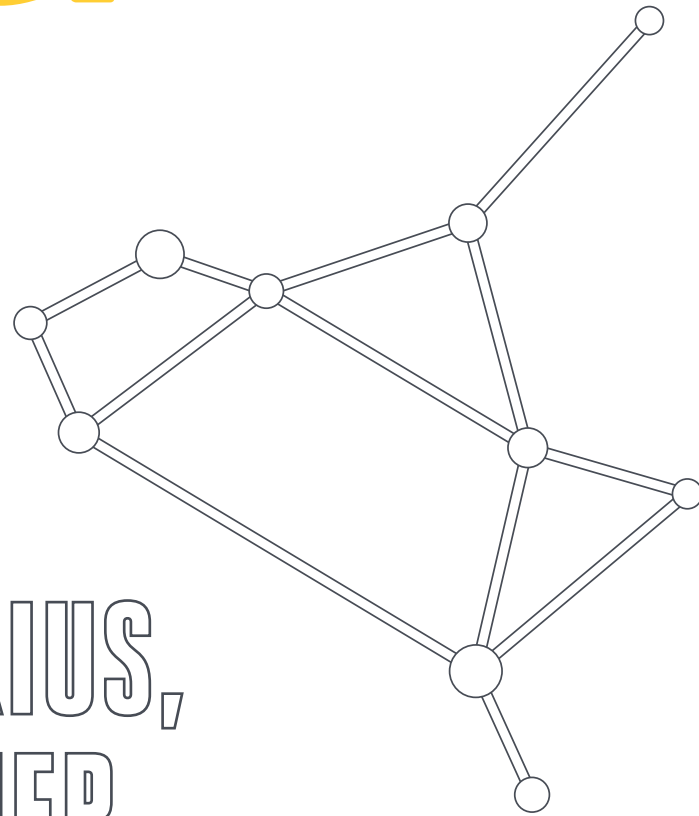




SAGITTARIUS, THE ARCHER

For the Sumerians, this area of the sky corresponded to a god of war and hunting; a centaur-like archer with wings. The ancient Greeks discarded the wings but kept the remainder of the figure. The three renditions presented here testify to the typical and enduring representation of Sagittarius as a centaur drawing a bow.

The larger illustration on top left is from a star map included in an 18th-century textbook on astronomy and geography. It differs in style from the 16th-century rendition at the bottom, which includes star symbols just for decorative effect. The rendition on top right is taken from a 17th-century celestial globe made in Lahore (now in Pakistan). It reflects the combined influence of Arab, Persian, and Indian cultures in the arts and sciences during the Mughal empire, which extended over the Indian subcontinent between the 16th and the 19th centuries.



Celestial globe, unknown maker, Lahore, Pakistan, 17th century, Adler Planetarium collections

Nicolas Bion, *L'usage des globes celestes et terrestres* (Paris, 1721), Adler Planetarium library



Astronomica veterum scripta isagogica Graeca & Latina (Heidelberg, 1589), Adler Planetarium library

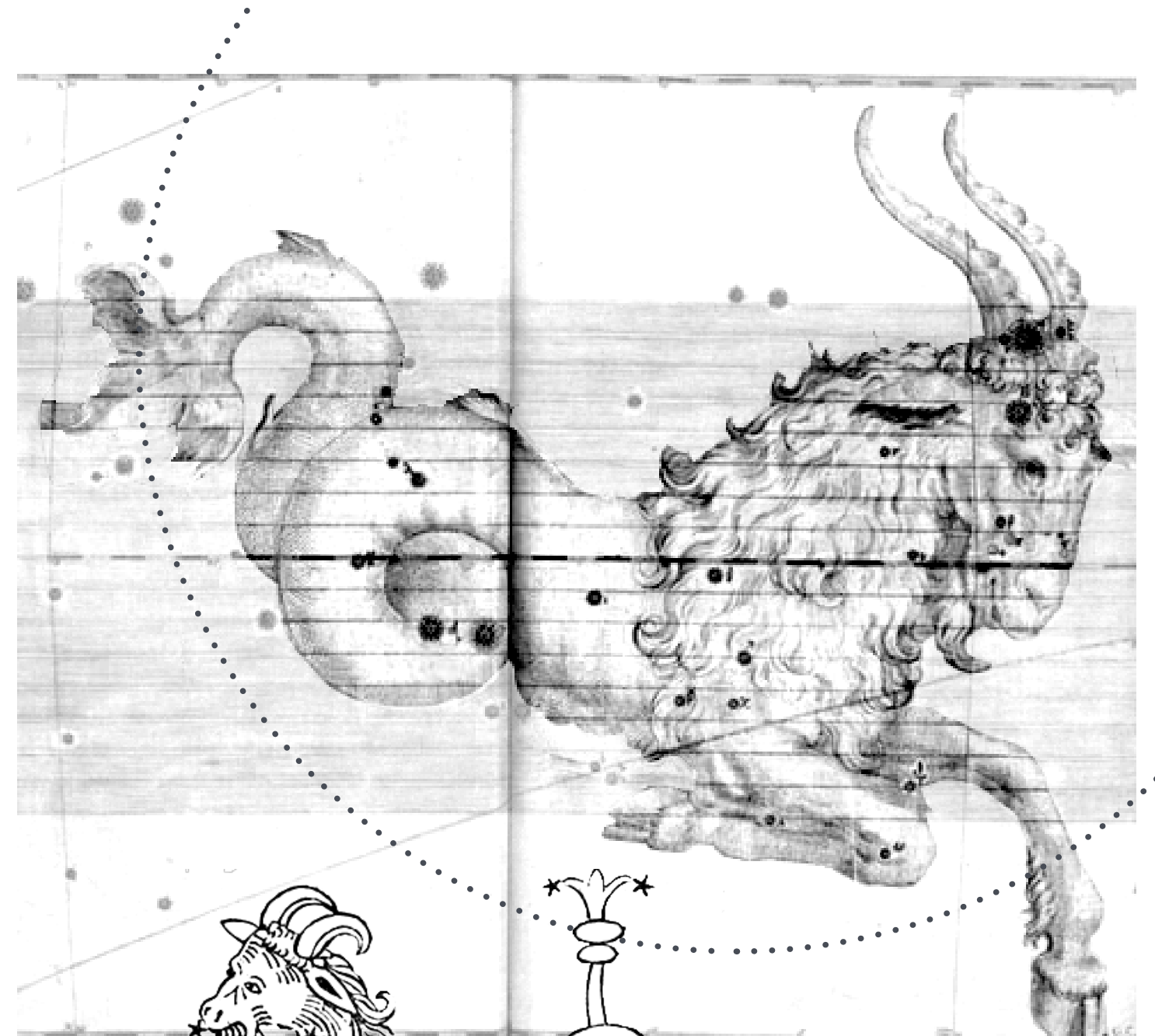


CAPRICORNUS, THE SEA GOAT

Capricornus, the Sea Goat (in Western astrology, known by its old name Capricorn) is a mythical mix of goat and fish. It reflects a fascination with amphibious creatures in Sumerian and Babylonian cultures. The ancient Greeks associated it with Pan, a playful deity that sported the hindquarters, legs, and horns of a goat.

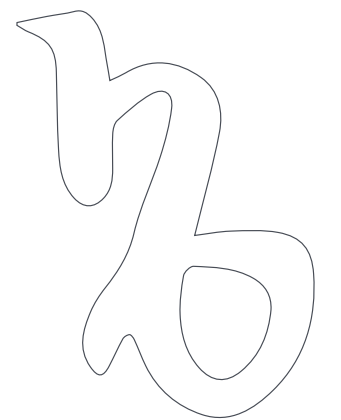
In ancient times, Capricornus housed the Sun at the December solstice, marking the beginning of winter in the Northern Hemisphere (now, the Sun is in Sagittarius at the solstice). For this reason, the circle the Sun passes overhead at noon in the December solstice is named the Tropic of Capricorn.

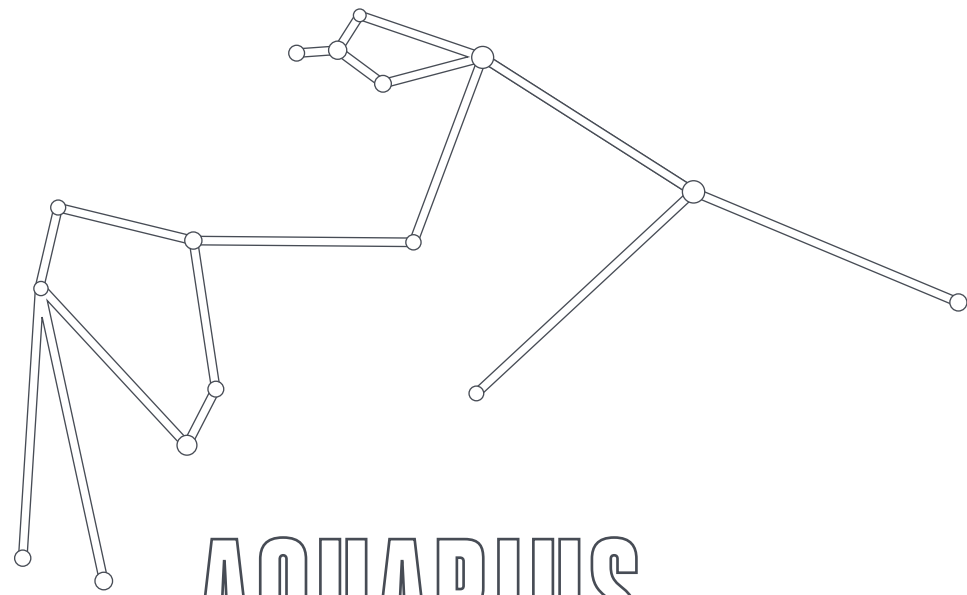
The larger rendition of Capricornus comes from *Uranometria*, an influential 17th-century star atlas, and displays a remarkable combination of artistry and scientific accuracy. The other illustration is purely decorative, dating to the late 15th century, and showing a grinning Capricornus with its tail twisted, which resonates with the playful character of Pan.



Johannes Bayer, *Uranometria* (Augsburg, 1603),
Adler Planetarium library

Clarissimi uiri Iginij Poeticon astronomicon (Venice, 1482), Adler Planetarium library





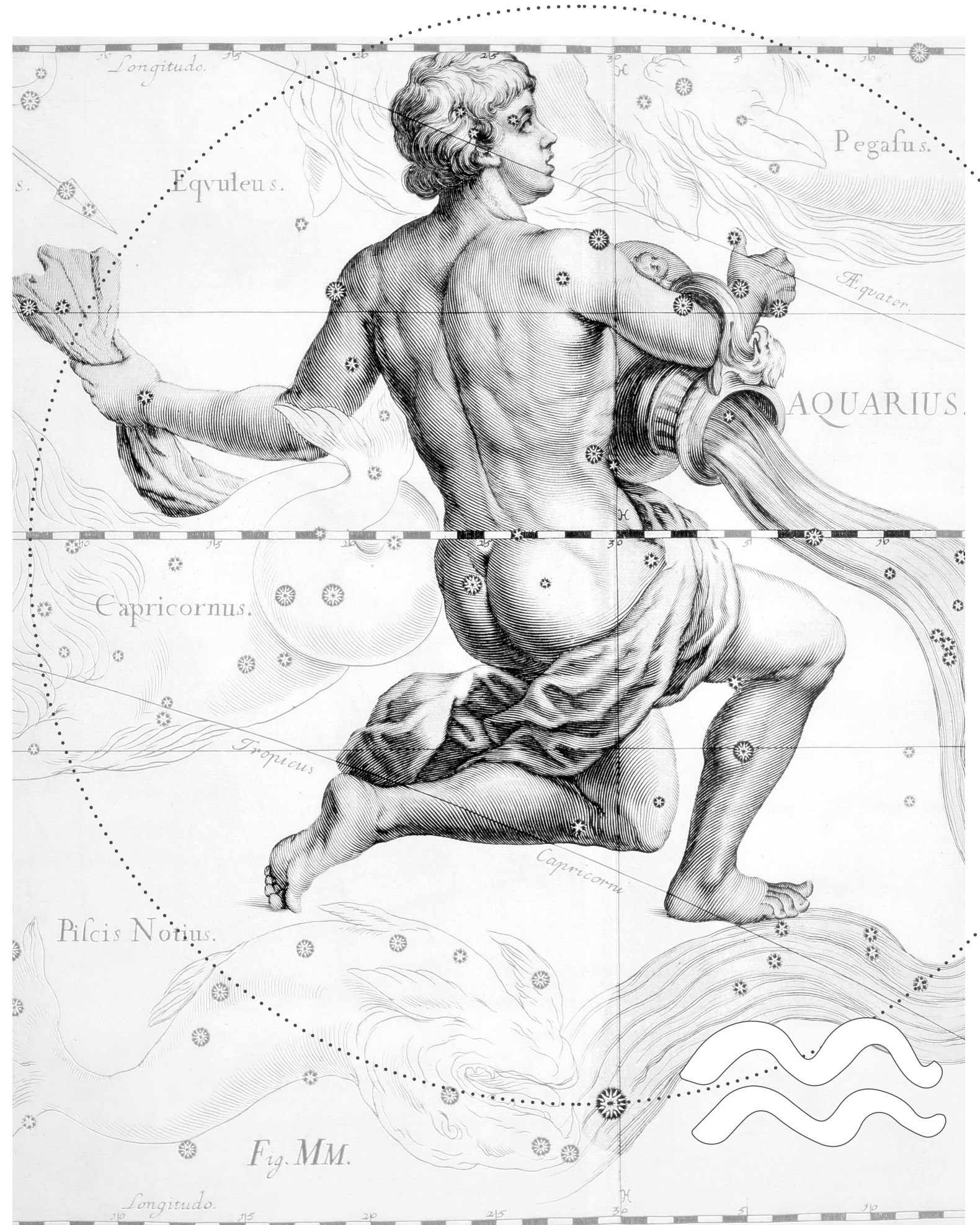
AQUARIUS, THE WATER CARRIER

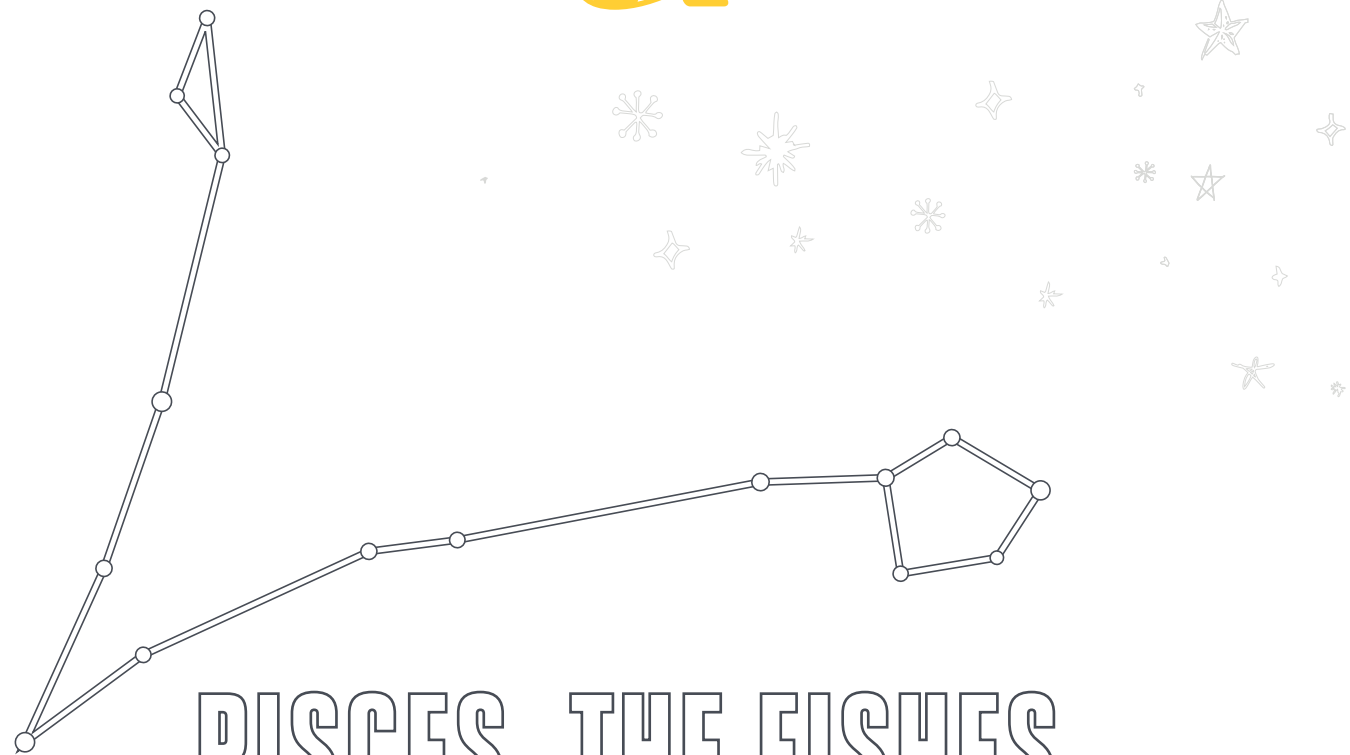
This star map featuring Aquarius, the Water Carrier is part of the star atlas *Firmamentum Sobiescianum*, which was assembled by the 17th-century astronomer Johannes Hevelius and published posthumously by Elisabetha Hevelius, a fellow astronomer and his wife.

Aquarius is depicted according to its classical representation as a scantily clad man pouring water out of a vase, but with an exceptional level of artistry, which is a distinctive aspect of *Firmamentum Sobiescianum*. The water flows down to the mouth of Piscis Austrinus, the Southern Fish, visible in the lower left corner.

In Greek mythology Aquarius is associated with Ganymede, the gods' cupbearer who dispensed nectar (the divine drink) from a bowl. Aquarius has also been identified with Deucalion, a mythological character similar to the biblical Noah, representing one of the few men to survive a great flood.

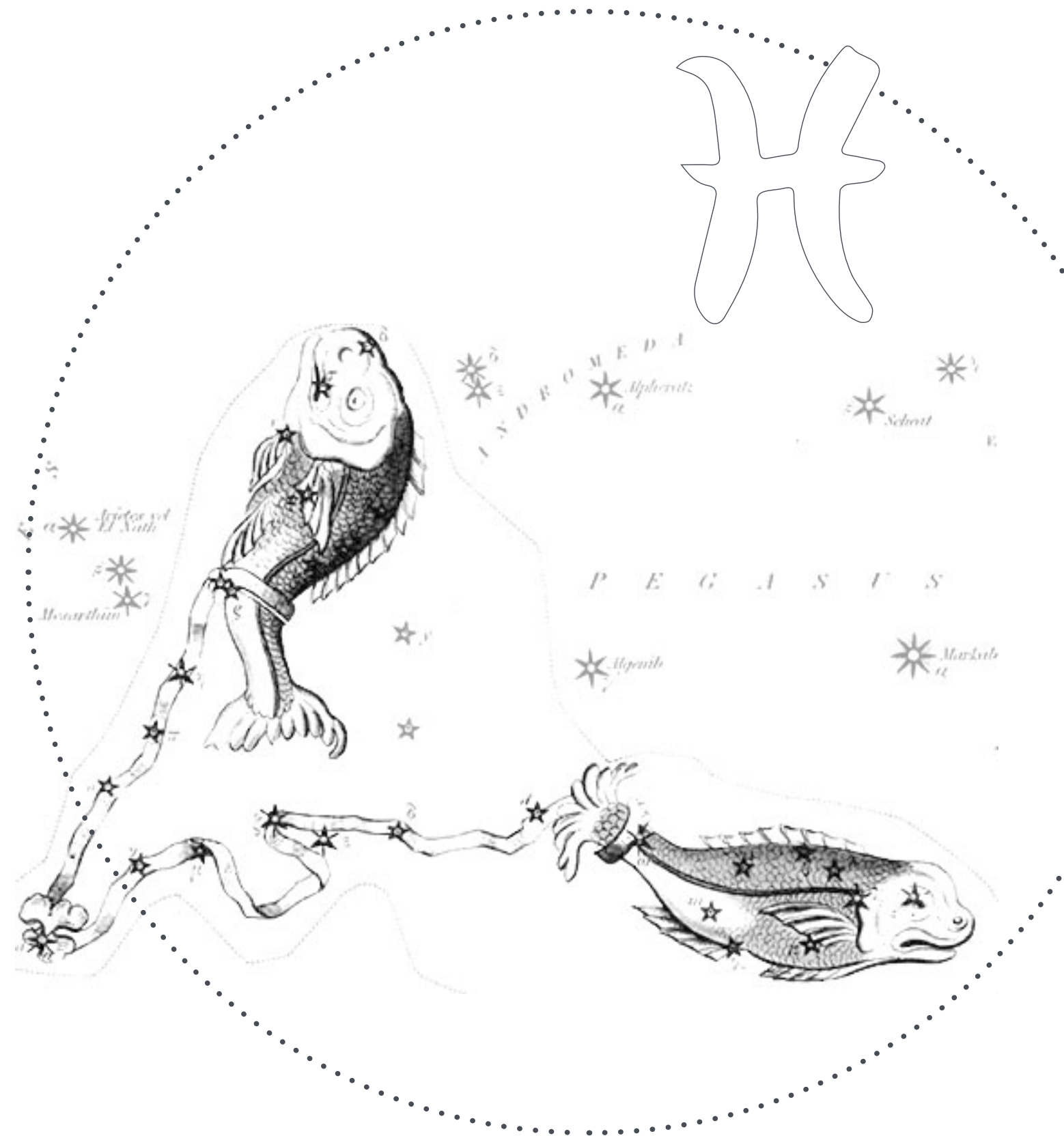
Johannes Hevelius, *Firmamentum Sobiescianum, sive, Uranographia* (Gdansk, 1690), Adler Planetarium library





Pisces, the Fishes is the final position in the apparent motion of the sun across the zodiac before it returns to Aries, thus starting a new cycle. Pisces now contains the vernal equinox.

Pisces is associated with a Greek myth in which Aphrodite and her son Eros seek shelter from the monster Typhon in the banks of river Euphrates, one of the great rivers of Mesopotamia. This detail underlines the Mesopotamian origins of the constellation. According to one version of the Greek myth, Eros and Aphrodite are saved by two fishes that are then immortalized in the sky. In an alternative version, the goddess and her son turn into fishes themselves and end up in the stars, with their tails bound by a cord or ribbon to prevent them from drifting apart. This cord is a defining element of the classical depiction of Pisces. It is exemplified by the rendition included here, which is taken from a 19th-century set of constellation cards.



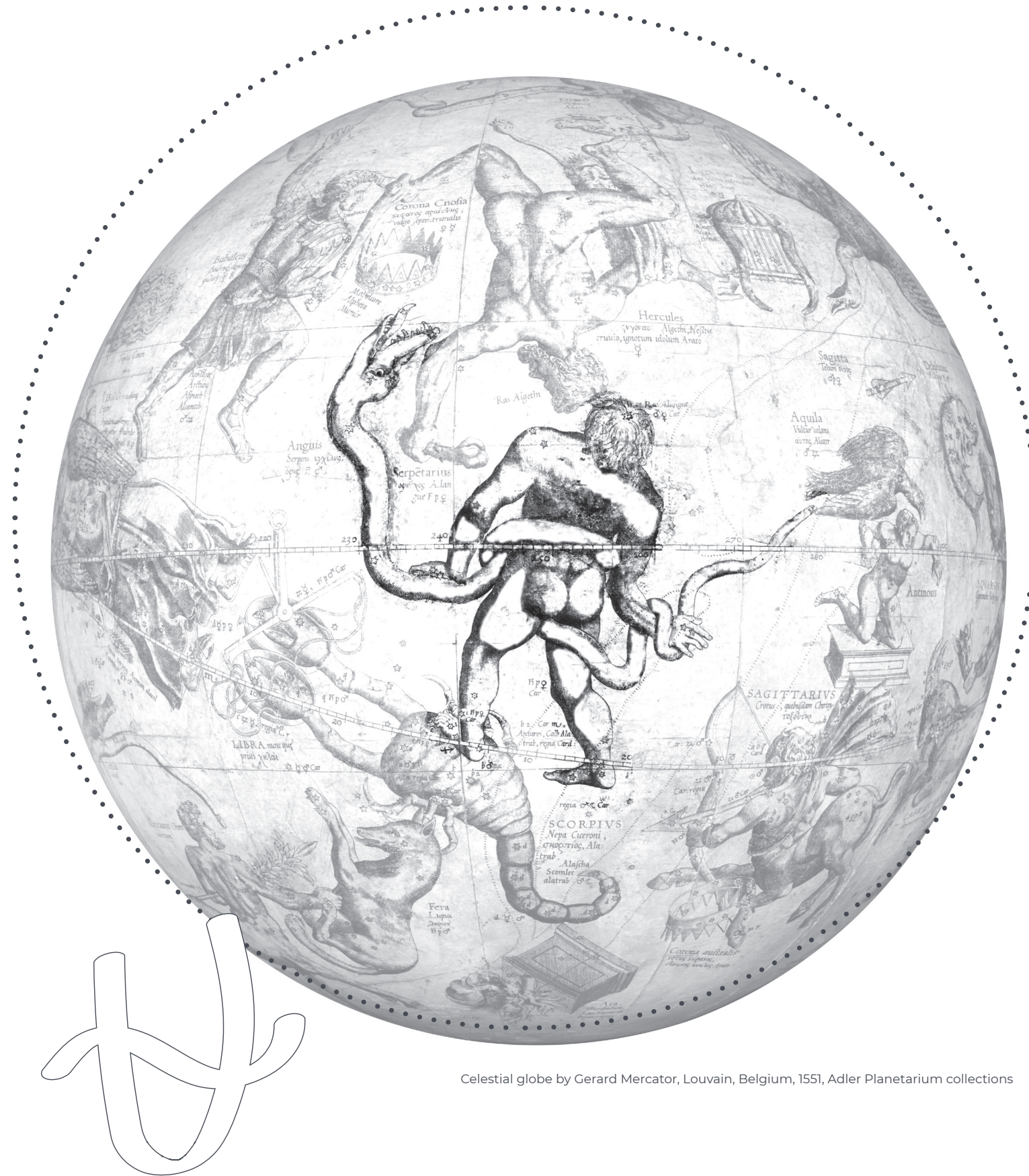


OPHIUCHUS, THE SERPENT BEARER

This depiction of Ophiuchus, the Serpent Bearer is from a 16th-century celestial globe. Note Ophiuchus's left foot on Scorpius and the ecliptic crossing Ophiuchus's feet.

In the 1920s, when the International Astronomical Union (IAU) established the boundaries of the 88 constellations included in its standard list, this section of the Sun's apparent path across the sky fell within the area ascribed to Ophiuchus. Traditionally, the Sun would be considered to lie in Scorpius while traversing that part of the ecliptic. But according to the IAU's division of the sky, it crosses Ophiuchus. For that reason, Ophiuchus is often referred to as the 13th constellation of the Western zodiac, though it was never deemed a part of it.

Even though constellations have largely lost their relevance as a frame of reference since astronomers now rely on precise coordinate systems to keep track of the positions of celestial bodies, the sky above remains open to our imagination.



Celestial globe by Gerard Mercator, Louvain, Belgium, 1551, Adler Planetarium collections



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