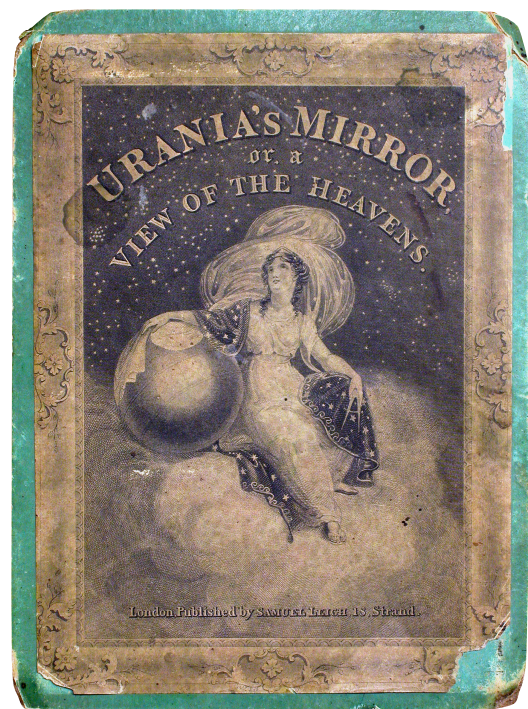




*Urania's Mirror* (London, 1825)

Constellation figures, as in this boxed set of 32 constellation cards, make the constellations memorable and easier to learn. Each card illustrates one or a few constellations. Holes punched in the positions of bright stars allow one to hold any card up to a light and compare the star pattern with the constellation figure. The constellations include several no longer recognized today.

Urania, the Muse of Astronomy, appears on the cover of the box. This is the first edition. Subsequent editions included stars outside the boundaries of the featured constellations. The creator of the cards remains a mystery. In a companion book providing a simple introduction to the night sky, Jehoshaphat Aspin explains only that the constellation cards "were designed by a lady." The constellation figures were based upon the *Celestial Atlas* of Alexander Jamieson, published in 1822.





# Things to do

1. Choose a card with a constellation that seems interesting to you.
2. Color your constellation.
3. Does your constellation include any star names?
4. Do you know any stories, mythology, poetry or music that refer to your constellation?
5. Does your constellation hold any meaning in your culture and heritage, or to those who have lived in places you have been?
6. Have you ever seen your constellation represented in jewelry, works of art, the movies, or other forms of media?
7. Compare your constellation with a list of the 48 constellations recognized by Ptolemy in the 2nd century AD. Is your constellation included? If not, when and by whom was it invented?
8. Compare your constellation with a list of the 88 constellations officially recognized today. Is your constellation currently recognized?
9. Punch holes in the brightest stars. Then hold the card up to the light to see the star pattern. Compare the *star pattern* with the *constellation figure*. How much imagination is necessary to see the figure in the star pattern?
10. Punch holes in 2 pieces of cardstock set underneath the constellation card to make the star pattern without a traditional constellation figure.
  - *Look at the star pattern and imagine a figure from a favorite story that it might represent.*
  - *Sketch your own brand-new constellation figure.*
10. Find your constellation on a planisphere, a star chart, or a celestial globe.
11. *Location:* Does your constellation contain the celestial equator? If so, and if it is not shown on your card, draw it in. Determine whether your constellation is *equatorial*, or whether it falls *north* or *south* of the celestial equator.
12. *Zodiac:* Does your constellation contain the ecliptic? (The ecliptic is the annual path of the Sun.) If so, it is a zodiac constellation. If the ecliptic is not shown on your card, draw it in.
13. *Season:* According to a planisphere, during which season is your constellation most prominent in the evening sky?
14. Does your constellation include any interesting stars, nebula, galaxies or other deep-sky objects visible in a telescope? If so, draw them in.
15. Have you ever seen your constellation in the night sky? Look for a skywatch opportunity.

Constellations included in <i>Urania's Mirror</i> (London, 1825)				
#	Constellation	Location	Season	Zodiac?
1	Andromeda			
2	Antinous, the Slave of Hadrian (with Delphinus)			
3	Antlia Pneumatica the Air Pump (with Noctua)			
4	Apparatus Sculptoris, the Tools of the Sculptor (with Cetus)			
5	Aquarius the Water Carrier			
6	Aquila the Eagle (with Delphinus)			
7	Aries the Ram			
8	Auriga the Charioteer			
9	Boötes the Herdsman			
10	Camelopardalis the Giraffe			
11	Cancer the Crab			
12	Canes Venatici the Hunting Dogs (with Boötes)			
13	Canis Major the Big Dog			
14	Canis Minor the Little Dog (with Monoceros)			
15	Capricornus the Sea-Goat			
16	Caput Medusae, the Head of the Medusa (with Perseus)			
17	Cassiopeia the Queen of Ethiopia			
18	Cepheus the King of Ethiopia			
19	Cetus the Sea Monster			
20	Coma Berenices the Hair of Berenice (with Boötes)			
21	Corona Australis the Southern Crown (with Sagittarius)			
22	Corona Borealis the Northern Crown (with Hercules)			



Constellations included in <i>Urania's Mirror</i> (London, 1825)				
#	Constellation	Location	Season	Zodiac?
23	Corvus the Crow (with Noctua)			
24	Crater the Cup (with Noctua)			
25	Custos Messium, the Harvest Keeper (with Camelopardalis)			
26	Cygnus the Swan (with Lacerta)			
27	Delphinus the Dolphin			
28	Draco the Dragon			
29	Equuleus the Little Horse (with Pegasus)			
30	Felis the Cat (with Noctua)			
31	Gemini the Twins			
32	Gloria Frederici, in honor of Frederick II of Prussia (with Andromeda)			
33	Hercules			
34	Hydra the Water Snake (with Noctua)			
35	Lacerta the Lizard			
36	Leo Major the Big Lion (or just Leo the Lion)			
37	Leo Minor the Little Lion (with Leo Major)			
38	Lepus the Hare (with Canis Major)			
39	Libra the Balance			
40	The Lynx			
41	Lyra the Harp (with Lacerta)			
42	Machina Electrica, the Electrostatic Generator (with Cetus)			
43	Monoceros the Unicorn			
44	Musca Borealis, the Southern Fly (a.k.a. "Apes," with Aries)			

Constellations included in <i>Urania's Mirror</i> (London, 1825)				
#	Constellation	Location	Season	Zodiac?
45	Noctua the Owl			
46	Officina Chemica, the Chemical Apparatus (with Cetus)			
47	Officina Typographica, the Printing Press (unlabeled, with Monoceros)			
48	Orion the Hunter			
49	Pegasus the Flying Horse			
50	Perseus			
51	Pisces the Fishes			
52	Sagitta the Arrow (with Delphinus)			
53	Sagittarius the Archer			
54	Scorpio the Scorpion			
55	Scutum the Shield (with Serpentarius)			
56	Serpentarius (or Ophiuchus) the Snake Handler			
57	Serpens the Snake (with Serpentarius)			
58	Sextans the Sextant (with Noctua)			
59	Tarandus the Reindeer (with Camelopardalis)			
60	Taurus the Bull			
61	Taurus Poniatowski, the Bull of the King of Poland (with Serpentarius)			
62	Triangula, the Triangle (with Andromeda)			
63	Ursa Major the Big Bear			
64	Ursa Minor the Little Bear (with Draco)			
65	Virgo the Maiden			
66	Vulpecula and Anser (The Fox and the Goose, with Lacerta)			



## 48 Constellations of Ptolemy

Andromeda	Corona Australis the Southern Crown	Lyra the Harp
Aquarius the Water Carrier	Corona Borealis the Northern Crown	Ophiuchus the Snake Handler
Aquila the Eagle	Corvus the Crow	Orion the Hunter
Ara the Altar	Crater the Cup	Pegasus the Flying Horse
Argo Navis, the Ship of the Argonauts	Cygnus the Swan	Perseus
Aries the Ram	Delphinus the Dolphin	Pisces the Fishes
Auriga the Charioteer	Draco the Dragon	Piscis Austrinus the Southern Fish
Boötes the Herdsman	Equuleus the Little Horse	Sagitta the Arrow
Cancer the Crab	Eridanus the River	Sagittarius the Archer
Canis Major the Big Dog	Gemini the Twins	Scorpius the Scorpion
Canis Minor the Little Dog	Hercules	Serpens the Snake
Capricornus the Sea-Goat	Hydra the Water Snake	Taurus the Bull
Cassiopeia the Ethiopian Queen	Leo the Lion	Triangulum the Triangle
Centaurus the Centaur	Lepus the Hare	Ursa Major the Big Bear
Cepheus the Ethiopian King	Lupus the Wolf	Ursa Minor the Little Bear
Cetus the Sea Monster		Virgo the Maiden
The Claws (Libra)		

Which Ptolemaic constellations are not included in *Urania's Mirror*?

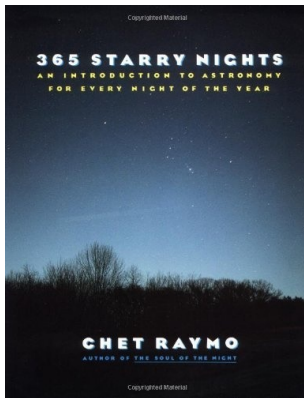
## 88 Modern Official Constellations

*Check off the constellations included in your card set. Does your card set contain any constellations that are no longer recognized?*

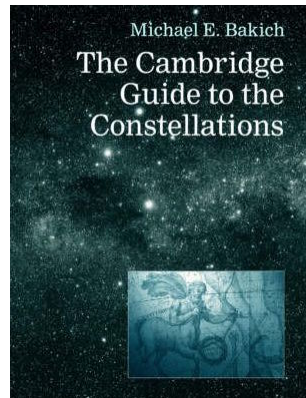
Andromeda	Crux the Southern Cross	Orion the Hunter
Antlia the Air Pump	Cygnus the Swan	Pavo the Peacock
Apus the Bird of Paradise	Delphinus the Dolphin	Pegasus the Flying Horse
Aquarius the Water Carrier	Dorado the Swordfish	Perseus
Aquila the Eagle	Draco the Dragon	Phoenix
Ara the Altar	Equuleus the Little Horse	Pictor the Painter's Easel
Aries the Ram	Eridanus the River	Pisces the Fishes
Auriga the Charioteer	Fornax the Furnace	Piscis Austrinus, the Southern Fish
Boötes the Herdsman	Gemini the Twins	Puppis the Stern of Argo Navis
Caelum the Chisel	Grus the Crane	Pyxis the Magnetic Compass
Camelopardalis the Giraffe	Hercules	Reticulum the Net
Cancer the Crab	Horologium the Pendulum Clock	Sagitta the Arrow
Canes Venatici the Hunting Dogs	Hydra the Water Snake	Sagittarius the Archer
Canis Major the Big Dog	Hydrus the Southern Water Snake	Scorpius the Scorpion
Canis Minor the Little Dog	Indus the American Indian	Sculptor, the Sculptor's Workshop
Capricornus the Sea-Goat	Lacerta the Lizard	Scutum the Shield
Carina the Keel of Argo Navis	Leo the Lion	Serpens the Snake
Cassiopeia the Queen of Ethiopia	Leo Minor the Little Lion	Sextans the Sextant
Centaurus	Lepus the Hare	Taurus the Bull
Cepheus the King of Ethiopia	Libra the Balance	Telescopium, the Telescope
Cetus the Sea Monster	Lupus the Wolf	Triangulum, the Triangle
Chameleon	The Lynx	Triangulum Australe the Southern T.
Circinus the Drawing Compass	Lyra the Harp	Tucana the Toucan
Columba the Dove	Mensa the Table Mountain	Ursa Major the Big Bear
Coma Berenices, Berenice's Hair	Microscopium, the Microscope	Ursa Minor the Little Bear
Corona Australis the Southern Crown	Monoceros the Unicorn	Vela the Sail of Argo Navis
Corona Borealis the Northern Crown	Musca the Fly	Virgo the Maiden
Corvus the Crow	Norma the Carpenter's Square	Volans the Flying Fish
Crater the Cup	Octans the Octant	Vulpecula the Fox
	Ophiuchus the Snake Handler	



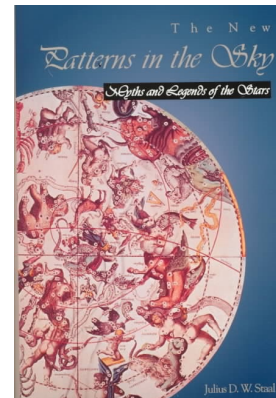
## Recommended resources



**Chet Raymo, *365 Starry Nights***  
A read-aloud orientation to the constellations in astronomy, literature and skylore



**Michael E. Bakich, *The Cambridge Guide to the Constellations***  
Handy reference information for every constellation



**Julius D.W. Staal, *The New Patterns in the Sky***  
Skylore from around the world combines astronomy and mythology

iBook Store: *Galileo's World Exhibit Guide*

App store: StarWalk & SkySafari Pro

David Chandler Planisphere



OU Academy of the Lynx

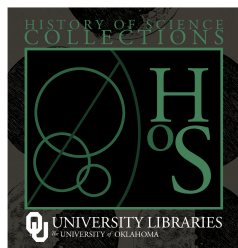
Collaborating in exhibit-based learning.  
Download open educational resources in the "Constellations" series from [oulynx.org](http://oulynx.org)



OU Academy of the Lynx

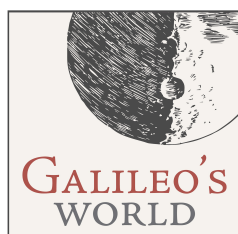
*Collaborating in exhibit-based learning.*

Download open educational resources from [oulynx.org](http://oulynx.org)



History of Science Collections

University of Oklahoma Libraries



Galileo's World exhibition

[galileo.ou.edu](http://galileo.ou.edu)



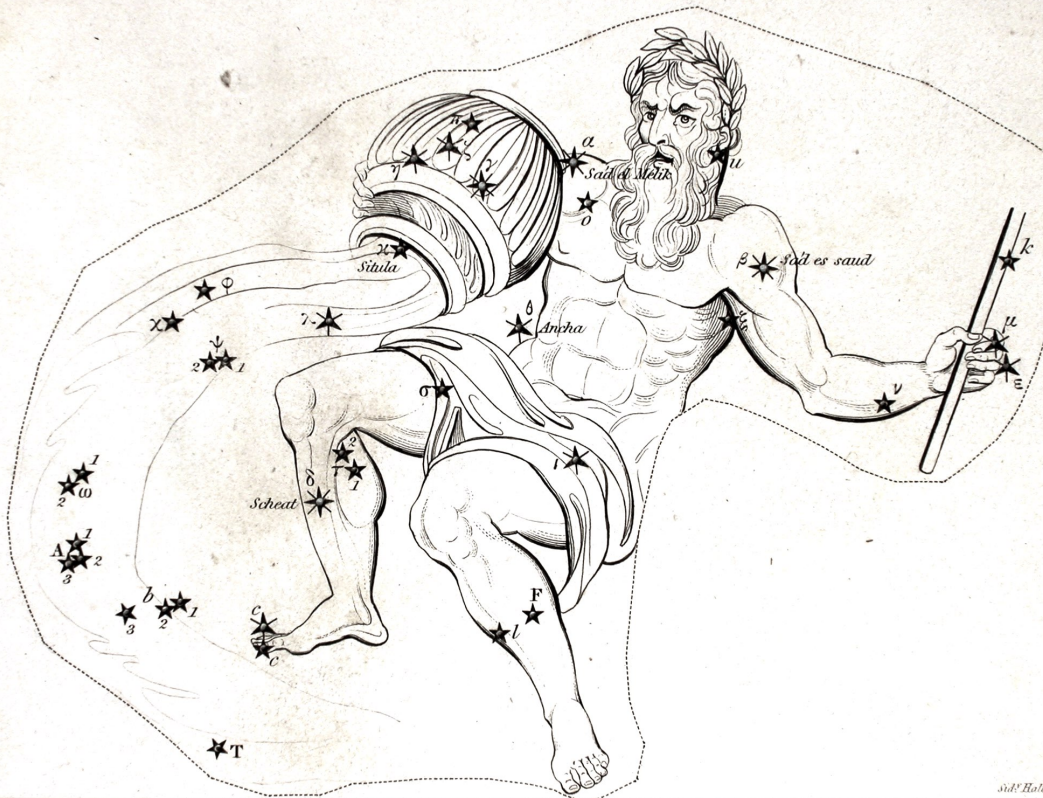
GLORIA FREDERICI, ANDROMEDA.



Sid. Holl, sculp.

AND TRIANGULA.

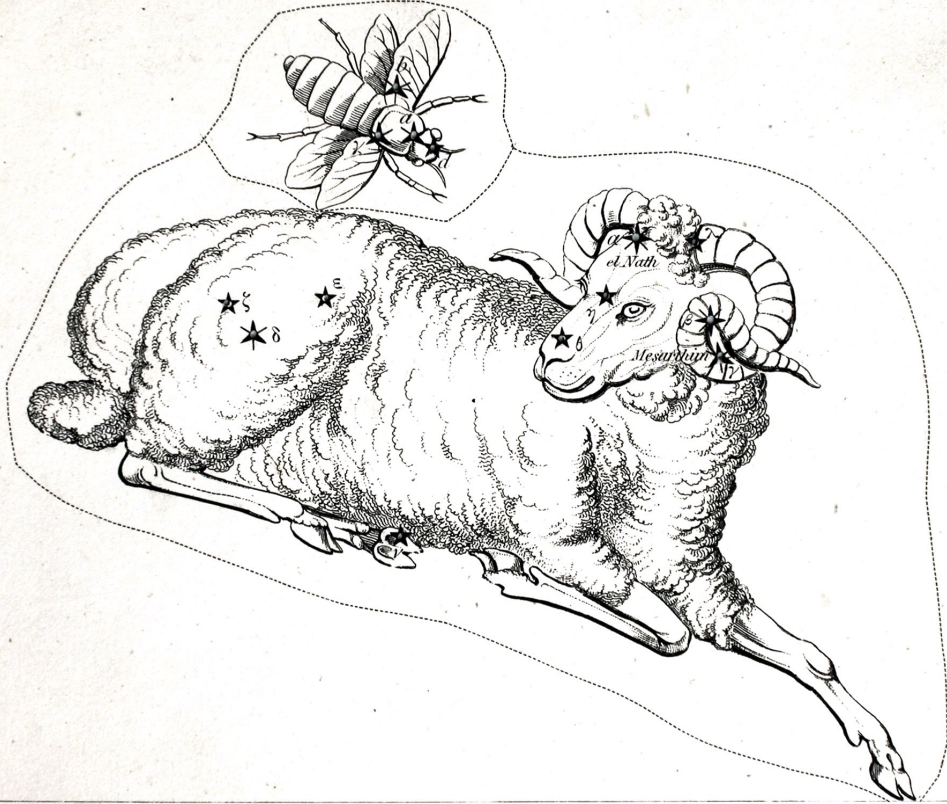
AQUARIUS



Sid. Holl, sculp.



ARIES AND MUSCA BOREALIS.



Sill. Hall sculp.

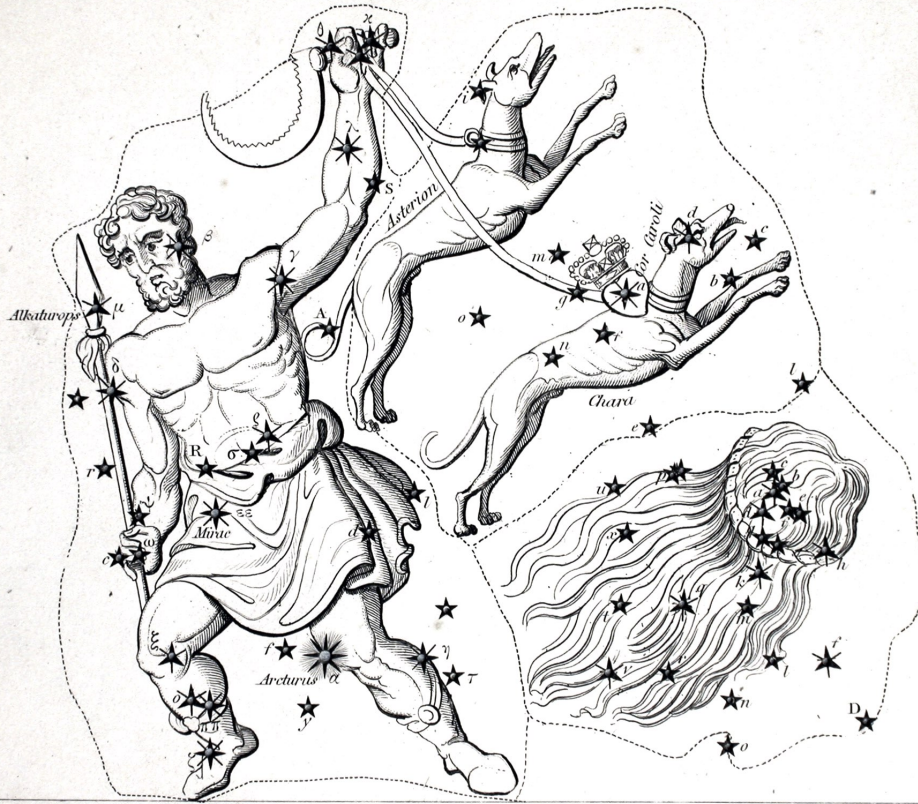
AURIGA.



Sill. Hall sculp.



BOOTES, CANES VENATICI AND COMA BERENICES.



Sid<sup>l</sup> Hall, sculp<sup>t</sup>

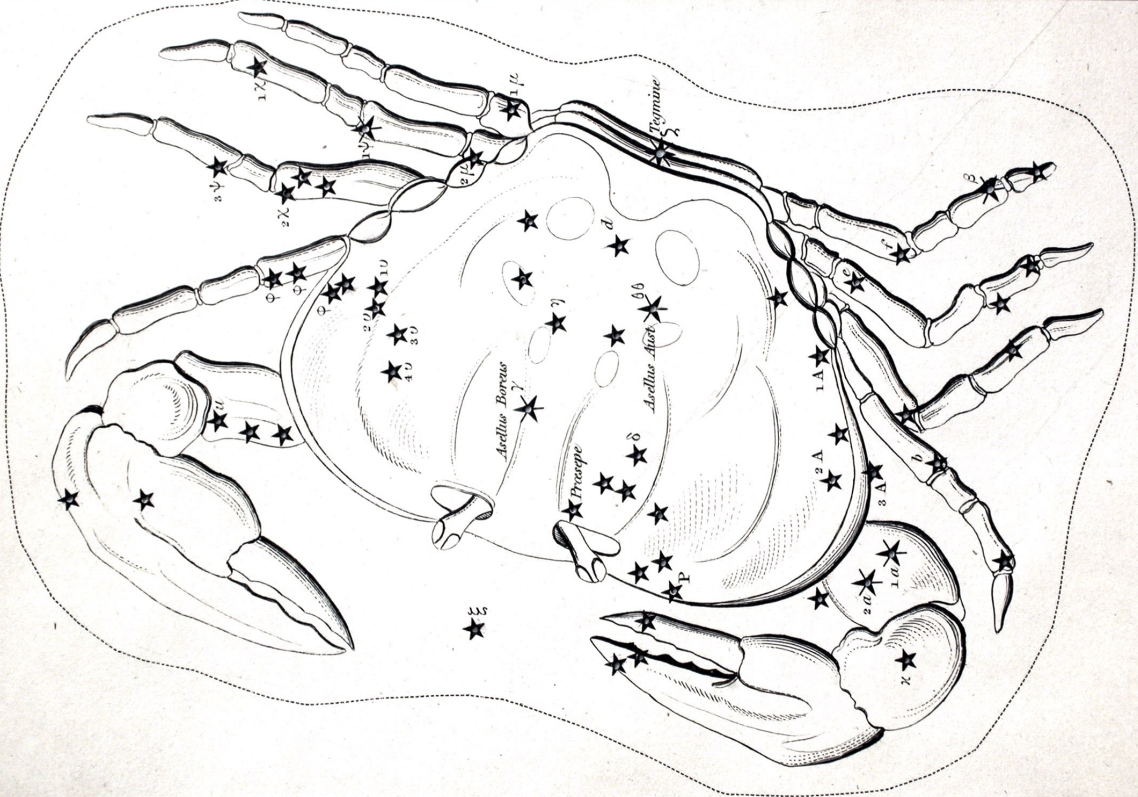
CAMELOPARDALIS, TARANDUS AND CUSTOS MESSIUM.



Sid<sup>l</sup> Hall, sculp<sup>t</sup>

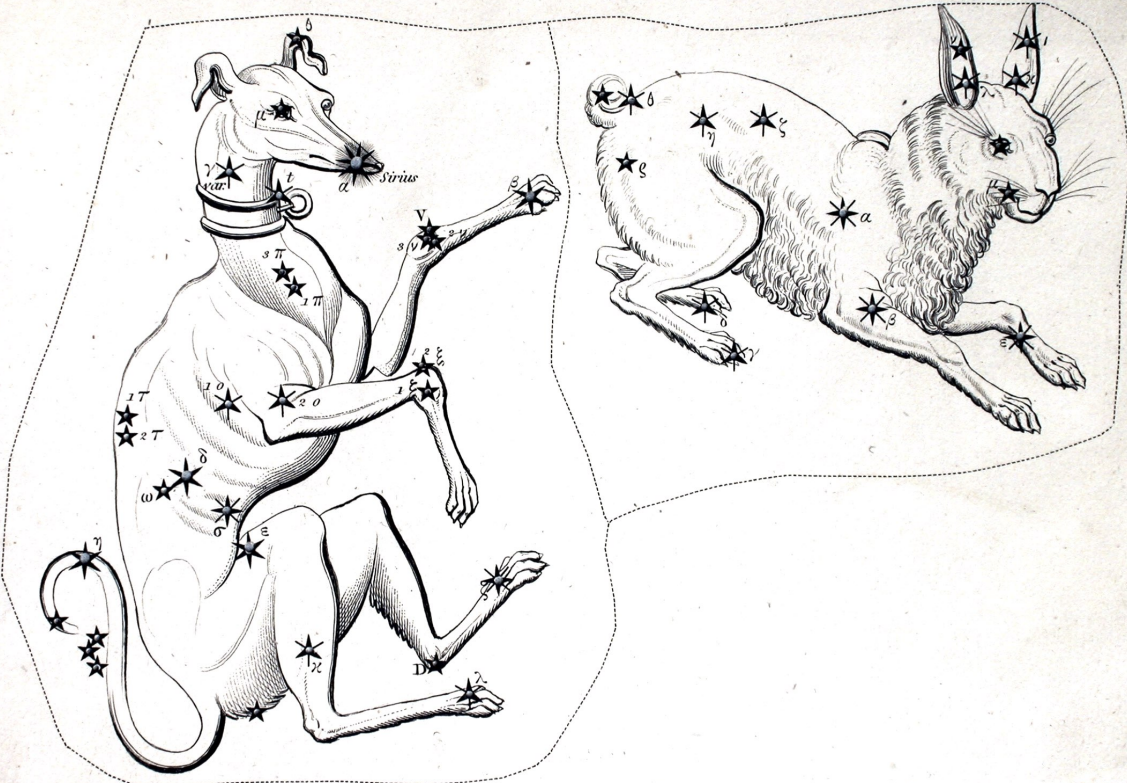


CANCER



Sid. Hall, sculp.

CANIS MAJOR AND LEPUS.



Sid. Hall, sculp.

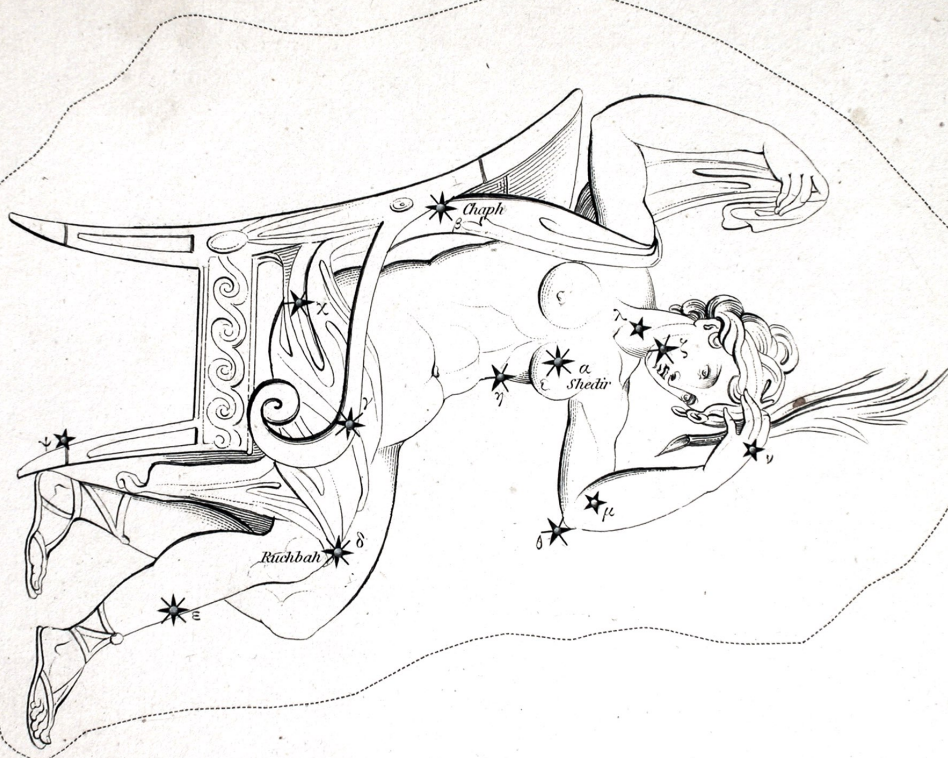


CAPRICORNUS



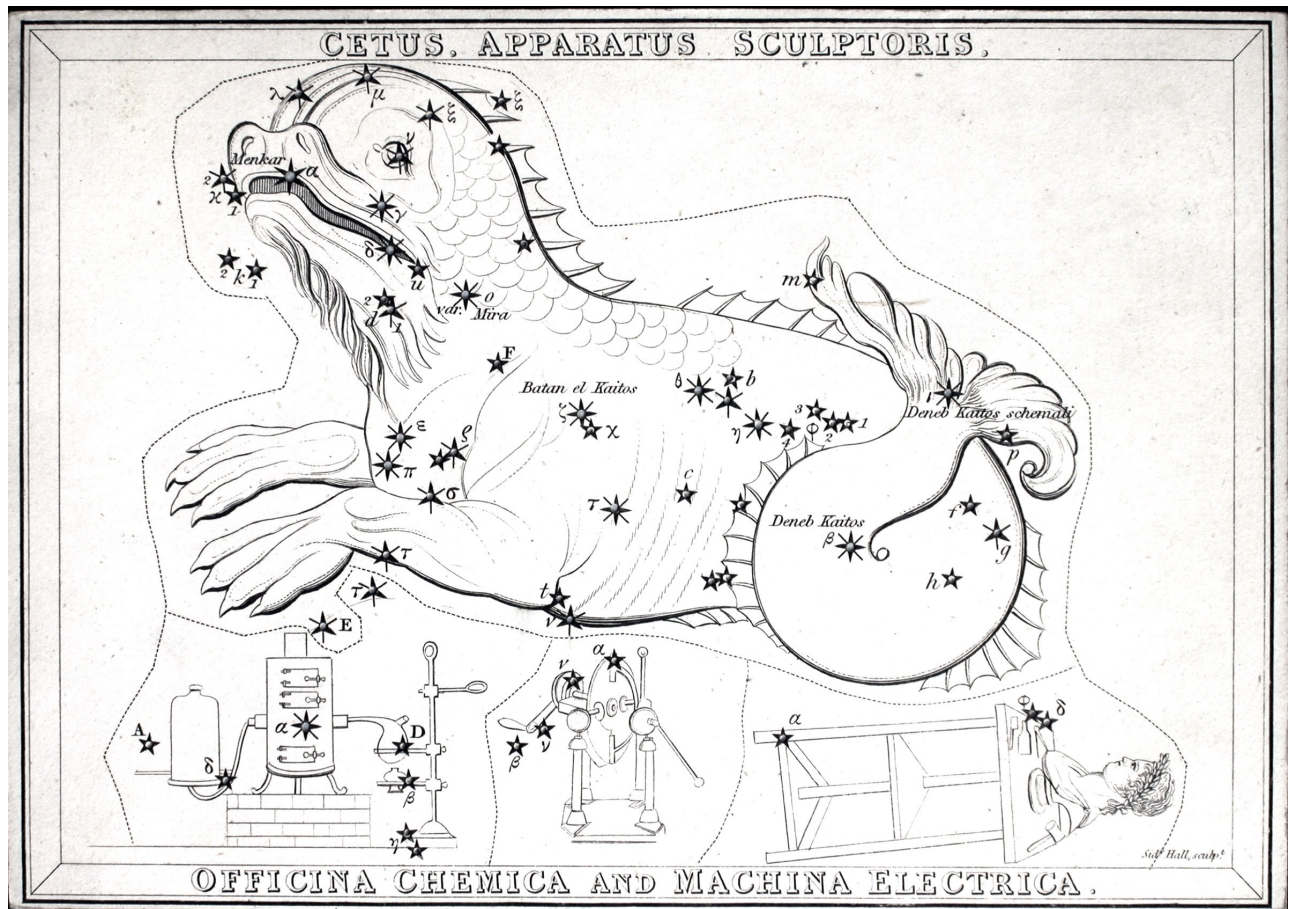
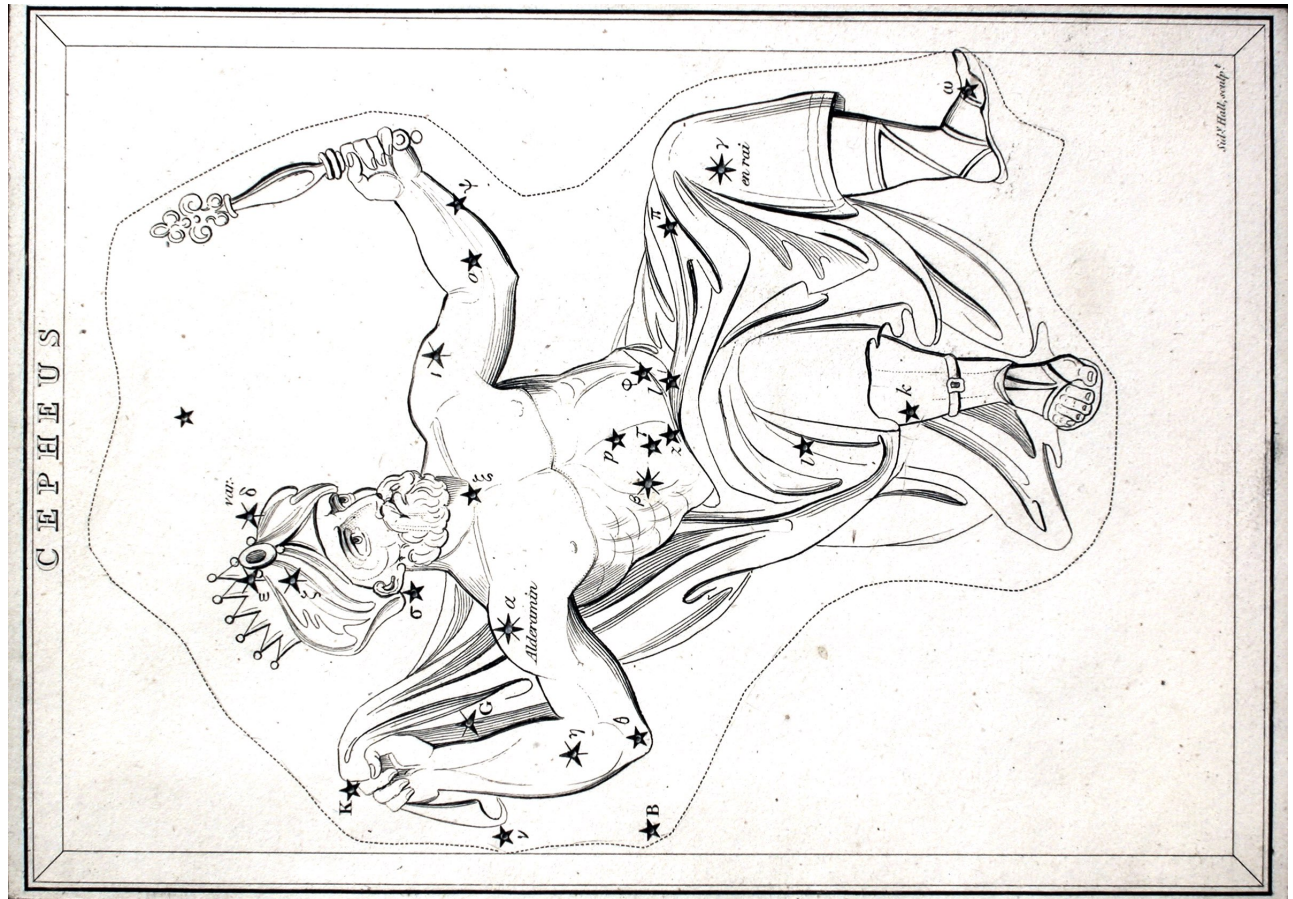
Sid. Hall, sculp.

CASSIOPEIA



Sid. Hall, sculp.







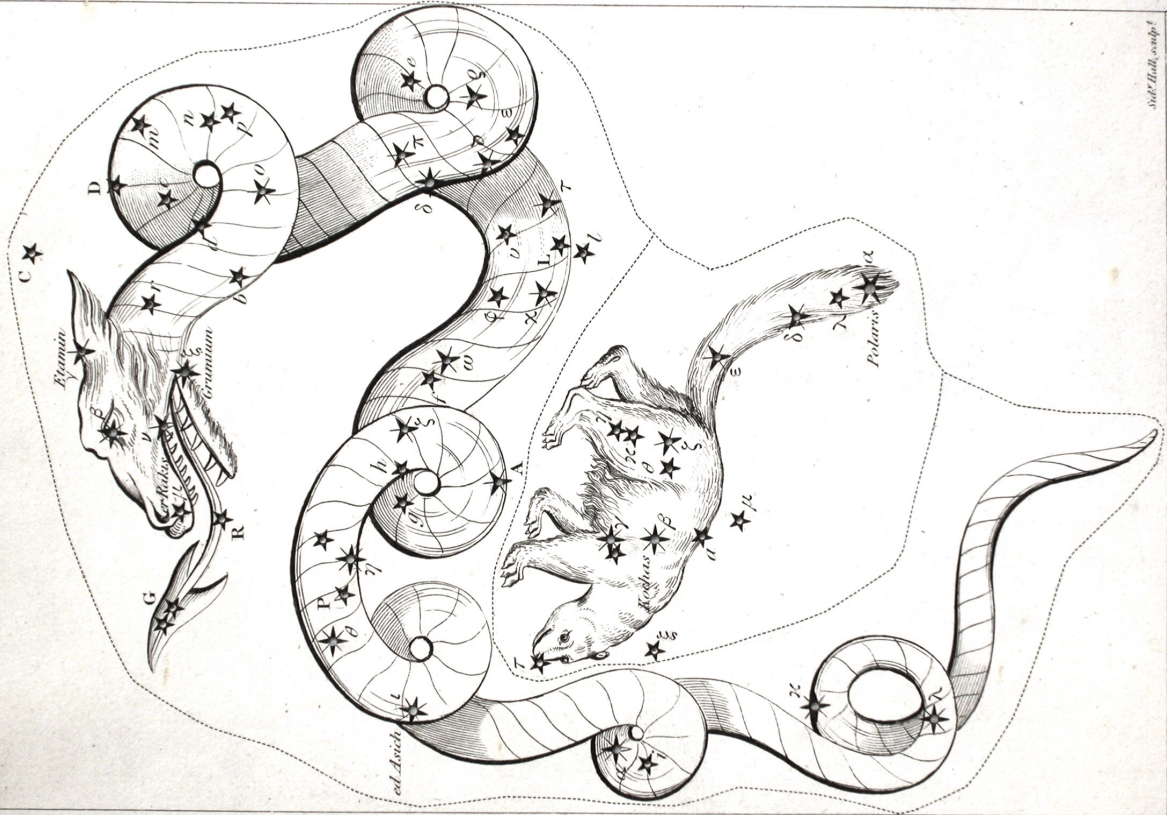
DELPHINUS. SAGITTA. AQUILA.



W. & A. Wall, sculp.

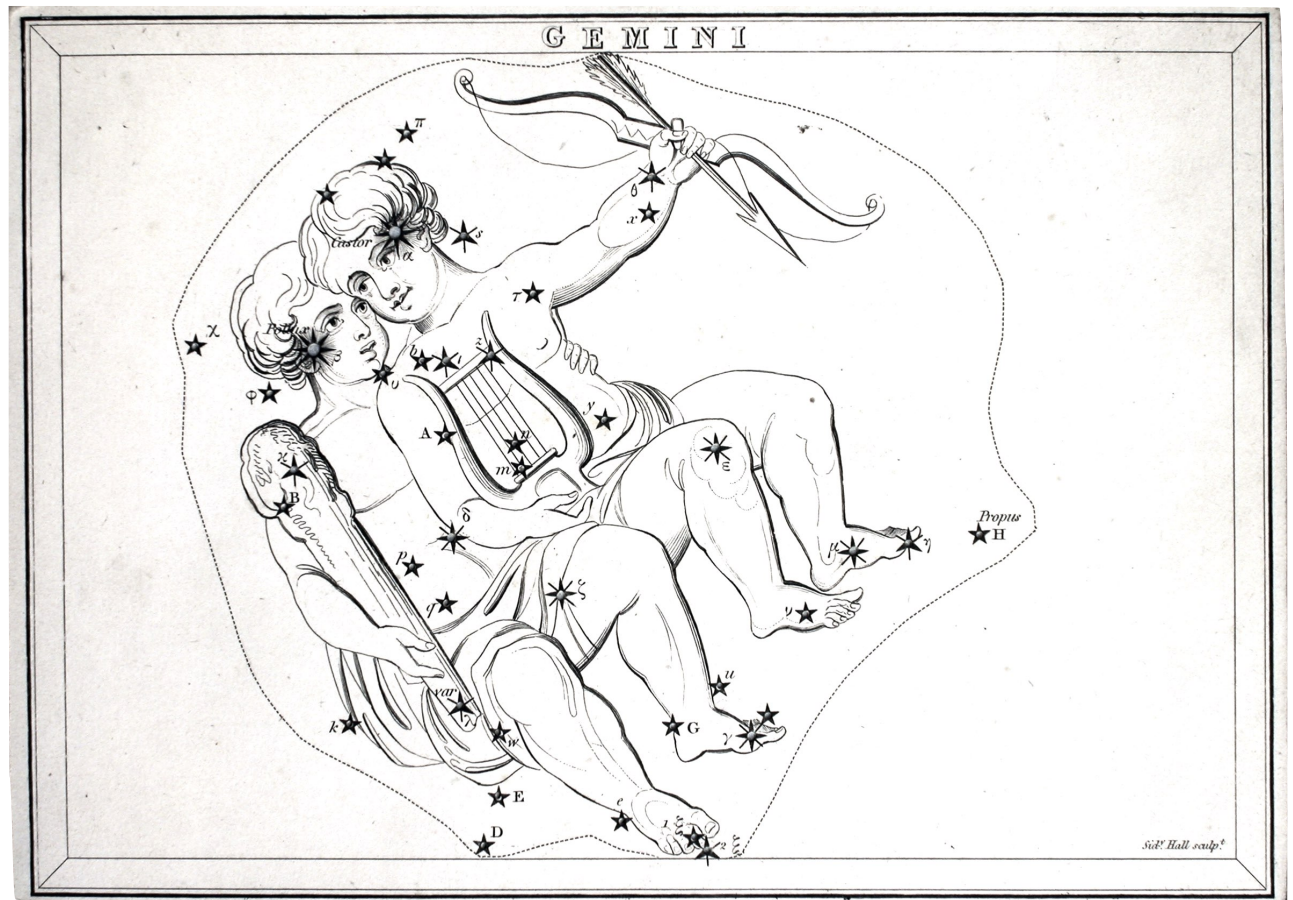
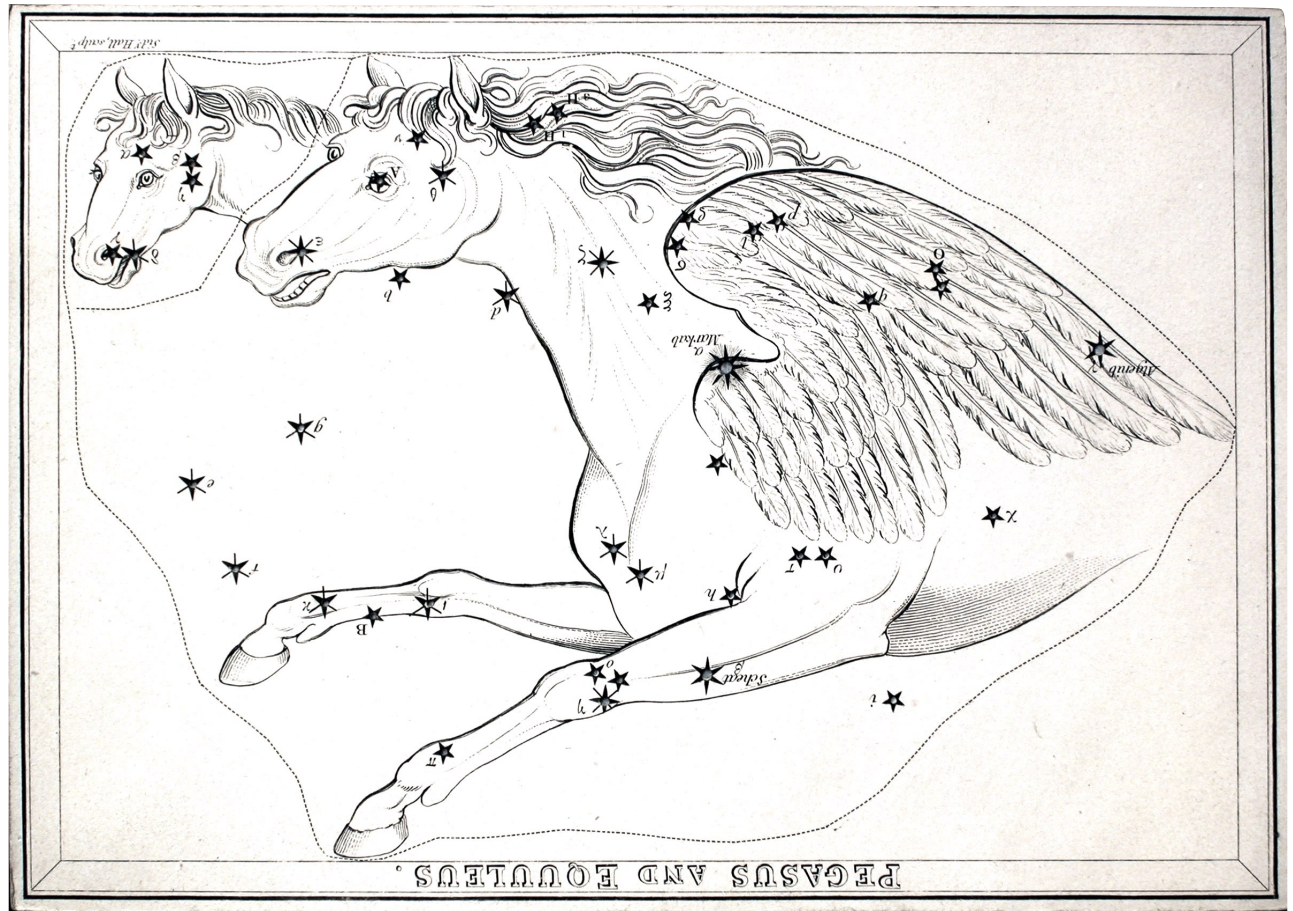
AND ANTINOUS.

DRACO AND URSA MINOR.



W. & A. Wall, sculp.





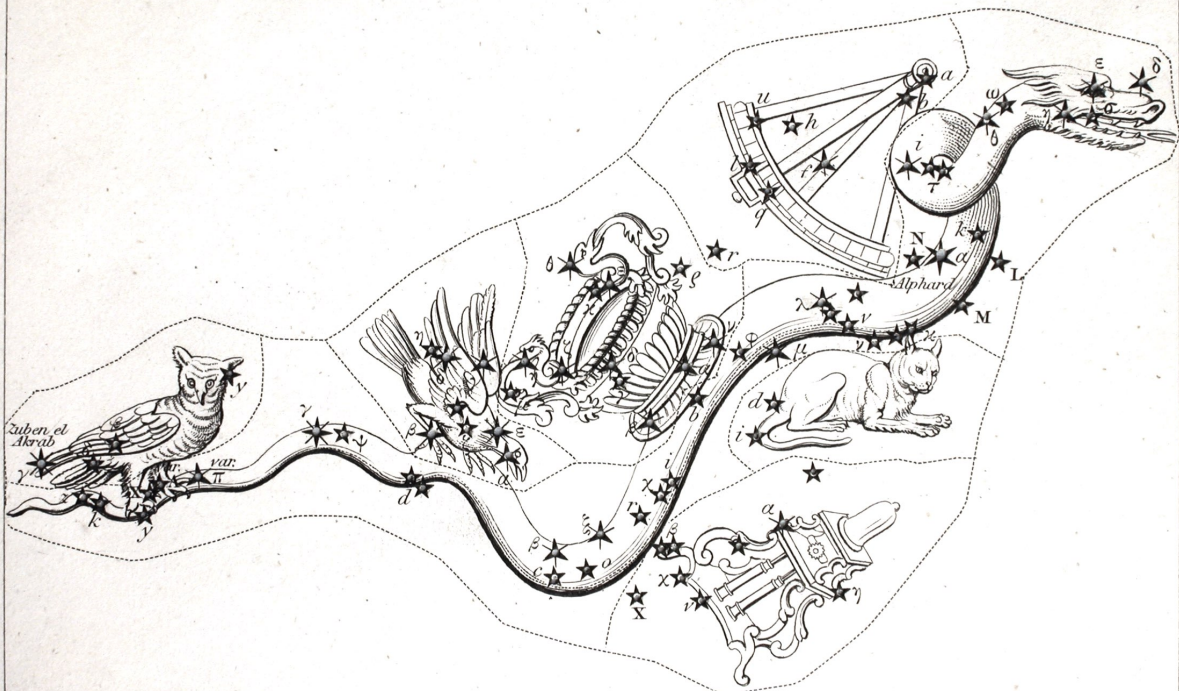


HERCULES AND CORONA BOREALIS.



Sid. Hall, sculp.

NOCTUA. CORVUS. CRATER, SEXTANS.

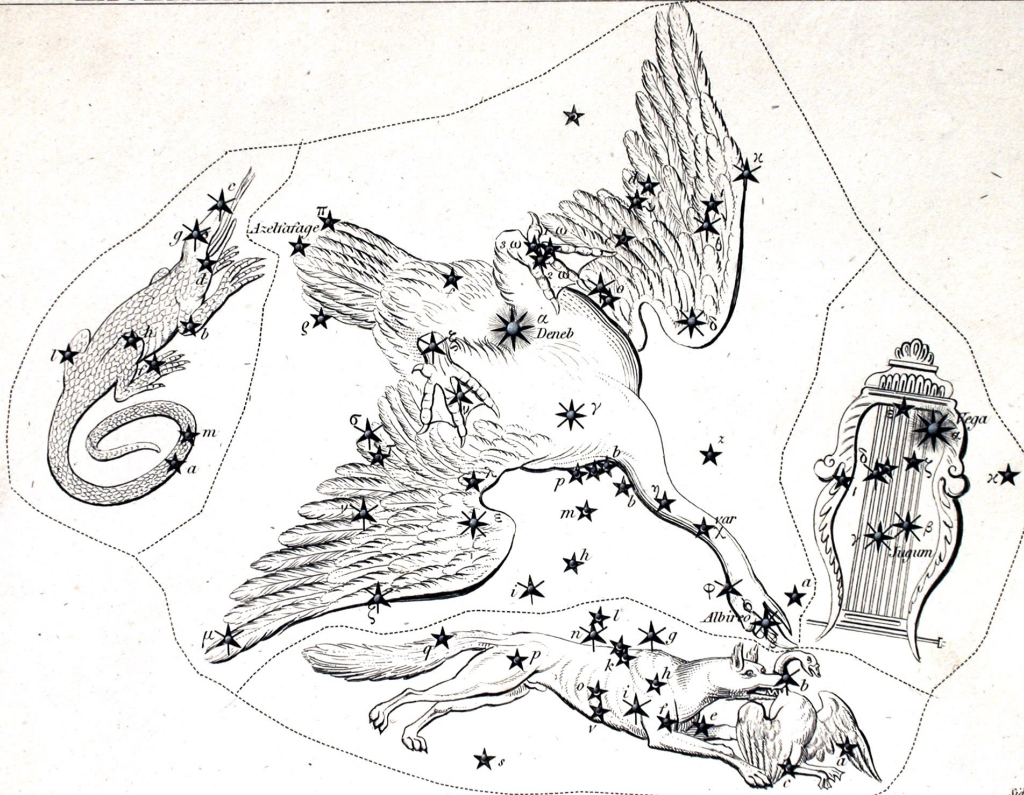


Sid. Hall, sculp.

HYDRA. FELIS AND ANTLIA PNEUMATICA.



LACERTA, CYGNUS, LYRA, VULPECULA AND ANSER.



W. H. Wall, sculp.

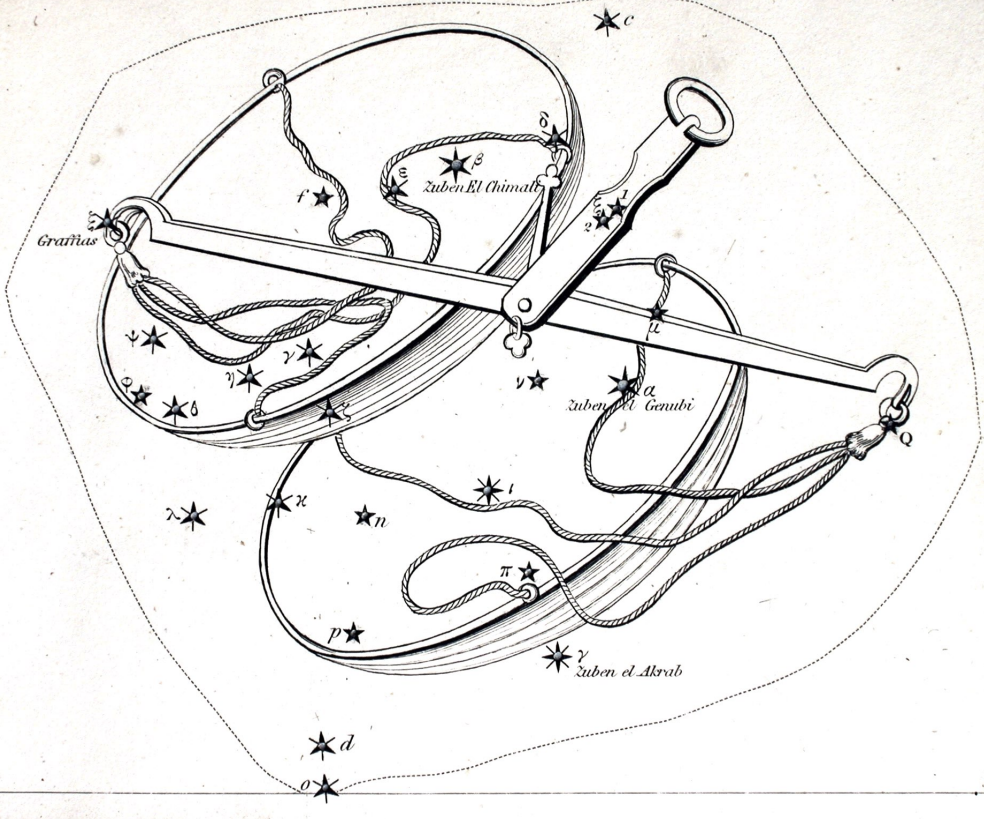
LEO MAJOR AND LEO MINOR.



W. H. Wall, sculp.

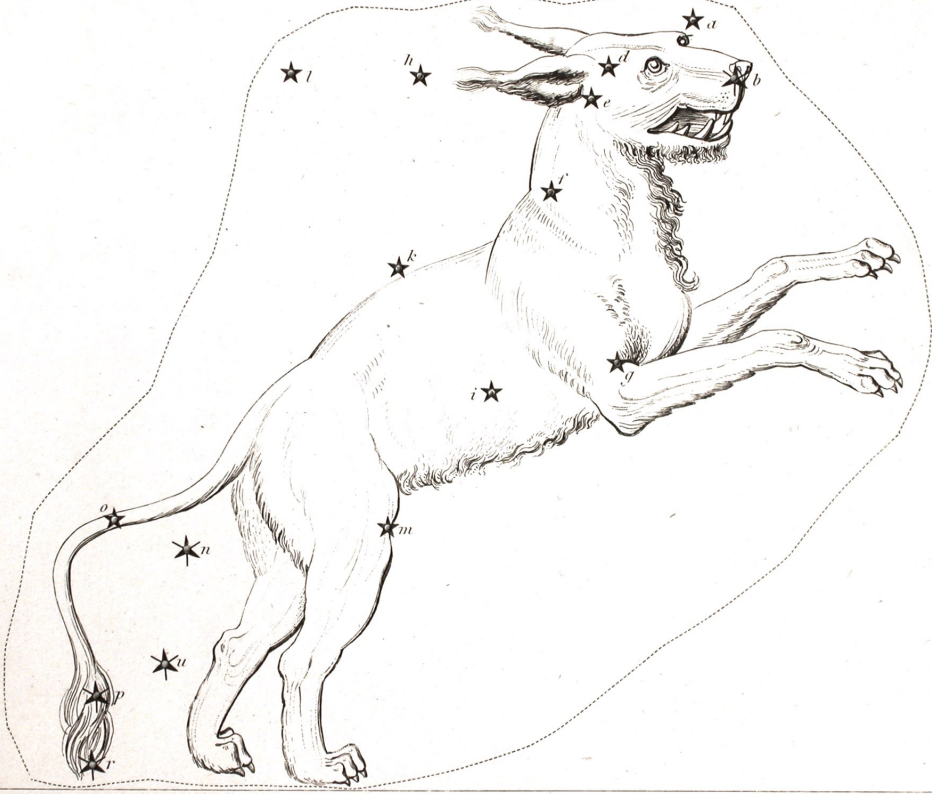


LIBERA.



Joh. Hall, sculp.

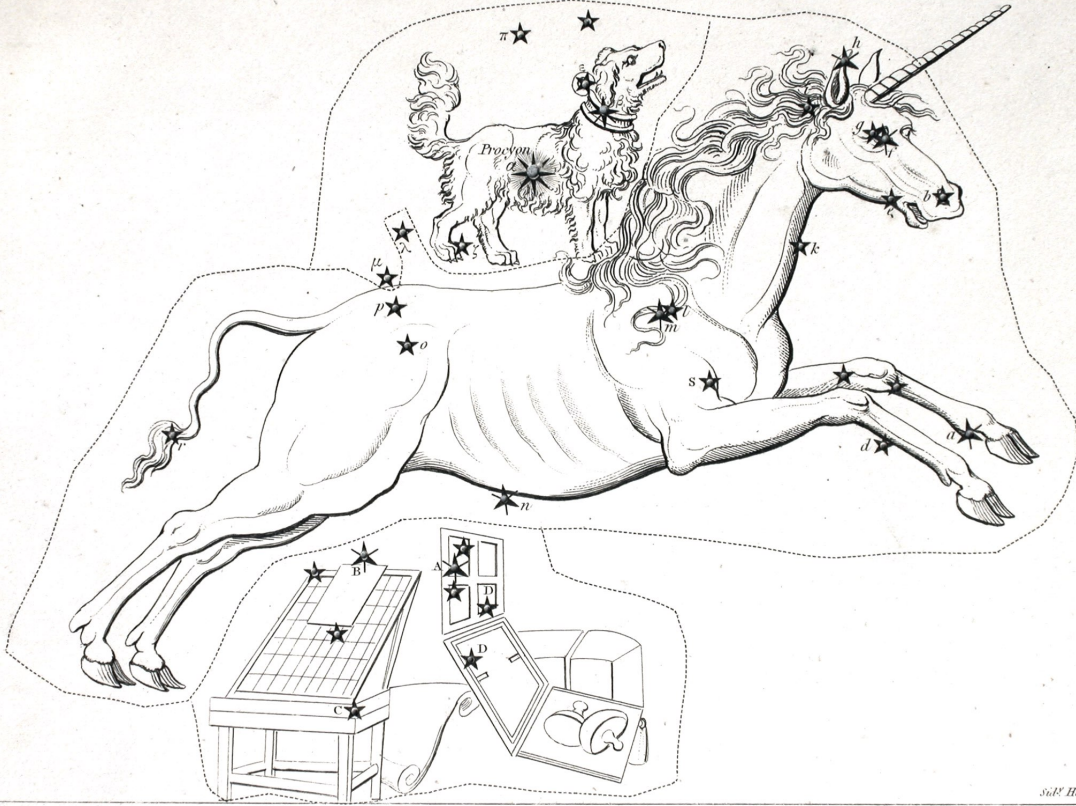
LYNX



Joh. Hall, sculp.

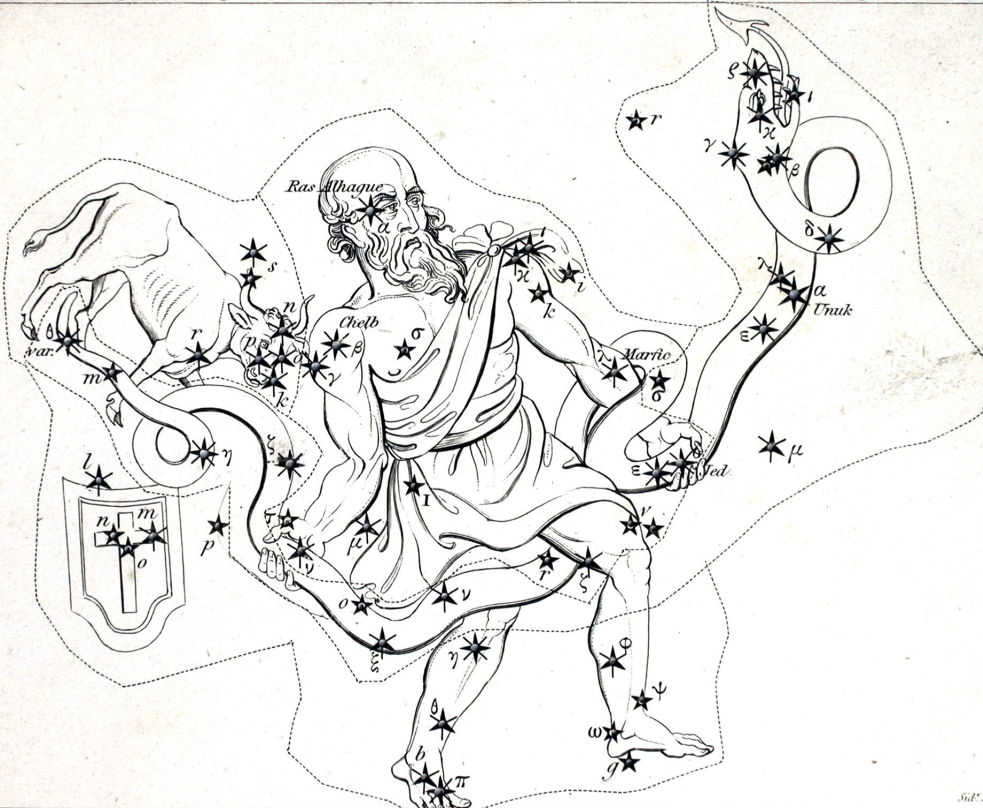


MONOCEROS. CANIS MINOR.



Sid. Hall, sculp.

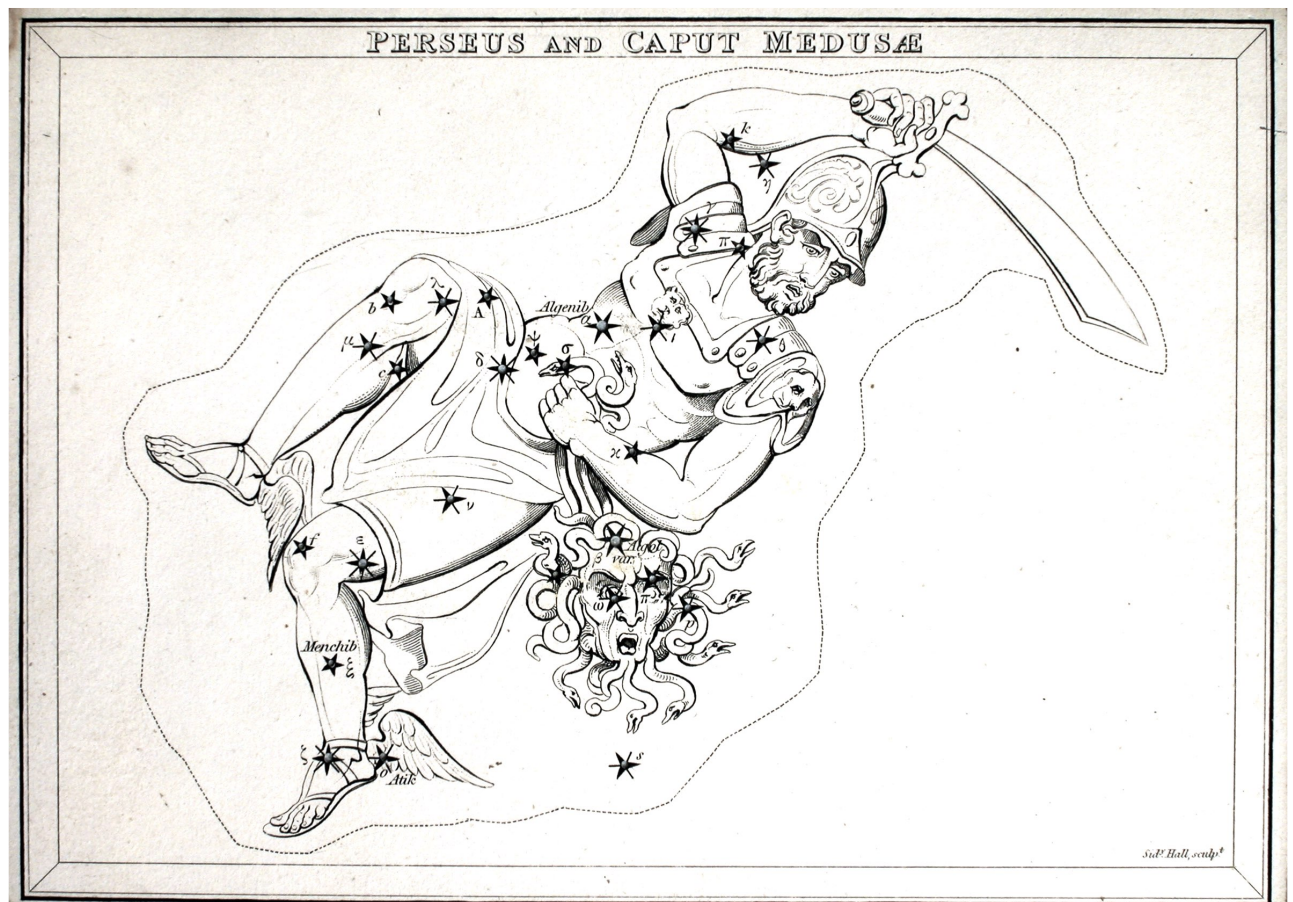
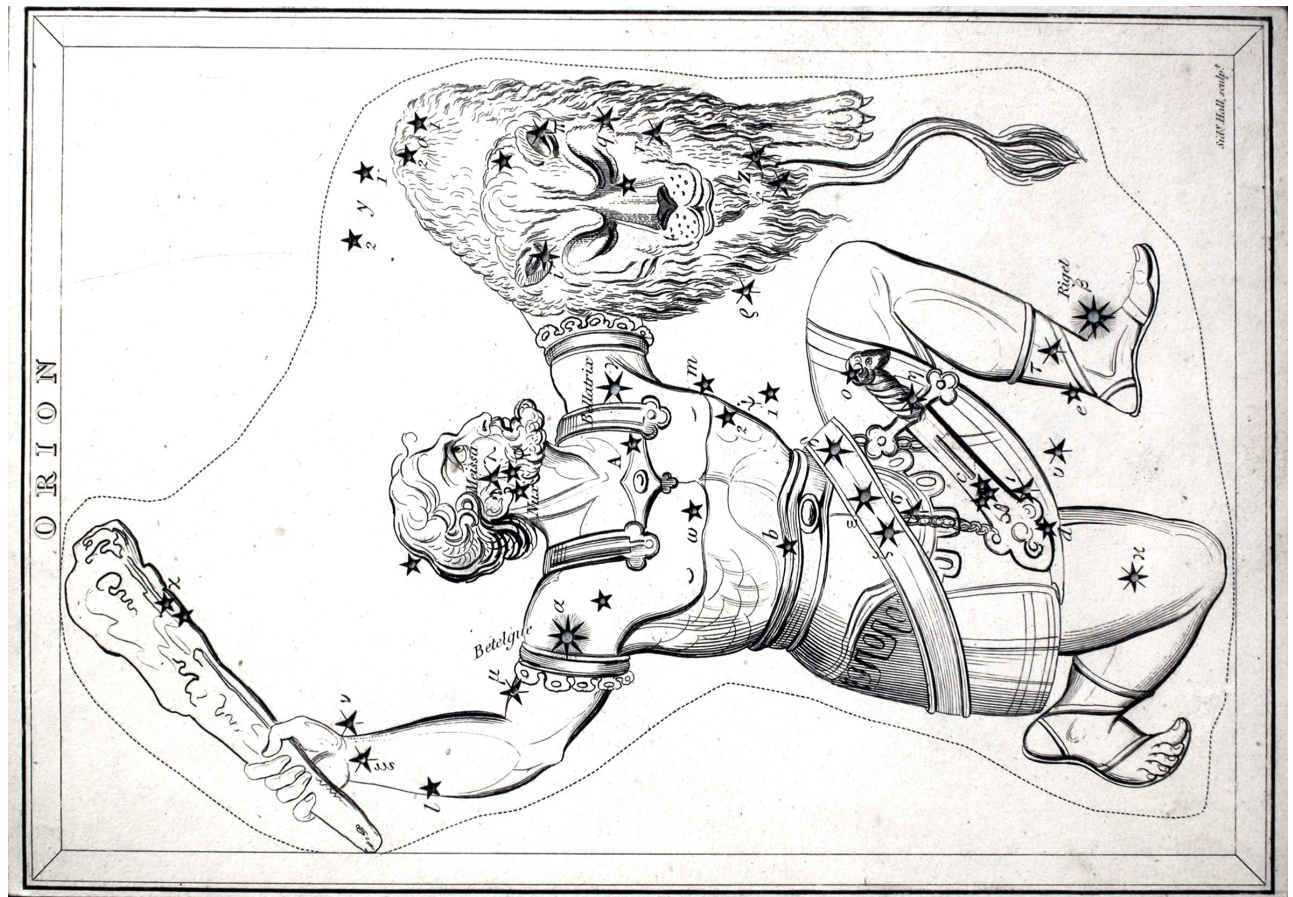
TAURUS. PONIATOWSKI. SERPENTARIUS.



Sid. Hall, sculp.

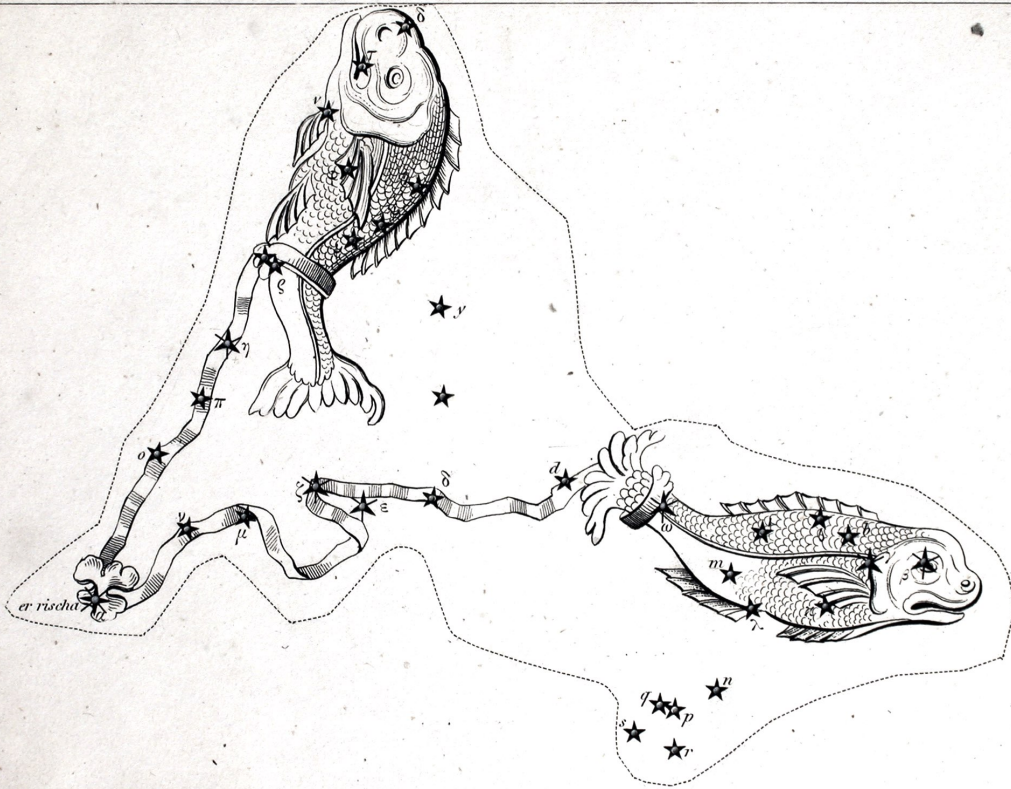
SCUTUM AND SERPENS.



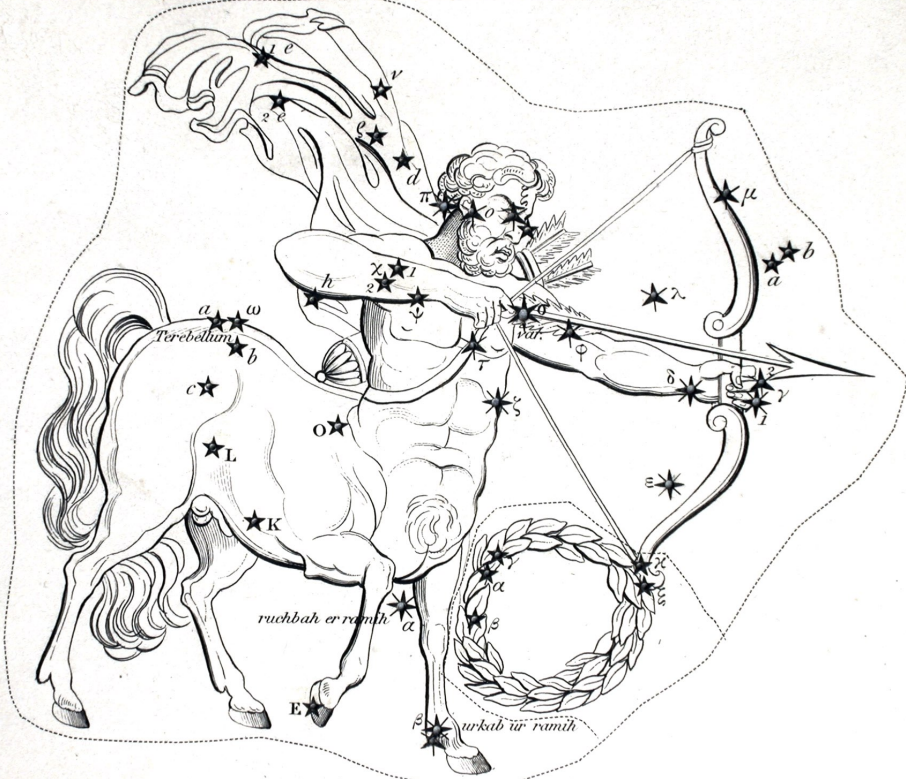




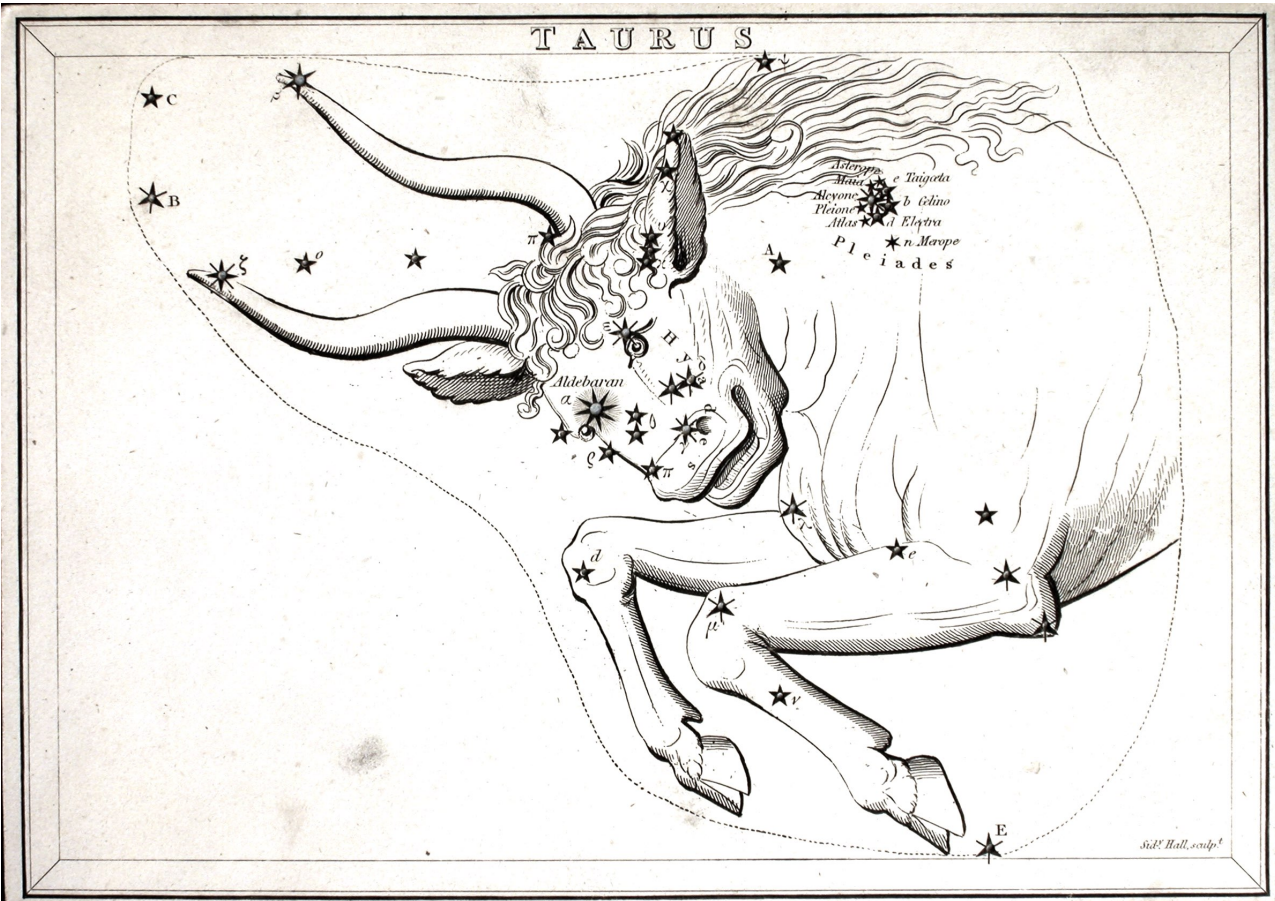
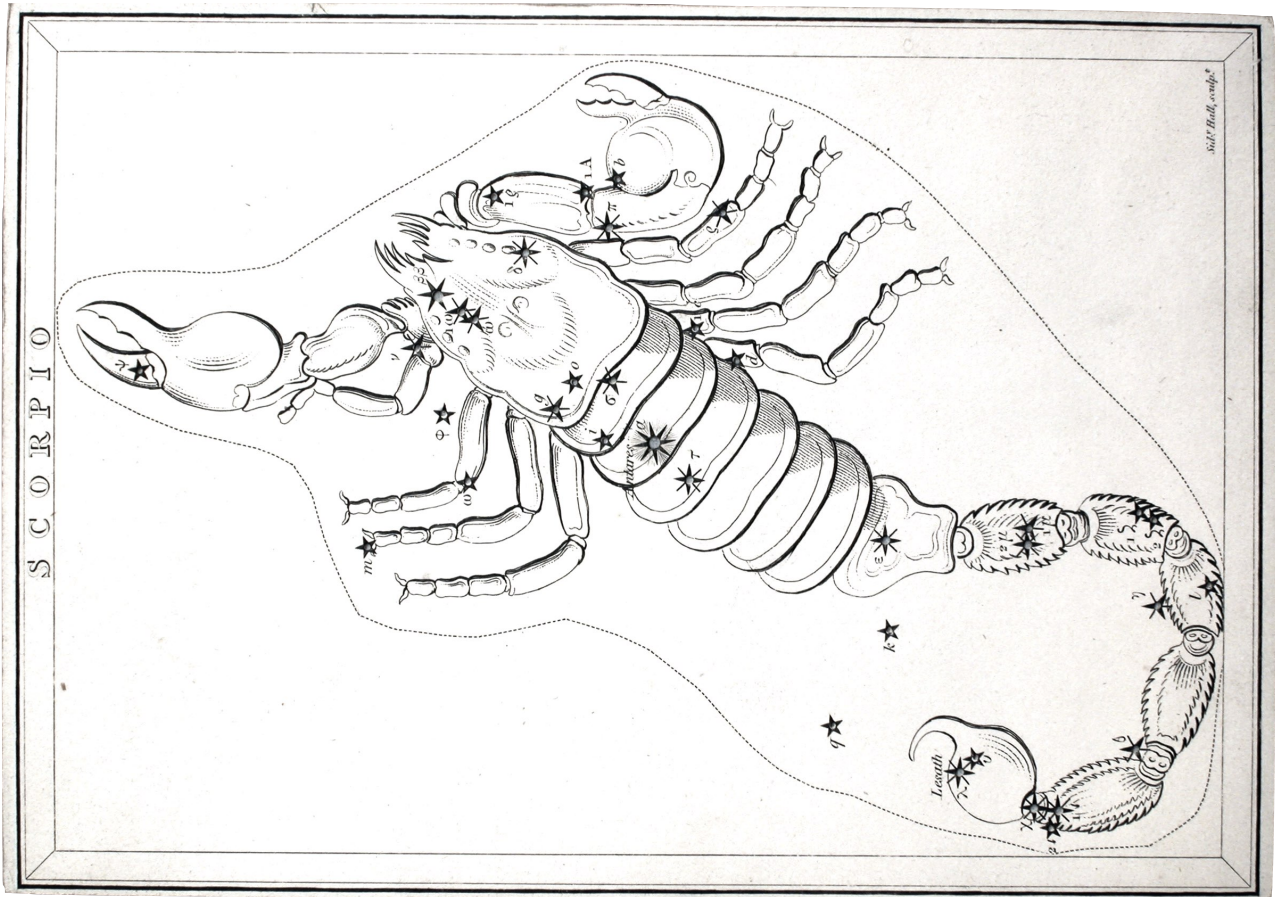
PISCES



SAGITTARIUS AND CORONA AUSTRALIS.









URSA MAJOR.



VIRGO.

