



Adler  
PLANETARIUM

# ANIMALS <sup>IN</sup> THE SKY

## A COLORING BOOK





Andreas van Luchtenburg, 'Nieuwe Hemels Spiegel...', Netherlands, c. 1700, Adler Planetarium collections

People around the world have found all sorts of shapes among the stars, with different cultures producing their own sets of constellations. Most of these traditions have at least one thing in common: the presence of animals, real and imaginary.

In the 1920s the International Astronomical Union divided the sky into a standard set of 88 constellations for the purpose of creating a single scientific reference. Of those 88 constellations, 41 historically were associated with real or imaginary animals, but at least 11 other constellations representing animals were left out.

This book presents a selection of historical depictions of animal constellations for coloring, taken from the Adler Planetarium's world-class collection of star maps and globes. They are all part of the Western tradition of celestial mapping and include constellations that are part of the IAU's standard set, as well as others that are now obsolete. Animal constellations belonging to the Zodiac can be found in [Adler's Zodiac Coloring Book](#).



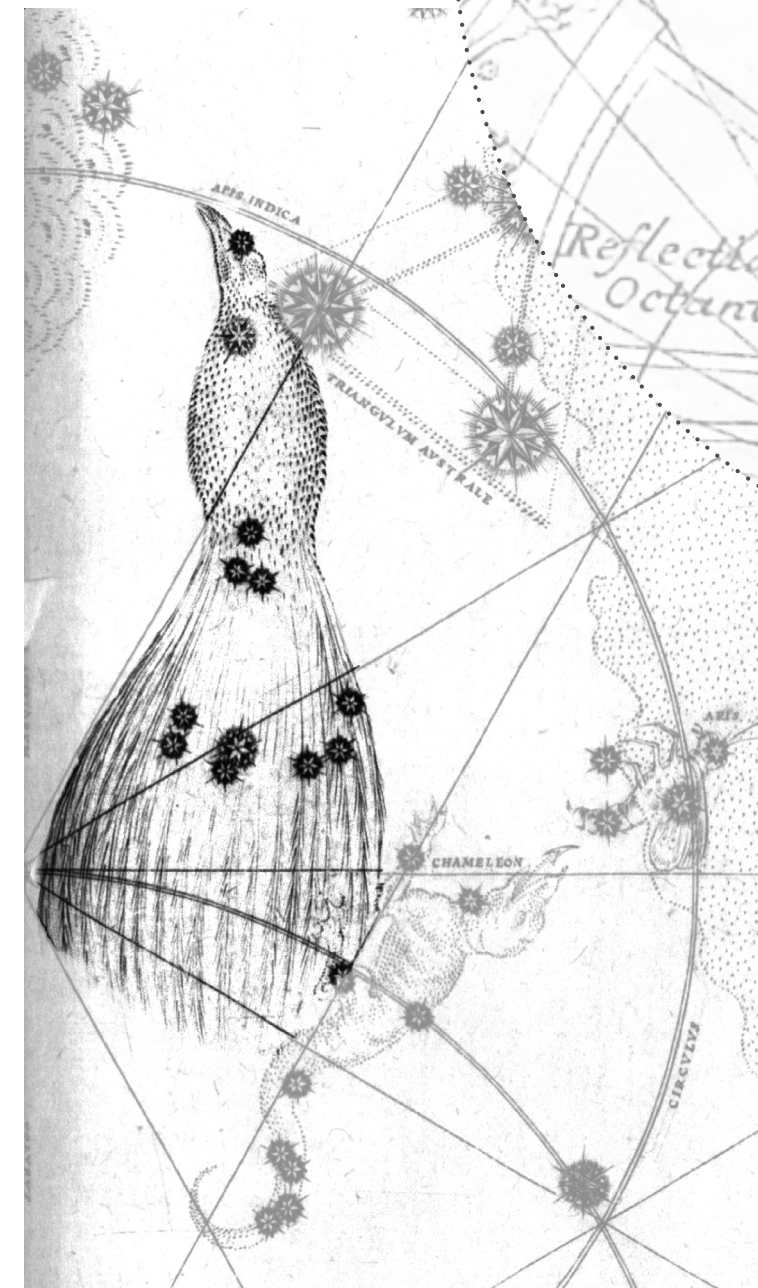


# APUS, THE BIRD OF PARADISE

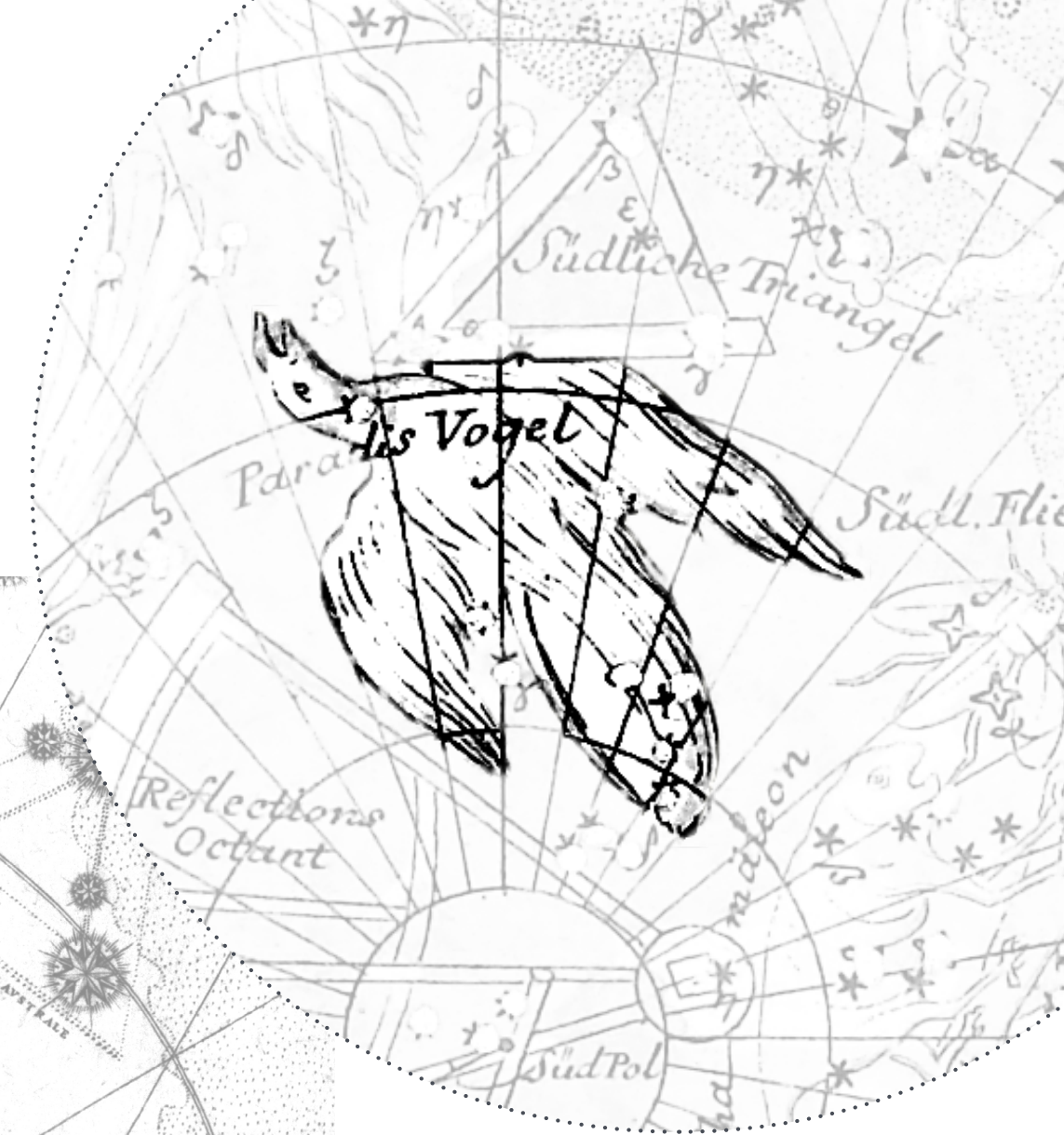
From the 15th century onwards, Europeans traveled the seas for both maritime and colonial expansion leading them to the southern hemisphere. There they had access to areas of the sky not visible from Europe, which they started to fill in with newly invented constellations.

Some of those constellations represented animals they found in the southern seas and lands, and which they perceived as exotic. Such is the case with Apus, which represents the bird of paradise from New Guinea.

The name Apus is of Greek origin and means “footless”. Europeans first saw dead specimens of this bird that had their wings and feet removed, which led them to believe that the bird was footless.



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



Johann E. Bode, 'Die Studlichen Gestirne nach de la Caillee', in *Vorstellung er Gestirne* (Berlin, 1782), Adler Planetarium collections





# CAMELOPARDALIS, THE GIRAFFE

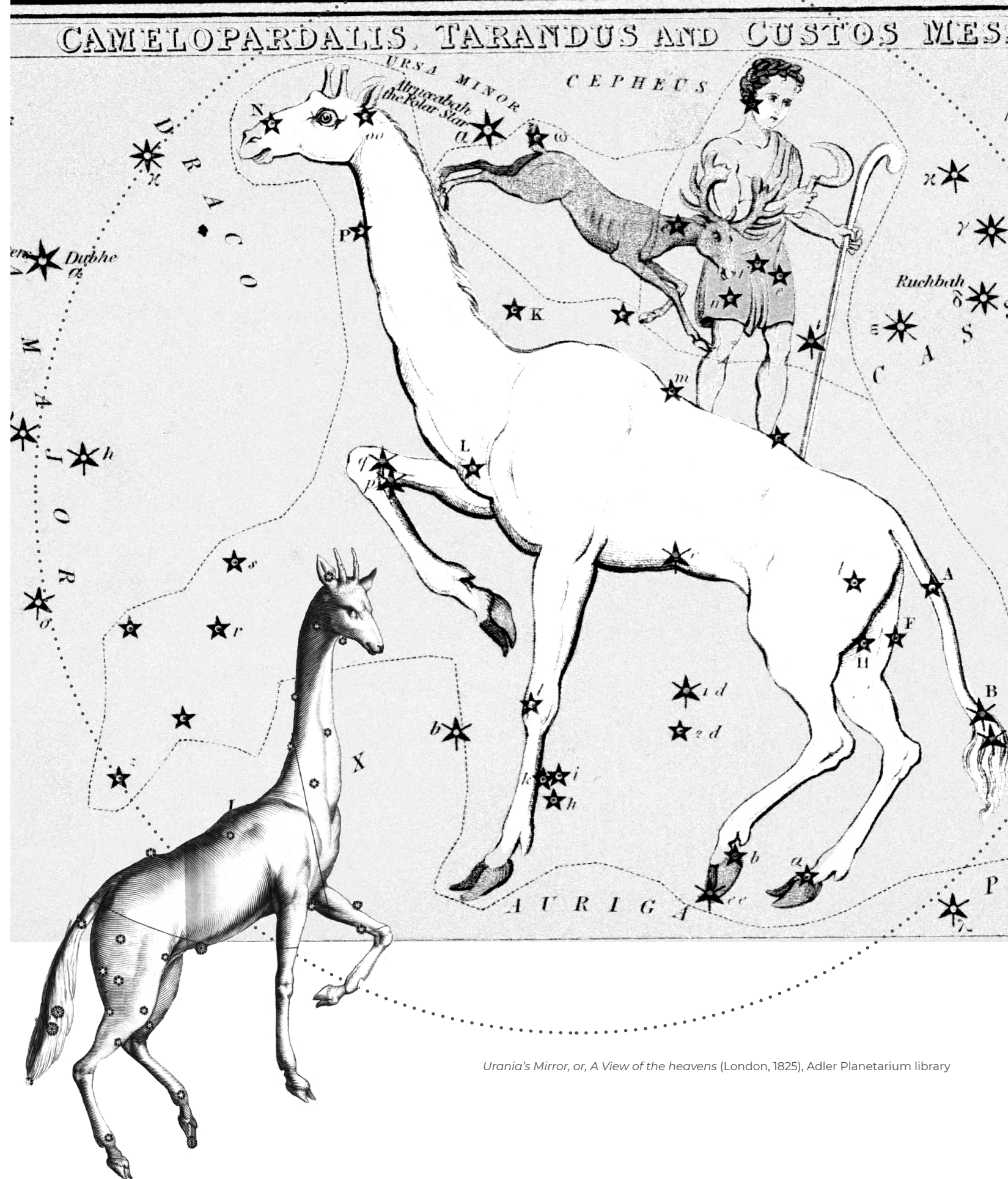
## RANGIFER, THE REINDEER



Camelopardalis was introduced by the Dutch mapmaker Petrus Plancius around 1612. Its name comes from the Greek for “camel with spots.” The Greeks associated the giraffe with the camel as both sport a long neck.

The other animal constellation seen above the giraffe on the map in the opposite page was known by the names of Rangifer and Tarandus. It represents a reindeer, whose scientific name is *Rangifer tarandus*. This constellation was created in the 18th century by the French astronomer Pierre-Charles Le Monnier, who participated in an expedition to Lapland (in Finland) to study the shape of the Earth.

The reindeer is symbolic of Lapland. By turning it into a constellation, Le Monnier expected the expedition to be immortalized in the sky. But unlike Camelopardalis, which is still used by the IAU to this day, Rangifer/Tarandus soon became obsolete; the only reindeer in the sky now belong to Santa.



Urania's Mirror, or, A View of the heavens (London, 1825), Adler Planetarium library

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



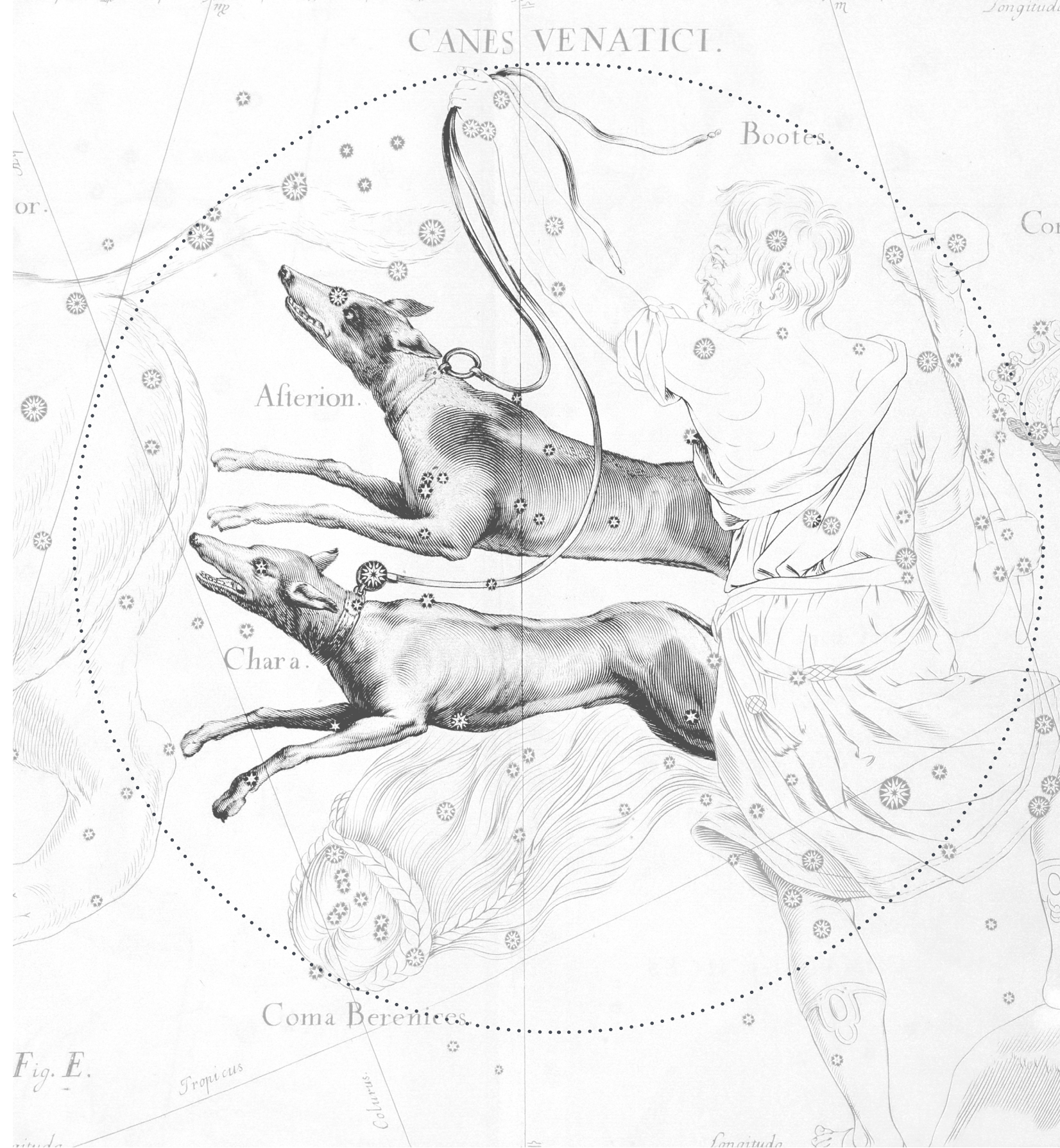


# CANES VENATICI, THE HUNTING DOGS

This constellation was introduced by the Polish astronomer Johannes Hevelius in the 17th century. It is normally depicted as a pair of greyhounds held by Boötes, the Herdsman.

Hevelius went further than earlier 17th century depictions of Boötes and Canes Venatici, and actually connected the figure of a pair of dogs with stars. Before Hevelius the dogs had served decorative purposes only, but now they overlapped star patterns themselves!

The map included here was made by Hevelius himself and shows the names that he gave to his Hunting Dogs: Asterion and Chara, a male and a female dog respectively. The constellation gained a steady presence in celestial map creation and became a part of the IAU's standard set of constellations, proving that perhaps it was Hevelius, after all, who let the dogs out.

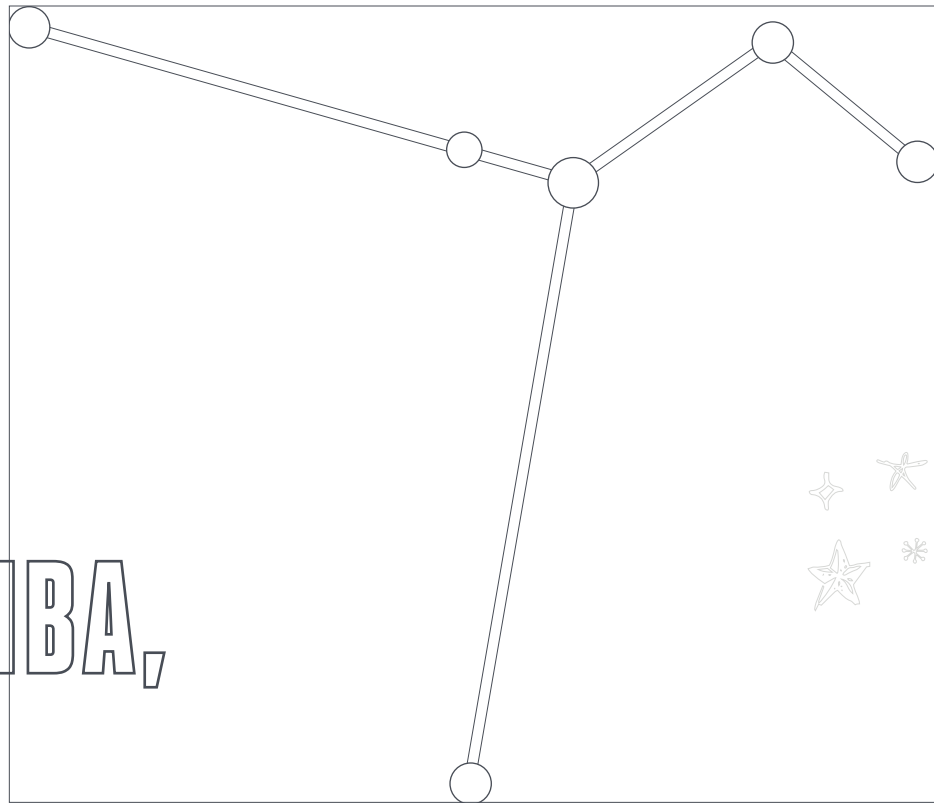


Jean Fortin, *Atlas céleste de Flamstéed* (Paris, 1795),  
Adler Planetarium library





# COLUMBA, THE DOVE

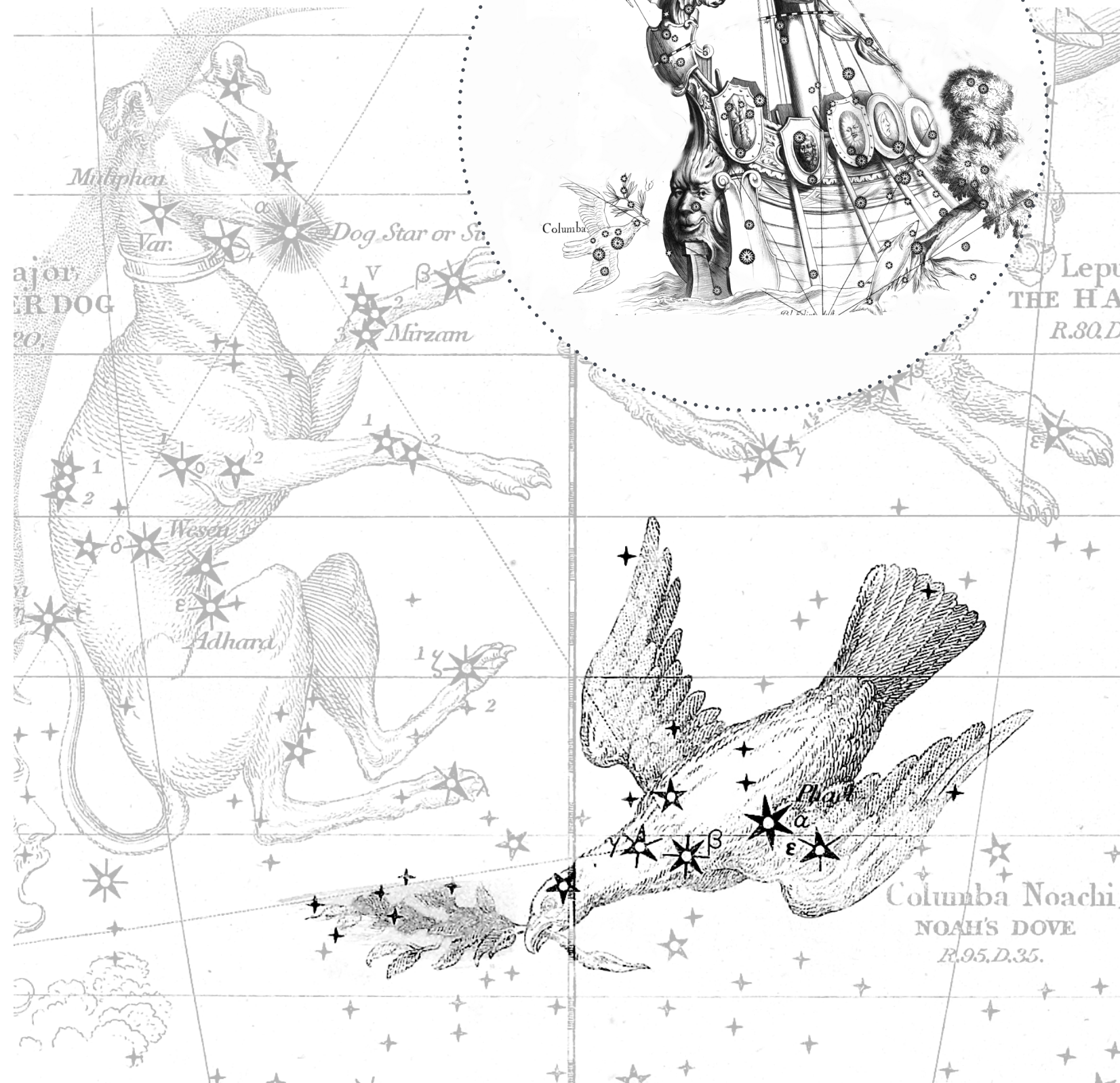


Columba was introduced by the Dutch mapmaker Petrus Plancius in the late 16th century. Plancius placed the Dove next to Argo Navis, a constellation representing the ship sailed by the Argonauts of classical mythology in their search of the Golden Fleece. In this myth, a dove is sent by the Argonauts to ensure their safe passage through a pair of rocks that clashed together when a ship attempted to cross.

Columba is also associated with the biblical narrative of the great flood. It represents the dove that was sent by Noah from the Ark to look for dry land and returned with an olive branch in its beak, signaling that the waters were subsiding.

Plancius renamed Argo Navis as the Ark in order to reinforce the biblical connection between this established constellation and Columba, but astronomers ignored the new name. Regardless of which story was favored, Columba endured, becoming part of the IAU's standard set of constellations — as did Argo Navis, although it is now divided into three separate constellations — Carina, the Keel; Puppis, the Stern; and Vela, the Sails.

Johann E. Bode, *Vorstellung der Gestirne* (Berlin, 1782), Adler Planetarium library.



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





# CYGNUS, THE SWAN



Cygnus, the Swan, was originally associated with several myths in which Zeus, the god of gods in Greek mythology, takes the shape of a swan. This constellation is also known as the Northern Cross, a reference to the cross-shaped pattern formed by its brightest stars that also serves to distinguish it from Crux, the Southern Cross.

The depiction of Cygnus highlighted here is part of a 17th-century celestial globe made in Lahore (now in Pakistan) during the Mughal Empire. The Mughal Empire brought together elements of Arab, Persian, and Indian culture. The globe is labelled in Arabic and incorporates knowledge of constellations originating in Mesopotamia and Ancient Greece (such as Cygnus) that was preserved and developed by Arab and Persian astronomers during the Middle Ages.

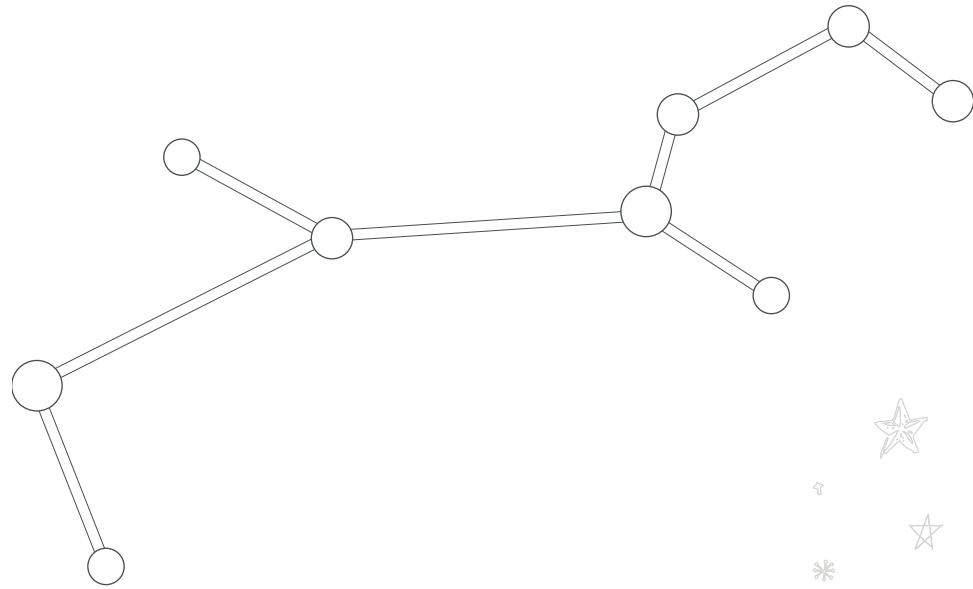
Their legacy is echoed by many star names still used today, as exemplified by those of the two brightest stars in the Swan: Deneb, from the Arabic for “tail,” and Sadr, meaning “chest.”







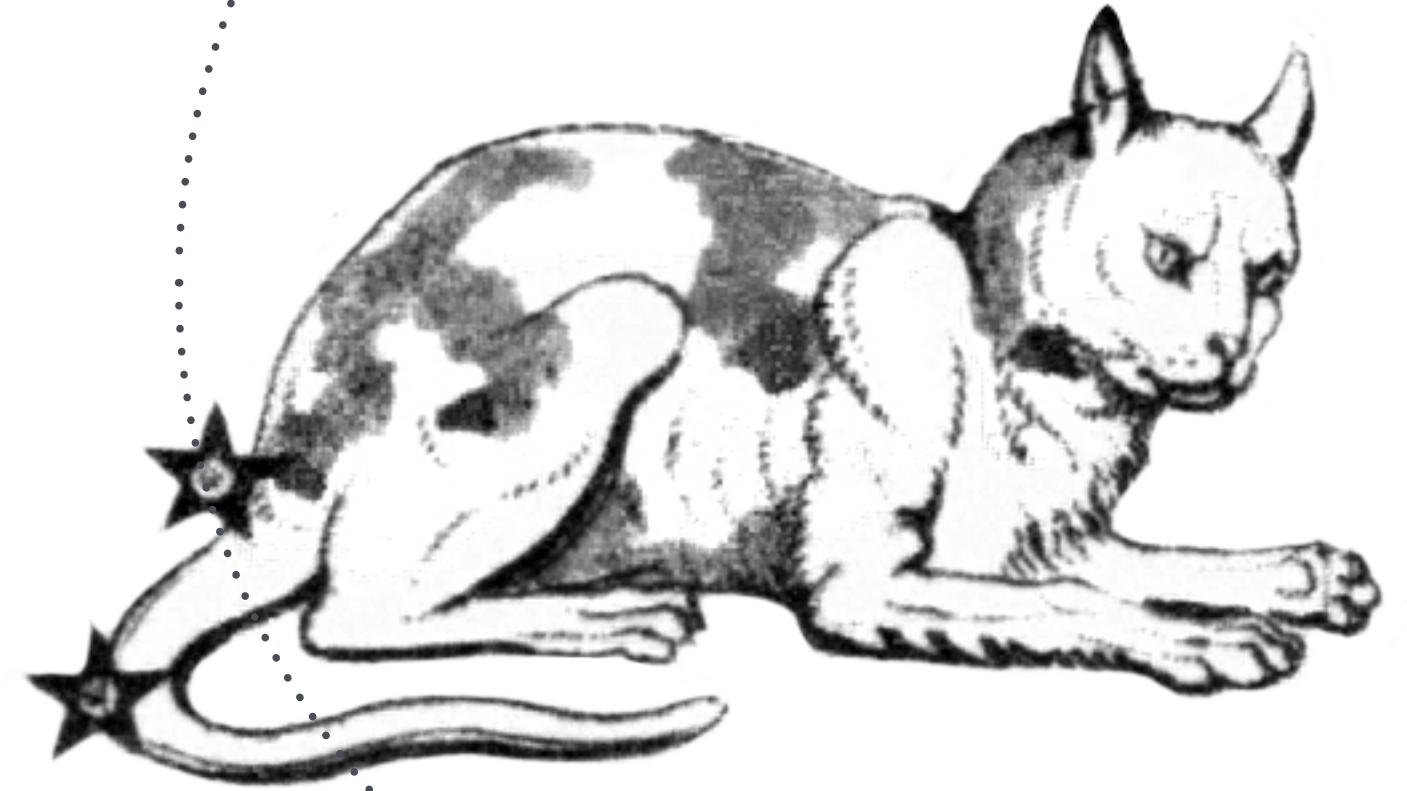
# FELIS, THE CAT



This constellation was created by the French astronomer and cat lover, Joseph Jérôme de Lalande in 1799. While felines were already represented in Western celestial maps by Leo (the Lion), Leo Minor (the Lesser Lion), and Lynx, a constellation specifically representing the domestic cat was still missing.

A poem about cats written by Claude-Antoine Guyot-Desherbiers inspired Lalande to fill in the gap. His newly created constellation was first depicted as a grumpy cat in the star atlas *Uranographia* of Johann Bode (see the map on the opposite page). It then appeared in several star maps throughout the 19th century.

Possibly because its stars are not very noticeable, astronomers eventually dismissed Lalande's feline constellation. But one of its former stars (now belonging to Hydra, the Female Water Snake) is still named Felis, remaining as a beacon for cat lovers everywhere.



*Urania's Mirror, or A view of the heavens*  
(London, 1825), Adler Planetarium library



Johann E. Bode, *Uranographia* (Berlin, 1801), Adler Planetarium library



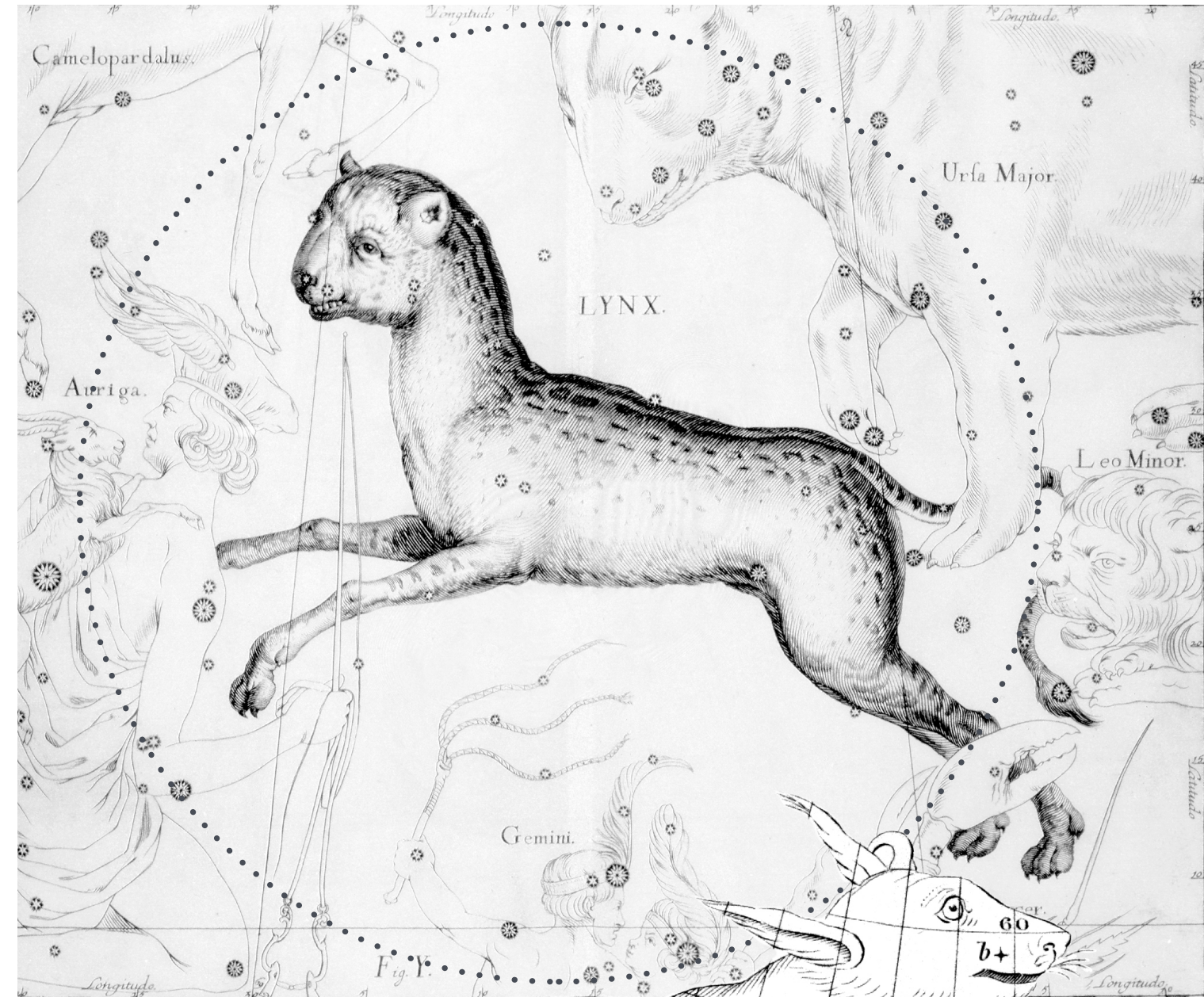


## LYNX, THE LYNX

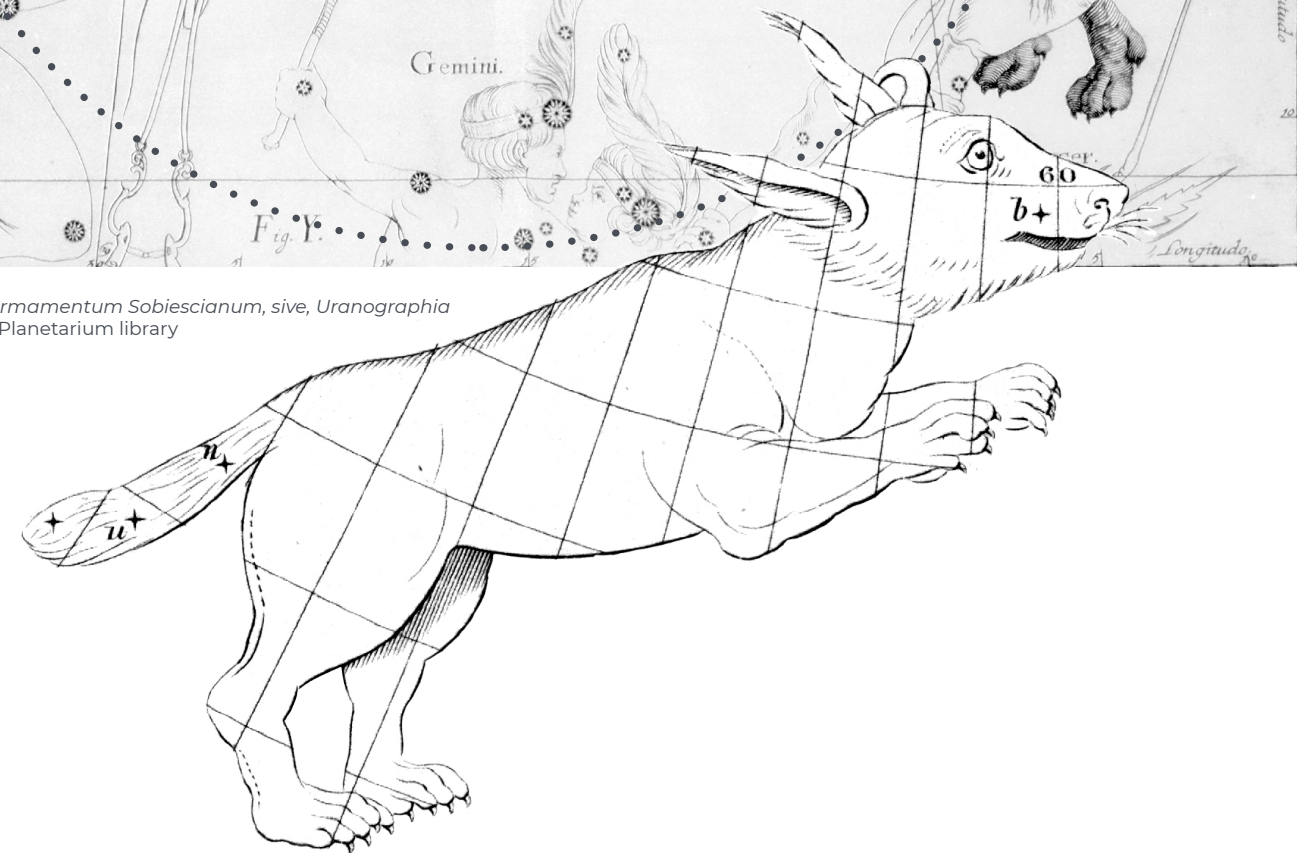
Lynx was created by the Polish astronomer Johannes Hevelius in the 17th century from stars located between Ursa Major, the Great Bear (also featured in this book) and Auriga, the Charioteer. The lynx is a part of a group of feline animals that also include the wild cat of North America (known as bobcat or red lynx), and which are generally associated with sharp eyesight.

One of the first modern scientific societies in Europe, the Italian Academy of the Lynxes, was named as a way of emphasizing that their members (including Galileo Galilei) were expected to be similarly keen-eyed in their investigations of natural phenomena.

Hevelius also noted that those willing to spot Lynx in the sky would need a sharp eyesight, because the stars in this constellation are not particularly bright. Nevertheless, Lynx retained a presence in star maps and globes, and is part of the IAU's standard set of constellations.



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



Jacob Green, *Astronomical recreations* (Philadelphia, 1824), Adler Planetarium library.



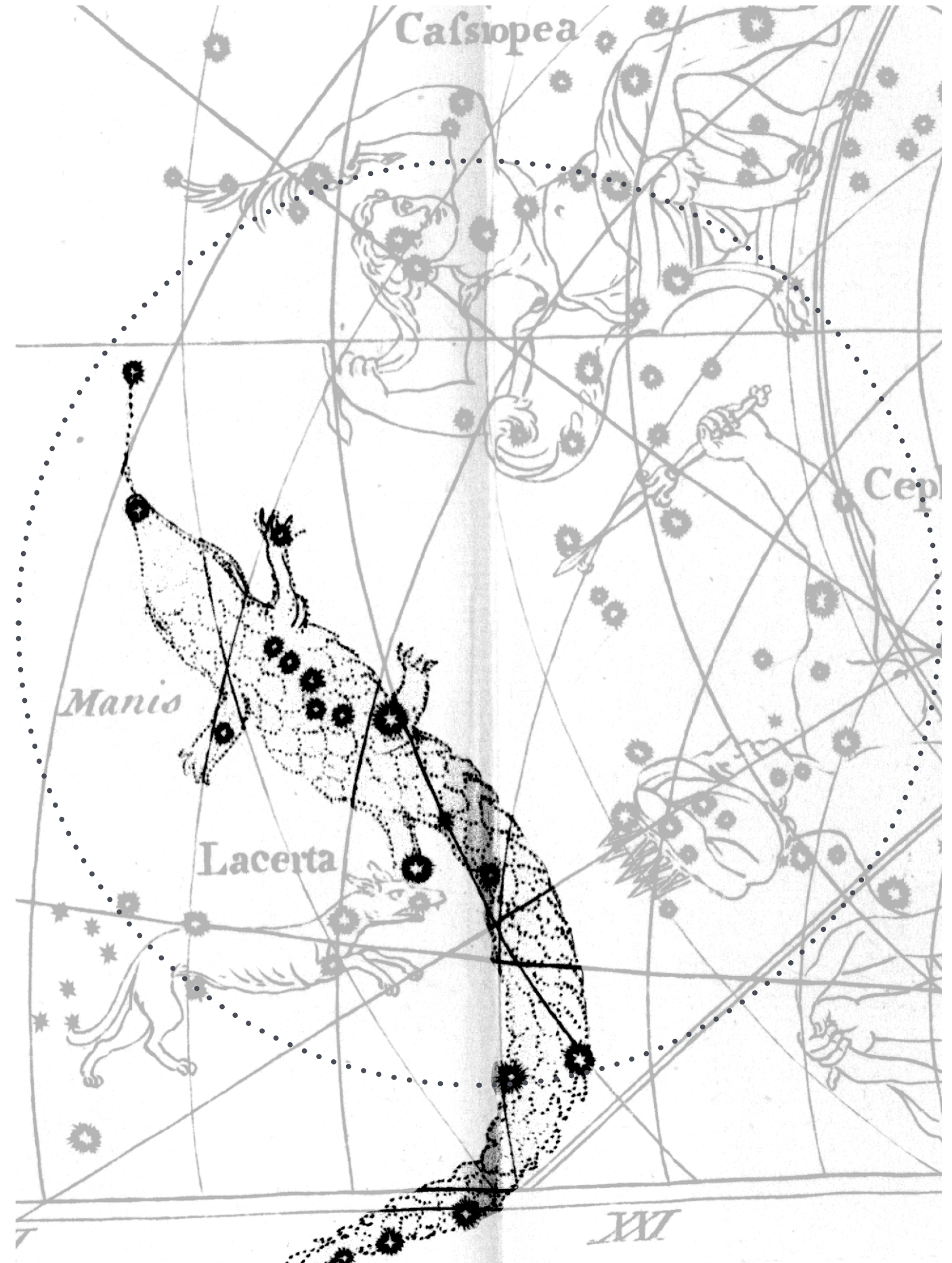
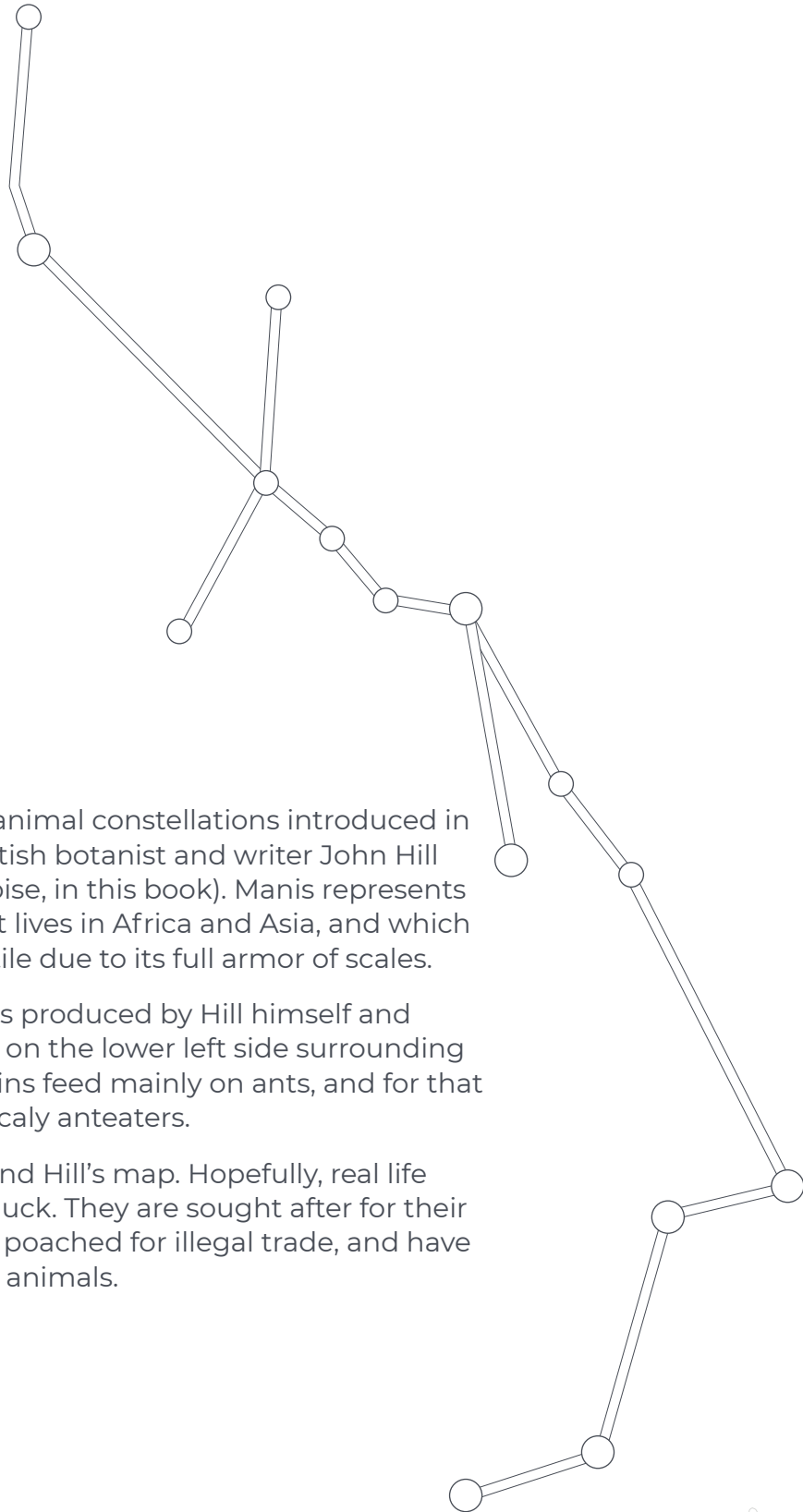


# MANIS, THE PANGOLIN

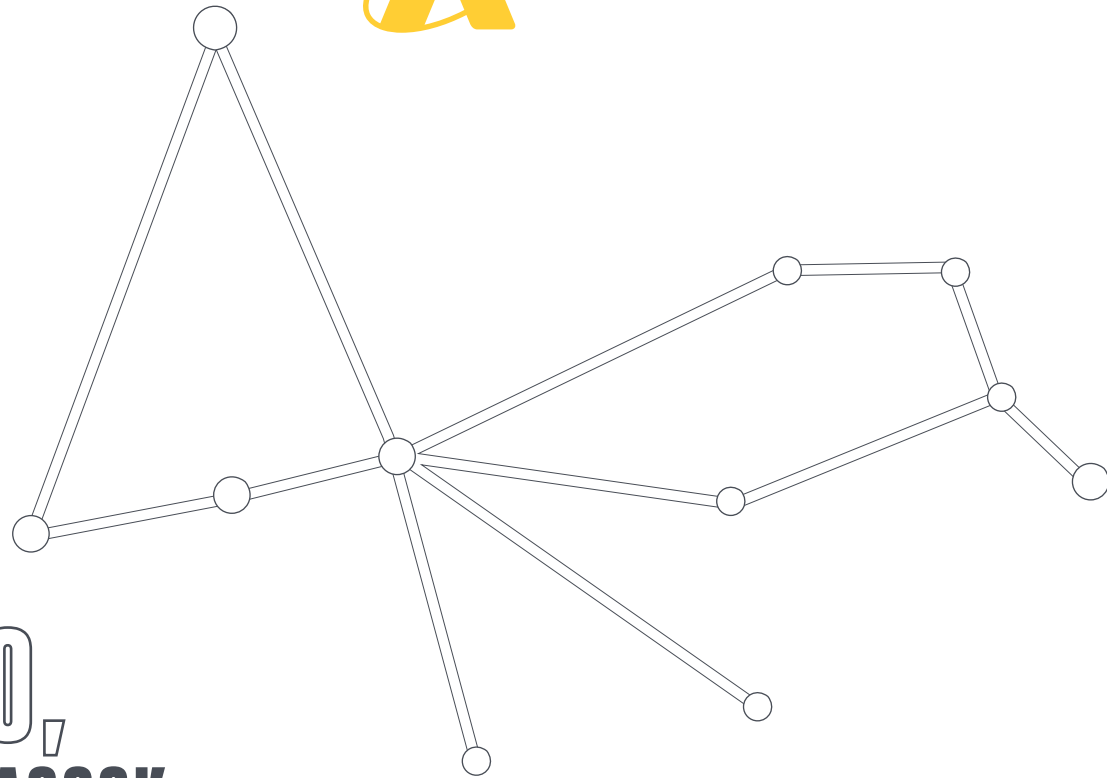
Manis is part of a series of animal constellations introduced in the 18th century by the British botanist and writer John Hill (see also Testudo, the Tortoise, in this book). Manis represents a pangolin, a mammal that lives in Africa and Asia, and which is often mistaken for a reptile due to its full armor of scales.

The map included here was produced by Hill himself and shows Manis, the Pangolin on the lower left side surrounding Lacerta, the Lizard. Pangolins feed mainly on ants, and for that reason are also known as scaly anteaters.

Manis did not survive beyond Hill's map. Hopefully, real life pangolins will have better luck. They are sought after for their meat and scales and often poached for illegal trade, and have been listed as endangered animals.







# PAVO, THE PEACOCK

Pavo, the Peacock, is part of a group of southern constellations introduced by the Dutch navigators Pieter Dirkszoon Keyser and Frederick de Houtman in the late 16th century (see also Apus and Volans).

The blue peacock (also known as Indian peacock) was already known to the Ancient Greeks, but this constellation is more likely a reference to the green peacock that the Dutch navigators would have seen in Java (Indonesia). While the blue peacock became a common presence in Western gardens, the green peacock is now listed as an endangered species.

The image of Pavo at the center of the page dates from 1603 and is the first ever to be included in a constellation map. The other illustration on top left is taken from a late 17th-century star map.



Frederick de Wit, "Planisphaerium Coeleste", c. 1680, Adler Planetarium collections



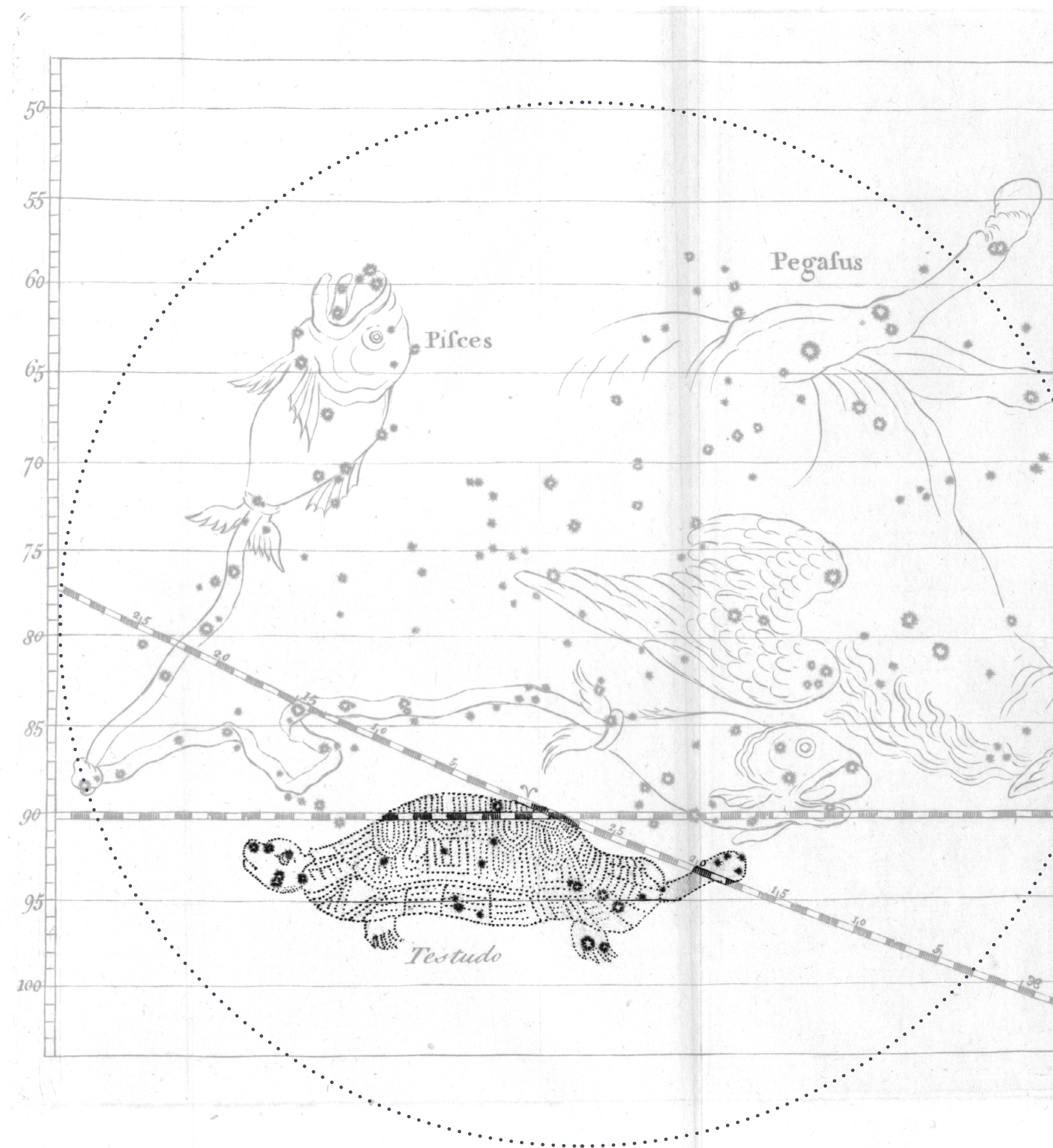


# TESTUDO, THE TORTOISE

This constellation was introduced by John Hill, the British writer and botanist who in the 18th century created a series of animal constellations that also included Manis, the Pangolin (featured in this book) and an assortment of less appealing creatures such as the Spider, the Leech, and the Earthworm.

Hill was often at odds with the intellectual and scientific authorities of his time. Hill's unlikely choice of creatures to place among the stars was possibly meant to poke fun at well-established astronomers who sought to gain a place in the history of science by adding new constellations.

The star map shown here, which was produced by Hill himself, contains the only known depiction of Testudo. Hill's animal constellations never gained a footing; perhaps the first time a tortoise lost out to the hare (Lepus).







# NOCTUA, THE NIGHT OWL



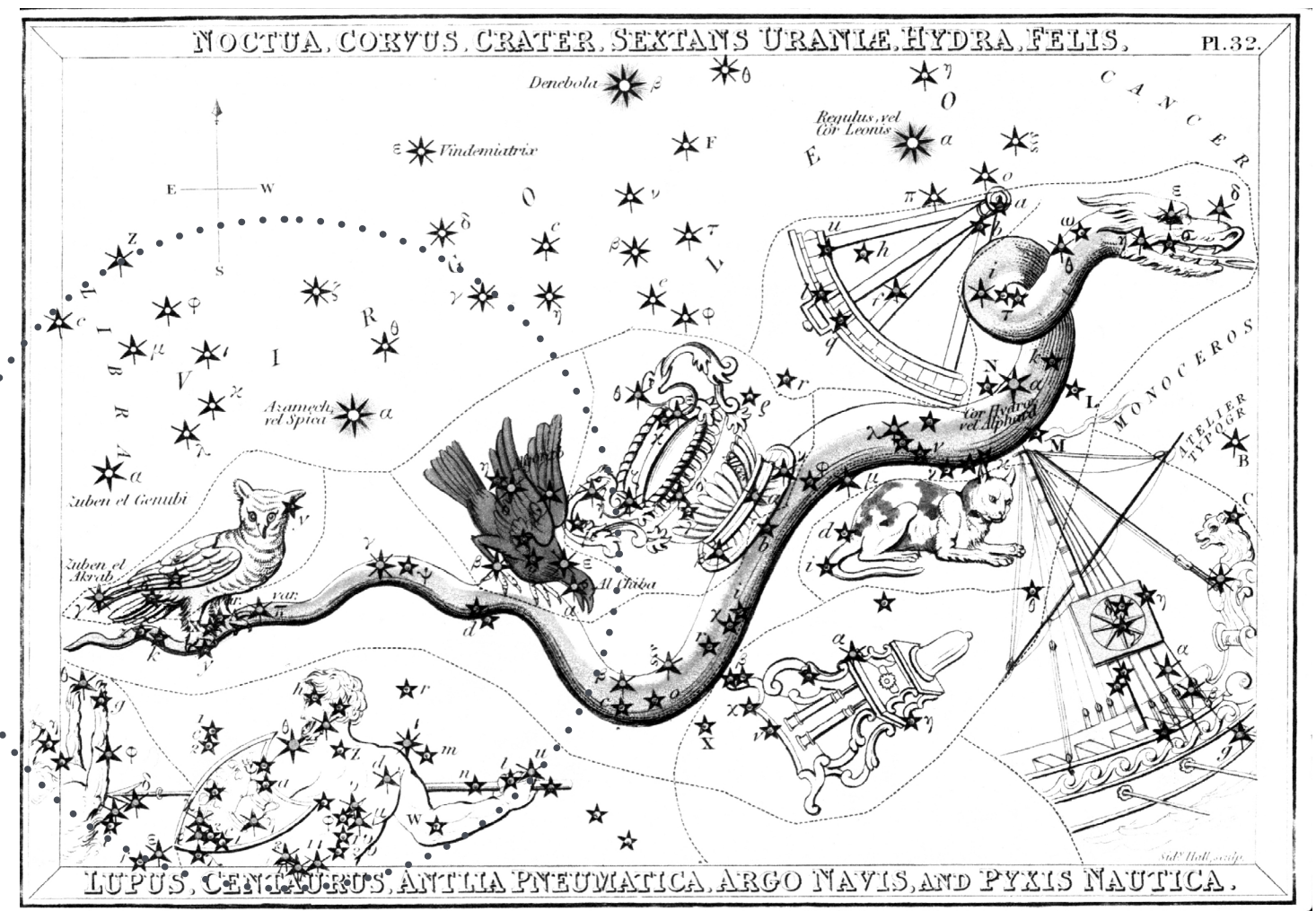
This constellation was first introduced by the French astronomer Pierre Charles Le Monnier in the 18th century, under the name “Solitaire” (Solitary). It was meant to represent an extinct bird from the island of Rodrigues in the Indian Ocean.

Monnier’s constellation was taken by other astronomers to represent the thrush, a common bird, and started to gain a presence in star maps and globes under that form. Then the British writer and educator Alexander Jamieson turned it into Noctua, the Night Owl. Jamieson’s depiction is shown on top of the opposite page.

Noctua can also be seen on the lower left side sitting on the tail of Hydra, the Female Water Snake, next to another bird: Corvus, the Crow. But while Corvus is used to this day, the Night Owl has fallen into oblivion.



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



*Urania's Mirror, or, A view of the heavens* (London, 1825), Adler Planetarium library

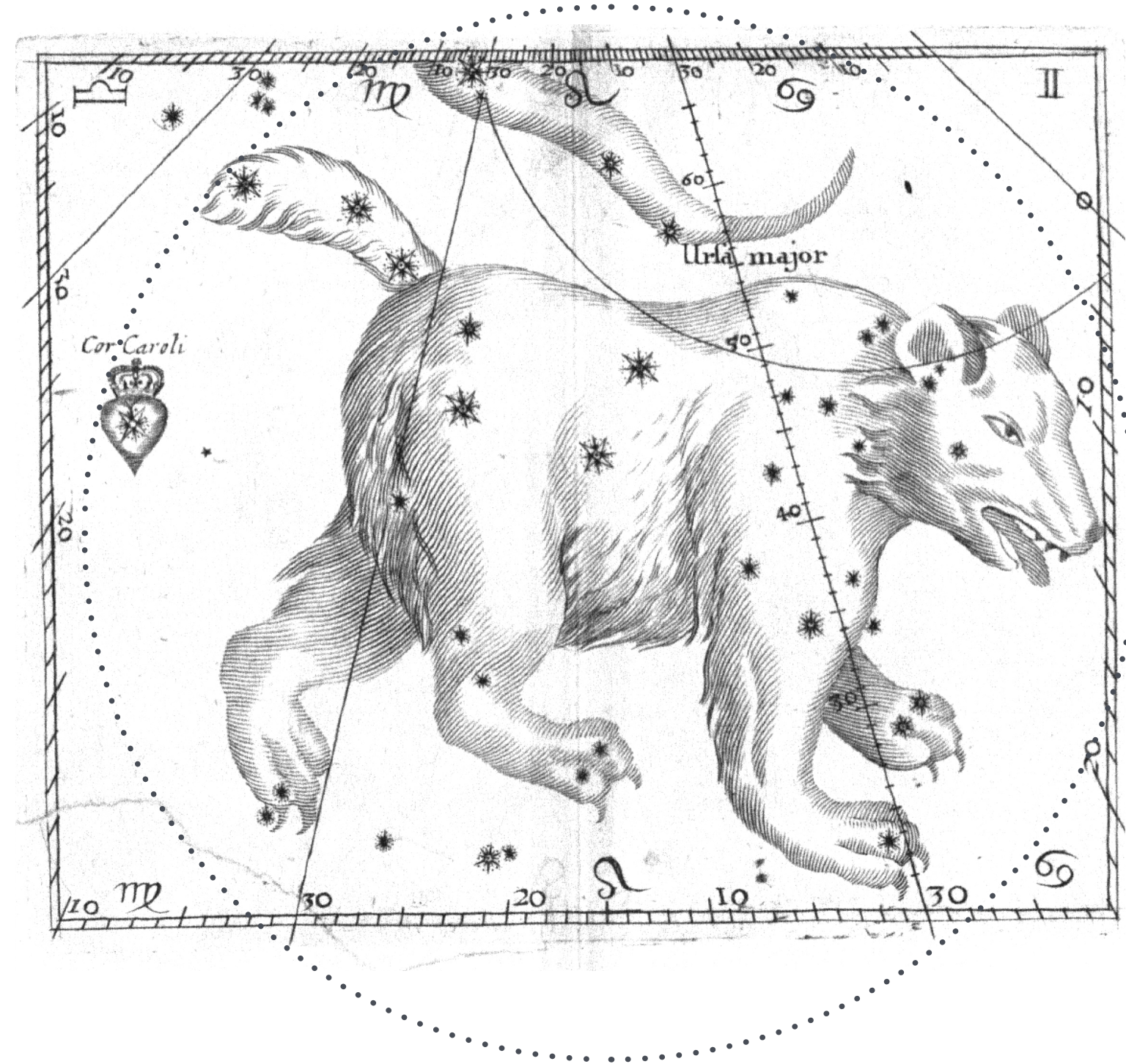




# URSA MAJOR, THE GREAT BEAR

Ursa Major is one of the best known constellations of the Northern hemisphere, as it contains the asterism (the star pattern) known in North America as the Big Dipper. This pattern is highlighted above, and can be clearly identified on the 18th-century star map in the opposite page.

The Big Dipper is a helpful guide to track down the North Star in the neighboring constellation of Ursa Minor, the Little Bear, and has often been used as a symbol of Northern lands. For example, the flag of Alaska shows the relative positions of the Big Dipper and the North Star in the sky.







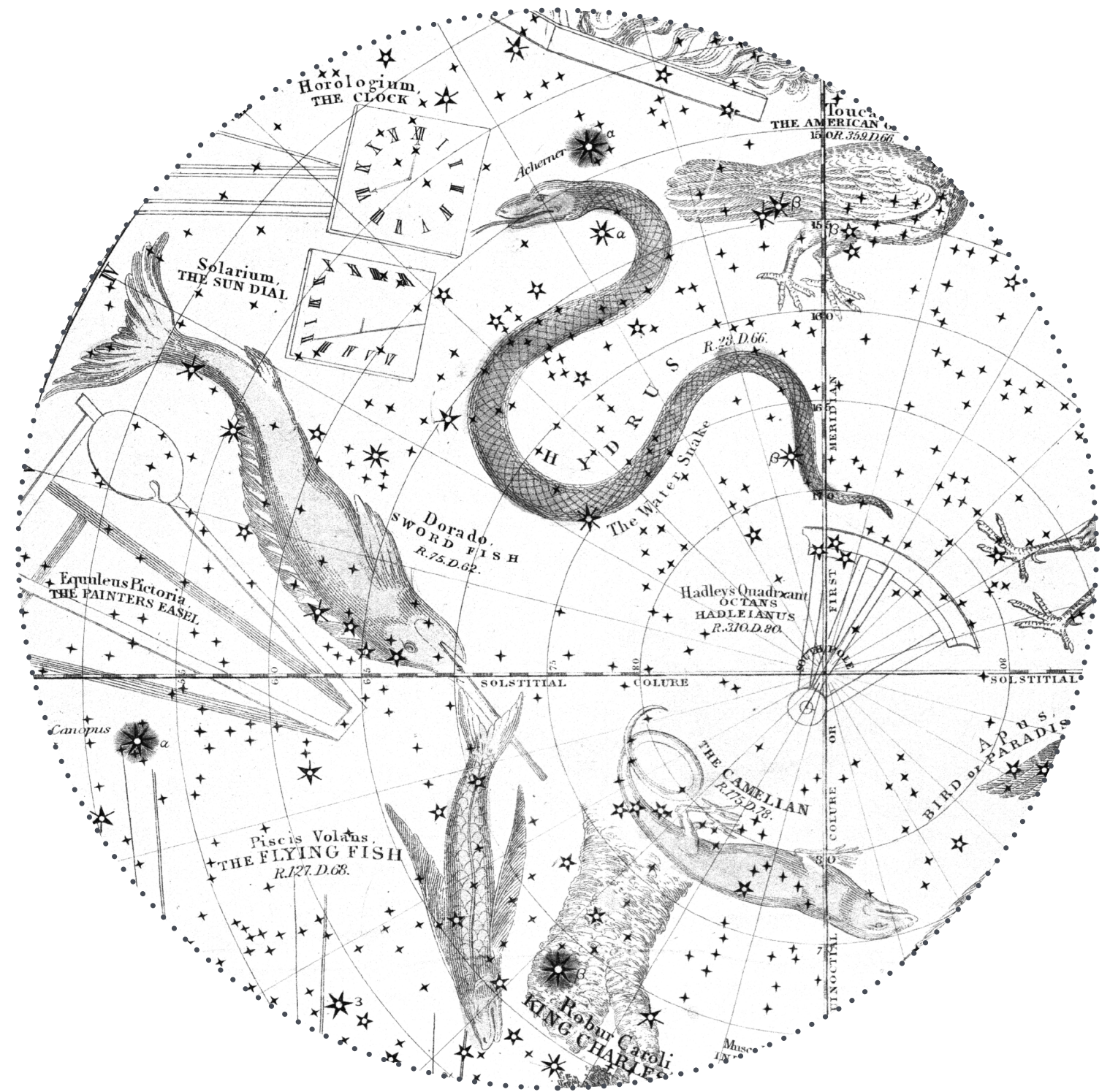
# VOLANS, + DORADO, THE FLYING FISH THE SWORD FISH



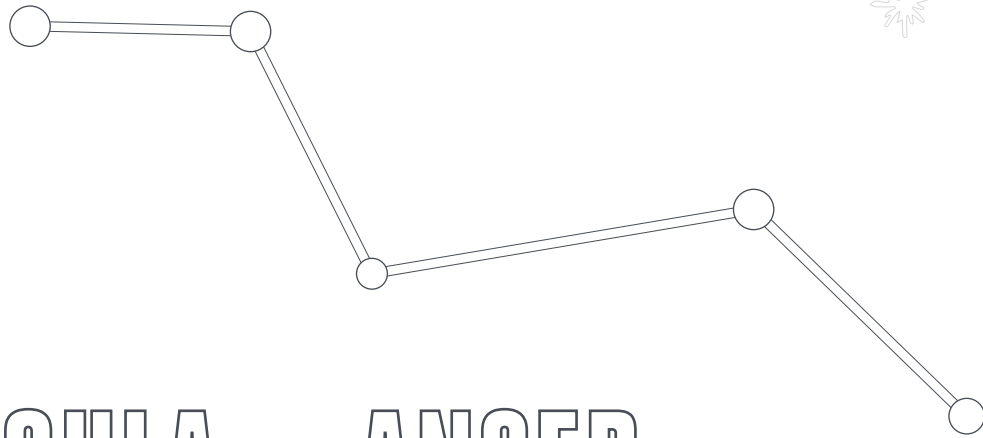
Volans was introduced by the Dutch navigators Pieter Dirkszoon Keyser and Frederick de Houtman in the late 16th century (see also Apus and Pavo in this book).

The name Volans is a simplification of Piscis Volans, Latin for the Flying Fish. European navigators and sailors who travelled across the southern seas recounted episodes of flying fishes leaping out of the water and landing on the decks of their ships.

Volans can be seen on the lower side of the 19th-century star map included here. It seems to swim away from the neighboring Dorado, the Sword Fish, actually one of its predators in the real world.





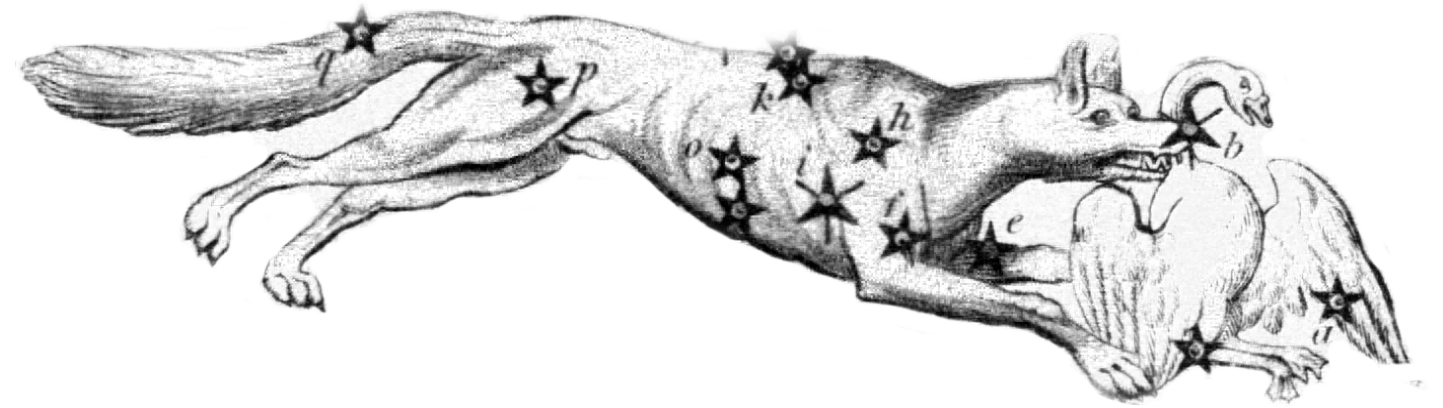


# VULPECULA, + ANSER, THE FOX THE GOOSE

Vulpecula, the Fox, was introduced by the Polish astronomer Johannes Hevelius in the 17th century (see also Canes Venatici and Lynx). The map on the opposite page, by Hevelius himself, shows Vulpecula as a fox carrying a goose (*Anser* in Latin) in its jaws, and taking it to Cerberus.

Hevelius's maps were drawn from an external perspective, that is, as looking down on a celestial globe. As a consequence, the constellations are reversed. The illustration above the map, which dates to the 19th century, shows Vulpecula and Anser as they would actually appear in the sky looking up from Earth.

Anser was eventually combined with Vulpecula, which is now part of the IAU's standard set of constellations.



*Urania's Mirror, or, A view of the heavens* (London, 1825), Adler Planetarium library



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





# TO LEARN MORE

## WEBSITES AND ONLINE RESOURCES

Adler Planetarium - [Zodiac coloring book](#)

Online Exhibit - [Pictures in the Sky](#)

[Figures in the Sky: How Cultures Across the World Have Seen Their Myths and Legends in the Stars](#)

[Ian Ridpath's Star Tales](#)

[Native Skywatchers: Indigenous Astronomy Revitalization](#)

## BOOKS

John Barantine, *Uncharted Constellations: Asterisms, Single-Source and Rebrands* (Springer, 2015)

\_\_\_\_\_, *The Lost Constellations: A History of Obsolete, Extinct, or Forgotten Star Lore* (Springer, 2015)

Nick Kanas, *Star Maps: History, Artistry, and Cartography, 2nd edition* (Springer Praxis, 2021)

Ian Ridpath, *Star Tales, expanded edition* (Lutterworth Press,, 2018)







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