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Hyginus *excerpta*

German (or northern French?)

15th century

text

ff. 4r-8r: Hyginus, *Excerpta* (adapted from Hyginus, *De astronomia*, Book III, but with no information on the positions of the stars included).

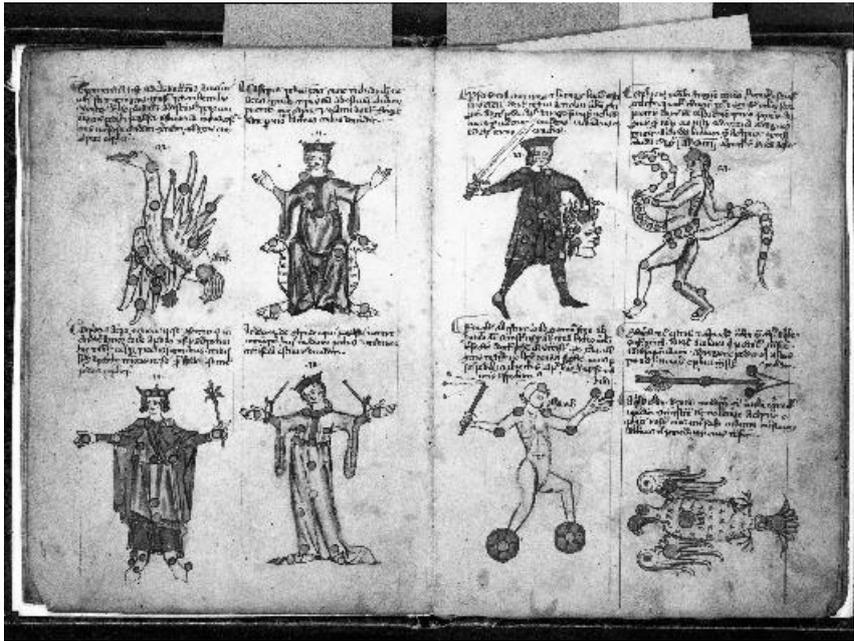
fol. 4r Artofilax vel boetes huius dextram circulus articus includit ita et nec oriri nec occidere videatur ipse autem inter articum et estivum circulum in longitudine inclinatus dextro pede estivo circulo innititur per huius pectus transit colurus qui per arietem ducitur ad libram. in manu 4<sup>or</sup> stelle que numquam occiderunt ... (cf. Hyginus, *De astronomia*, III, 3; ed. Viré 1992, p. 96)

(note: the opening set of images are not in the proper 'Hyginian' order. For example, the first constellation is Bootes, followed by *Draco inter arctos* and then Corona Borealis, Hercules, etc. The opening passage should be the text accompanying the image of *Draco inter arctos* at the bottom left of the page: In artico celo due urse clause videntur ita collocate ut unaqueque earum resupinata capud alterius ... (cf. Hyginus, *De astronomia*, III, 1; ed. Viré 1992, p. 95))

fol. 8r ... excipiens ore aquarii stellarum 12. (compare Hyginus, *De astronomia*, III, 40; ed. Viré 1992, p. 124)



fol. 4r



fol. 4v

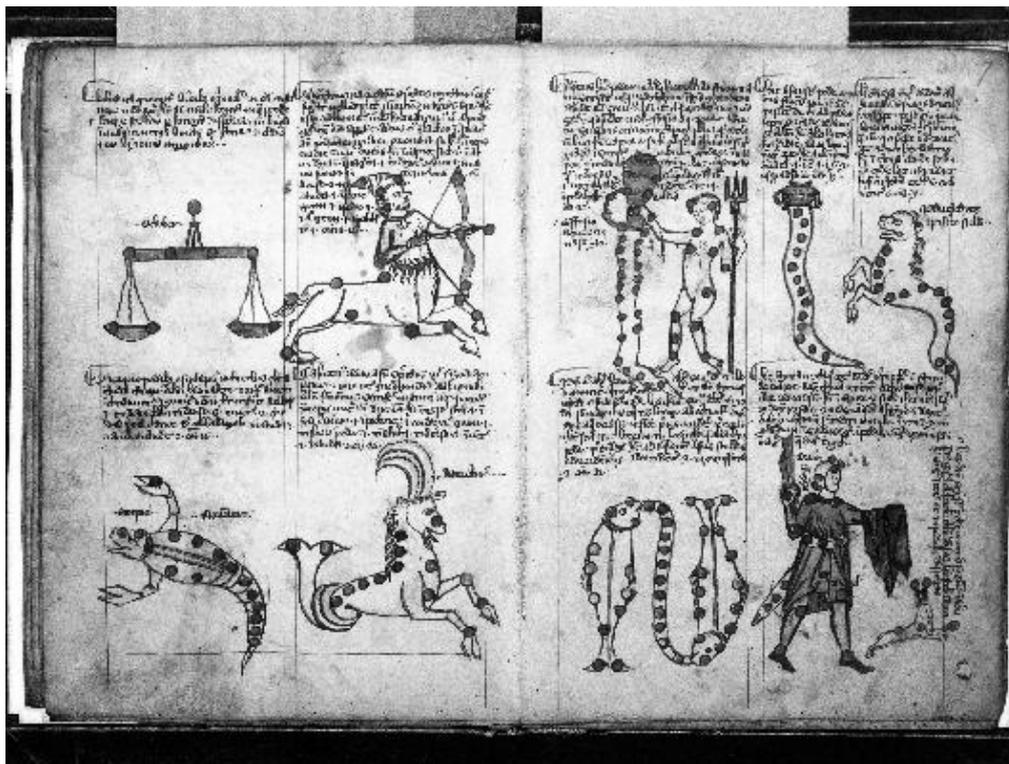
fol. 5r



fol. 5v

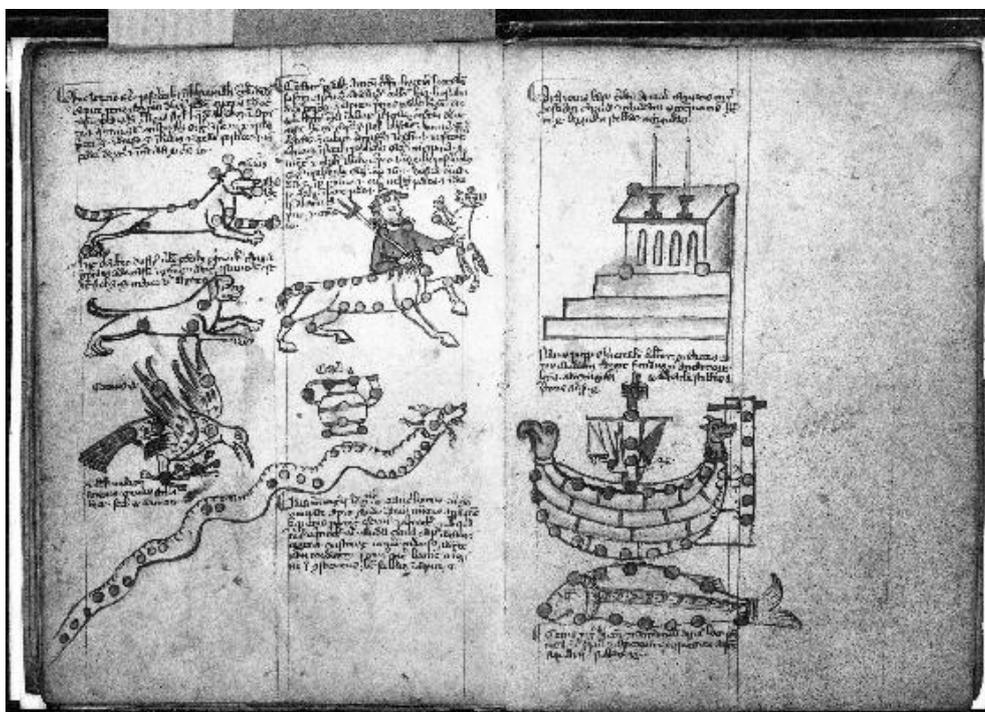


fol. 6r



fol. 6v

fol. 7r



fol. 7v

fol. 8r

illustrations

ff. 4r-8r Coloured drawings of 38 constellation groupings with lavender, green, gold and red predominating. The stars are marked as gold circles. A number of the stars have Arabic names penned in same hand as the text. The text and images are meant to be read vertically, column-by-column; but the opening images are not in the correct order.

fol. 4r **BOOTES** stands facing the viewer, and is dressed in a short tunic. He leans on a crutch, held on his right side and holds a flail with 3 thongs above his head in his right hand. He has 4 stars in his raised right hand, 1 in his head, 1 on each shoulder, 4 in the raised right hand, 1 on each nipple, 1 on his left side below the nipple, 1 in his left elbow, 1 at his belt, 1 below the belt, and 1 in each foot. The one in the middle of his chest appears to be a decorative motif. Therefore, he has 15 stars.

**DRACO INTER ARCTOS** shows **DRACO** with only one real bend in his body like a flattened 'S'), with his head facing towards the bottom of the page. Draco has 5 stars in its head, and 10 stars in its body, or 15 stars in all. The Bears are placed back-to-back and are facing outwards. They have short tails and open mouths.

**URSA MINOR** is within the first bend and has 7 stars, 2 of which are outside the body.

**URSA MAIOR** is at the end of the tail and has 5 stars around its head, 1 on the ear, 3 in its mouth, 2 on its back, 1 in its shoulder or chest, 2 on its right forefoot, 5 on its flank and 1 on each hind leg, or 21 stars in all.

**CORONA BOREALIS** is a foliate corona and is marked by 7 stars. The star at the bottom of the wreath is labelled: Elpheta ( $\alpha$  CrB = *alfeta*).

**HERCULES** is nude and leaps to the right with his hips in profile and his upper torso facing the viewer. He holds an animal skin over his left arm held in front of him (with its face, 4 paws and tail visible) and holds a wooden club raised behind his head with his right hand. He has wild hair and is marked by 1 star in his head, 1 on each shoulder, 1 in each elbow, 1 in his right hand, 1 on each side of his chest

and 2 on the right thigh, 1 on the right knee, 1 below the right knee, 1 on the right shin and 1 on the right foot and 4 in the lion's skin, or 18 stars in all.

**LYRA** is lyre-shaped and has with animal head on both of its side supports. It is marked by 1 star in each animal head, 1 in each side support, 3 in the vertical bar in the middle and 1 at the bottom or 8 stars in all. The star at the bottom of the lyre is labelled: Wega ( $\alpha$  Lyr = *al-wāqi'* or *wega*).

fol. 4v

**CYGNUS** faces to the left and has its left wing raised and its right wing lowered. It has 1 star in its head, 1 in its neck, 4 in its left wing and 5 in its right and 1 on its tail, or 12 stars in all. The star in the tail is labelled: alrif ( $\alpha$  Cyg = *al-ridf*), and there is the number '12' written above it.

**CEPHEUS** stands facing the viewer dressed in a long robe with a mantle covering his shoulders. He wears a crown and holds a sceptre in his left hand. He holds his hands out to the side. He has 2 stars on his head, 1 on each shoulder, 1 on the right side of his chest, 3 along his belt, 1 on his right elbow and 1 in each hand, 2 on his legs, 4 on his right foot and 2 on his left foot, or 19 stars in all. There is the number '19' written above his head.

**CASSIOPEIA** is seated on a low-backed chair that has animal head and feet to either side. She wears a crown and a long gown with long, droopy sleeves. Her arms are held outstretched to either side. She has 1 star on her head, 1 on each shoulder, 1 on her right breast, 1 on her navel, 1 on her left hip, 1 on her left knee, 1 on her right foot and 4 on the throne, or 10 stars in all. There is the number '12' written above her head.

**ANDROMEDA** stands facing the viewer wearing a long gown with drooping sleeves. Her arms are extended to either side, and her wrists are lifted by large hoops that are hung on hooks (but they are not attached to anything). She tilts her head slightly to the right and wears a crown. She has 1 star in her head (?), 1 on each shoulder, 1 in each hand, 1 on each side of her chest, 2 at her waist, 5 in her dress below the waist and 1 on each foot, or at least 15 stars in all. There is the number '17' written above her head.

fol. 5r

**PERSEUS** faces the viewer and walks to the right in a short tunic with leggings. He wears a crown on his head. He holds a long sword upraised in his right hand and has flame-haired head in his left. The Medusa's head is labelled: algon (το γοργόνιον =  $\beta$  Per = *al-ghul*). He has 1 star in each shoulder, 1 in his chest, 5 on his skirt, 1 on his left knee, 1 in his left shin and 1 on his right ankle and 5 in the

Medusa's head, or 16 stars in all. There is the number '17' written above his head.

**AURIGA** is nude, save a tight-fitting cap he wears on his head. He faces the viewer and stands slightly to the right, with his feet transformed into small wheels. His arms are outstretched to either side and he holds a flail with 3 thongs in his right hand and nothing in his left. He has 1 star in his head, 1 on each shoulder, 1 on each elbow and 2 in his left hand, or 7 stars in all. The star on his shoulder is labelled: *alhaioch* ( $\alpha$  Aur = *alaioch*).

**OPHIUCHUS** is nude and faces away from the viewer towards the left, with his buttocks visible. He has long hair. The **SERPENS** is wrapped once around his middle and faces away from him to the left. It has a dragon's face. The man has 1 star in his head, 3 in his left hand and 4 in his right, 2 on his buttocks, 1 in each knee, 1 on his left (?) calf and 1 in each foot, or 15 stars in all. The Snake has 2 stars on the top of its head, 6 in the first curve below the head, 6 in the second curve, 4 on the body (close to the back of Ophiuchus), and 4 in the curve near the tail or 22 stars. Together, the grouping has 37 stars and there is the number '37' written alongside Ophiuchus and the star in his head is labelled: *alhaum*, which it outlined with a rectangle ( $\beta$  Oph = *al-ghanam*).

**SAGITTA** is an arrow with its tip pointing right and has 1 star at the end, 1 in the middle and two at the head, or 4 stars in all.

**AQUILA** is shown as heraldic eagle, but is placed horizontally on the page so its head is towards the left. It has 1 star in the head, 1 in each wing, 1 in the chest, 1 in the tail, or 5 stars in all. The one in its chest is labelled: *altahir* ( $\alpha$  Aql = *al-tā'ir*).

fol. 5v

**DELPHINUS** is a fish that swims to the right hand has a horn on its head. It has 1 star on its nose, 3 in its back, 3 on its belly and 2 in its tail, or 9 stars in all. There is the number '9' written above its head.

**TRIANGULUM** is a decorated triangle with 1 star in each corner or 3 stars in all.

**PEGASUS** is depicted as half a horse, flying to the right. Its body comes out of a wavy line and it is marked by 1 star in each ear, 3 in its face (1 on the head, 1 on the snout, 1 in the jaw), 4 in the neck, 1 in the chest, 2 in the wings, 1 in the belly, and 1 in each knee, or 15 stars in all. The star in his wing is labelled: *alferas* ( $\alpha$  Peg = *al-faras*) and the one in its belly is labelled: *capud andromede*.

**ARIES** walks to left with right foot raised. It has 3 stars in its horns, 1 in its head, 2 in its neck, 3 on the back, 1 in its tail, 4 in its belly, 1 on the right forefoot and 1 on the left hind foot, or 16 stars in all. There is the number '16' written above its head.

**TAURUS** is depicted as half a bull facing to the left, but turning its head backwards over its shoulder. He is cut off at the middle with a straight line. He has 1 star in each horn, 1 at the base of each horn, 1 in each eye, 1 above his eyes (= 7 stars of the Hyades), 1 at the mouth, 3 in his chest, 3 along his back, 1 in each knee and 1 in each foot, or 18 stars in all. There is also a small rectangular block above his head containing 7 stars (the Pleiades). There is a label between his horns: adrebor [an] (Aldeboran)

fol. 6r

**GEMINI** are nude and stand facing each other and resting their inner arms on each other's shoulders. They raise their outer arms at the elbow. The right Twin has a small harp in his raised left hand. They both have wreaths on their heads. The left Twin has 1 star in his head, 1 in each shoulder, 2 in his chest, 1 in his right elbow, 1 on his left knee, 1 in his right foot and 1 in his left foot and 1 close to it, or 10 stars in all. The star close to his left foot is labelled unclearly: topris (? = *Propus?*). The right Twin has 1 star in his head, 3 (?) in his shoulders and 1 in each knee, or around 6 stars in all.

**CANCER** is depicted as a crayfish with two long feelers coming from his nose, 2 large claws and 8 legs. It has two small donkeys on the back of his shell. It has 1 star on its nose and 2 in each claw and 2 stars on its back, 1 in each of the four upper legs and 6 on the bottom legs (2 in the first, 2 in the second, 1 in the third and 1 in the last leg), or 17 stars in all. There is a label between the 2 stars on the back: presepe asellorum.

**LEO** stands to the right and has his with left front paw raised, and his tail is raised and shaped like an 'S'. He has 3 stars in his head, 2 on his neck, 3 on his chest, 1 in his raised left front paw, 2 on his belly, 3 on his back, 1 in the hind knee and 1 in the hind foot, 1 in the middle of the tail and 1 at the tip of the tail, or 17 stars in all. One of the stars on his head is labelled: alrecuba (? = *alzubra* ('the mane') = the lunar mansion later confused with o Leo) and the star on his paw is labelled: aldriaan.

**VIRGO** stands facing the viewer and wears a crown on her head and a long gown the hem of which gathers around her feet. She holds two blades of wheat in her upraised right hand and holds the Scales down by her side in her left hand. She has 1 star on her head, 1 in each shoulder, 2 on each side of her head, 2 on her

chest, 6 down the front of her dress, 1 in each hand and 1 on each foot, or at least 18 stars in all. Close to the star in the left hand is the label: alchimet in virgine ( $\alpha$  Vir = *al-simak, azimech*).

fol. 6v

**LIBRA** is depicted as a set of scales with 4 stars in the arm of the balance and 2 stars in each pan, or 8 stars in all. The figure is labelled: october.

**SCORPIO** is a creature that faces to the left with a dog's head, two large claws and a tapering body somewhat like a slug. It has 2 stars in his head, 1 in the neck, 1 in the right claw, 5 in its body (3 on the back, 2 in the belly) and 7 in its segmented tail, or 16 stars in all. It is labelled: scorpio November.

**SAGITTARIUS** is a bearded centaur that rushes to the right. He wears a pointed cap on his head and a shirt with frayed edges. He holds the bow in his left hand and pulls the string with his right. He has 2 stars in his head, 1 on his right hand, 1 on his foremost (left) hand, 2 on the bow, 1 on the arrow, 2 on his back, 21 on the upper foreleg, 1 on each foreknee, 1 on his left foot, 1 on his belly and 1 on his tail and 1 on his right hind foot or 16 stars in all.

**CAPRICORN** faces to the right and has large curved horns and a beard. It has a corkscrew tail that ends in two fins. It has 1 star on its nose, 7 along its back, 2 on its chest, 2 on its left leg and 1 on its right and 2 stars in its tail, or 15 stars in all. It is labelled: Januarius.

fol. 7r

**AQUARIUS** is nude and stands to the left. He holds a trident in his left hand and holds an upside-down urn in his outstretched right hand. Water pours from the urn. He has 2 stars in his head, 1 in each shoulder, 1 in each nipple, 1 on his left hip, 1 in each knee, 1 on his right shin and 1 on each foot, 1 on his left elbow, 2 in his right hand, or 15 stars in all. There are 10 stars in the urn and 20 in the water, or 30 stars in all.

**PISCES** swim in opposite directions, with one fish heading towards the top of the page and the other one towards the bottom. They are joined at the mouth by a stream. The left fish has 12 stars, the cord has 12 stars and the right fish has 15 stars, or 39 stars in all.

**ERIDANUS** is depicted as an upside-down urn with 2 handles from which water pours. The water is marked by 13 stars.

**CETUS** faces to the left with a lion's face, cloven hooves on his front feet and tapering tail. It has 6 stars from the chest to below the belly, 5 on the back, 2 in

the end of the tail, or 13 stars in all. It is labelled: Pantacaytoz in pistrix stella ( $\zeta$  Cet = *baṭn qaiṭus* ('belly')).

**ORION** walks to the right wearing a short robe with a wide belt and a small cap covering his head. He holds his left arm extended out in front of him and there is a piece of drape hanging over it. In his left hand, he holds a club and there is a scabbard at his waist. There are 3 stars in his head, 1 in each shoulder, 1 on his right elbow and 1 on his right hand, 3 in his belt, 1 on each knee, 1 on each ankle, 3 on his scabbard, or 17 stars in all. Behind his head there are two labels: Orion and alge[n]ze (= *al-jauzā'*). On his knee, there is another label: Rigel (=  $\beta$  Ori).

In front of Orion, **LEPUS** leaps to the right with 1 star in each ear, 1 on his left fore paw, 1 on his chest and 1 on his back, or 5 stars in all.

fol. 7v

**CANIS MAIOR** leaps to the right and has his mouth open. He has 1 star in each ear, 1 star in the head, 1 in its mouth, 1 on his chest, 3 on his left foreleg, 1 on his shoulder, 3 on his back, 1 on his belly, 3 on his tail and 1 on each hind foot or 18 stars in all. The star on his head is labelled: Sirius and the one in his mouth is labelled: alhabor. ( $\alpha$  CMa = *al-'abūr*, *alahabor*)

**CANIS MINOR** is more hound-like and leaps to the right. It has 3 stars on its body. Close to his head is the label: algomei[sa].

**CENTAURUS** is a centaur that walks to the right, wearing a triangular hat and a shirt with a frayed edge. He holds a trident in his right hand so that it rests on his right shoulder. In his left hand, he holds **LUPUS** (a dog) by its belly so that the outstretched legs face towards him. He has 3 stars in his hat, 1 on each shoulder, 1 on his left elbow, 1 in the left hand, 2 in his horse's chest, 4 on the back, 3 on the belly, 1 on his left fore knee, 1 on the right foreleg, 1 on each rear leg and 3 on his tail, or 23 stars in all. Lupus has 3 in its head, 1 on each forepaw, 1 in each rear leg, 2 in the tail or 11 stars in all. Jointly, there are 34 stars in all.

**HYDRA** is depicted as a long snake with a dragon's head, complete with beard, pointy ears, prominent teeth and a beard. He has 3 stars in his head and a number of groupings of stars along his body: 6 in the first coil, 3 in the second coil, 4 in the third coil, 2 in the fourth coil and 9 in the fifth coil, or 27 stars in all.

**CORVUS** hovers above Hydra's body and has 1 star on the neck, 2 on the wings, 2 below the wings towards the tail, 1 on each foot or 7 stars in all. It is labelled: corvus 7.

**CRATER** is a two-handled urn with 2 stars on the rim, 2 at the centre of the bowl, 2 at the handles, 2 on the base, or 8 stars in all. It is labelled: crater 8.

fol. 8r

**ARA** is an altar with 3 steps leading up to a niched base. There are two candles on the altar and it is marked by 42 stars on top of the altar and 2 at the base.

**ARGO** is a full ship with a central mast ending in a crow's nest, which has a sail hanging from it. There is a strange square shape at the right (oversized rudder?) and the right end has a dog's head on it and the left end has an eagle's head. The mast has 3 stars, 9 in the bottom of the ship, 7 on the deck, 5 in the rudder or 24 stars in all. The picture is labelled: 25.

**PISCIS AUSTRINUS** swims to the left and has 12 stars (the text describes it as 'Cetus').

### notes

The text is an abbreviated variant of descriptions from Book III (often the first sentence or two and then part of the descriptive catalogue of stars), but it contains a number of notable differences and additions - such as the order in which constellations are described, the indications of left and right, the order of the phrases within each sentence and the addition of star names.

The manuscript also has a few drawings of projections for pillar dials and quadrants; and also has texts attributed to Alfraganus and a picture of an astrolabe plate projection.

A few of the star names can be traced back to Hyginus's text. In his description of Andromeda, for example, it reads: *eadem enim stella et umbilicum Pegasi et Andromedae caput appellantur* (III, 10). The occurrence of two names for  $\alpha$  CMa reflects the fact that one finds in Hyginus (III, 34) the description of 1 star in the tongue (*in lingua stellam unam, quae stella canis appellantur*) and one in the head of the Greater Dog (*in capite autem alteram, quam nonnulli Sirion appellant*). The label near the feet of Gemini is not legible, but probably is related to Hyginus's reference to Προπους (III, 21), commonly associated with  $\eta$  Gem. Eratosthenes uses another (probably earlier) name: τριπους (Le BOUEFFLE 1977, p. 160). Also, the idea of two donkeys surrounding the manger is not unusual in the lists of the descriptive star catalogues, though it is not recorded in exactly this way.

Paul Kunitzsch has kindly checked the transcriptions of the Arabic transliterations/Latinisations of the names for some of the bright stars (in correspondence) and suggests that they seem to derive

from a list belonging to his 'Type III'. I thank him for this correspondence and for the other corrections he offered.

If one compares some of the spellings in the manuscripts with the various star name lists (KUNITZSCH 1966), there is certainly affinity with his Type III, VIII and XI, with a very slight preference for Type XI. For example, the name for  $\alpha$  Oph in Type XI is 'alhaum' (in type III it is 'alhawi' and in Type VIII it is 'alhaue'). In some instances, however, the spelling in the manuscript disagrees with all three tables. For example, the name for  $\alpha$  CrB in Type XI is 'elfeta', in Type III is 'alfecat' and in Type VIII is 'alfeca'. Elly Dekker has suggested (in correspondence) that it is possible that the scribe borrowed the names from an astrolabe based on the Type XI lists (see also DEKKER 2000).

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McGurk 1966 says related to German star books (Pal. Lat. 1369; Pal. lat. 1389, Munich germ 595 and Munich lat 59), noting similar features of the Bootes with sword and whip; Cassiopeia on beast-chair and Auriga with wheels on feet.

### **bibliography**

VALENTINE ROSE 1905, XIII, no. 962.

Perg, 12 ff, oct (c. 14 x 19) 14th century; in LaCroze catalogue as '*Planetarum et Asteriscorum coeli figurae et virtutes astronomicae*, in membr; 13th century'; says is good round French hand with coloured illustrations.

McGURK IV 1966, pp. xxiii-xxiv.

KUNITZSCH 1966.

VIRÉ 1981, not mentioned.

DEKKER 2000.

## Comparison of star names by Elly Dekker

Constellations	no.	Names taken from an astrolabe	III no.	VIII no.	XI no.	Modern designation
Corona borealis	1	Elpheta	2	29	18	$\alpha$ CrB
Lyra	2	Wega	9	35	22	$\alpha$ Lyr
Cygnus	3	alrif	8	38	24	$\alpha$ Cyg
Perseus	4	algon	24	7	2	B Per
Auriga	5	alhaioth	25	10	4	$\alpha$ Aur
Ophiuchus	6	alhaum	3	33	21	$\alpha$ Oph
Aquila	7	altahir	4	36	23	$\alpha$ Aql
Pegasus	8	alferaz	6	46	27	B Peg
Taurus	10	Aldebor[an]	19	9	3	$\alpha$ Tau
Leo	13	alrecuba	26	21	13	$\theta$ UMa
Leo	14	adriaan	22	18	10	ghost star
Virgo	15	Alchimet in virgine	12	26	15	$\alpha$ Vir
Cetus	16	Pantacaytoz in pistrice stella	16	3	1	$\zeta$ Cet
Orion	18	Rigel	15	11	5	B Ori
Orion	17	Alge[n]ze	20	12	6	$\alpha$ Ori
Canis Maior	20	alhabor	14	13	7	$\alpha$ CMa

<b>Constellations</b>	<b>no.</b>	<b>Names taken from an astrolabe</b>	<b>III no.</b>	<b>VIII no.</b>	<b>XI no.</b>	<b>Modern designation</b>
Canis Minor	21	Algomei [sa]	21	15	8	$\alpha$ CMi
<b>Constellations</b>	<b>no.</b>	<b>Names taken from other sources</b>	<b>III no.</b>	<b>VIII no.</b>	<b>XI no.</b>	<b>Modern designation</b>
Pegasus	9	Capud andromede				$\delta$ Peg
Gemini	11	Tropis ?				$\eta$ Gem
Cancer	12	Presepe asellorum				$\gamma$ and $\delta$ Cnc
Canis Maior	19	Sirius				$\alpha$ CMa