

London

British Library

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Arundel Ms 66

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English (London)

c.1490

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An illustrated set of the Alfonsine stellar tables, updated and localised by John Killingworth (Chillingworth) of Merton College, Oxford, 'according to the system used at Oxford'.

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text

- ff. 1v-2v      Tabulas Kelyngworth Oxoniensis.
- (Canons explaining the use of Killingworth's Tables attr. to Master Thomas Pray or University College, Oxford)
- Canones tabularum Oxoniensis facilis composicionis Almanack et capitulum primum declarans occasionem colligendi has tabulas.
- Multum conferre dinosciter non solum Astronomis, verum et eciam medicis – pro opposicione cum nadir solis et loco lune. Expliciunt Canones tabularum facilis composicionis Amank [!] secundum modum universitatis Oxoniensis. Et incipiunt tabule que dicuntur Kelyngworth.
- ff. 3r-32v      John Killingworth (Chillingworth), *Astronomical tables*.
- Prima tabula Revolutionis lune – 00000 Libra.
- ff. 33r-47r      Alfonsine Tables (adapted from the Gerard of Cremona Latin transl. of Ptolemy for Oxford and the year 1449)
- ffacies celi cum gradibus et locis stellarum.
- ffacies celi Septemtrionalis. Constellaciones formarum septemtrionalem a zodiaco celi. Stellacio urce [!] minniris [!] et dicitur cinosura. Jlla que est super extremitate caude – latitudo debet accipi aliam (...) ecliptica sed pars latitudinis ab equatore. Explicit tabula stellarum fixarum secundum

quod sunt in ymaginibus signorum extracta a Ptolomeo diccione 6 et 7  
Almageste et verificata per astrologos domini Alfonsi illustris regis Hispanie  
Anno Domini 1449 [!] [...] et verificata Oxonien Anno Domini per Astrologos  
Humfridi ducis Glous[estrie].

ff. 48r-248r

Guido Bonatti, *Decem tractatus astronomiae*.

Tabula Libri introductorij ad iudicia Stellarum et non solum introductorium  
ad iudicia. Set eciam in causis Astronomie-editi. a Guydone Bonacto de  
Forlyvio: et collegit in eo – [then a Table of Contents running to fol. 52v]  
fol. 53r bis: In nomine Domini Amen: Incipit liber Introductorius ad iudicis  
Stellarum et est non solum introductorius ad iudicia. Set est in causarum  
[...] editus a Guidone Bonacto de Fforlivio: et collegit in eo ex dictus  
philosophorum – et luna in domo propria Saturno applicans ymbres  
multiplices inducit.

(The BL catalogue notes that the division and order of the treatises differ  
from the tradition that informed the first printed editions (*Decem tractatus  
Astronomiae*, Ratdolt 1491 and *Guidonis Bonati Forliviensis Mathematici  
de astronomia tractatus X*, Basel 1550). For more on the order of the  
chapters in this manuscript, see FRONSKA 2013, APPENDIX I.)

fol. 249r

Flyleaf for previous section with an inscription by the scribe John Wellys, who  
dates the completion of his work to 30 June 1490, at 12:24:

Finitur his liber Guydonis Bonacti de Forlivio anno Christi 1490 30 di junij  
hora 12 minuta 24a per me Johannem Wellys compositus et renovatus et  
anno H. r. 7 4to pontificatus sancitissimi in Christo patris nostris Innocenti  
pape 4to [sic = 8to] 5to

ff. 250r-266v

Astronomical tables known as the 'Alfonsine Tables', with canons (extract).

Tabula communis ad extrahendum omnes eras bisextiles at ad  
extrahendum incognita et cognita.

(fol. 264r) Inventis centris et argumentis mediis – vitrum sit de  
longitudine longiori vel propriori.

ff. 267r-268v

Geoffrey of Monmouth, *Prophetiae Merlini* (Prophecies of Merlin), with prefatory  
letter to Bishop Alexander of Lincoln.

Libellus Merlini Ambrosii in prophesia.

Coegit me Alexander Lincolniensis presul nobilitatis tue dileccio – venti  
diro sufflamine. Et sonitum inter sidera conficiet. Explicit.

- f. 268v            Nomina civitatum quarundam cum latitudine earum et longitudine. (Table of  
cities with their longitudes and latitudes).
- ff. 269r-277r     Alpharinus, *Liber arenalis scientiae*, translated by Plato Tiburtinus (Plato of  
Tivoli), with geomantic diagrams in roundels and on shields.
- In nomine Domini nostri Jhesu Christi incipit Liberino filio Abrahe Judeo  
editus et a Platone a Hebreico sermone in latinum translatus.
- Antequam procedatur ad iudicium alicuius questionis propositae. Sequitur  
[!] nomina figuram cum figuris geomansie – pro acquisitione et est ibi  
cogitatus multus.
- ff. 277v-287v     Geomantic tables of Hunfrey of Gloucester.
- Tabulas [!] Humfridi ducis Glowcestrie in Judicijs artis geomansie.
- Antequam procedatur ad iudicium alicuius questionis propositae. –in quo  
tenantur noster breviatur [?] de quo laudetur Deus omnipotens Amen.  
Explicit tabulas [!] Humfridi ducis Gloucestrie.
- ff. 288r-290v     Five political prophecies from *The Prophecy of John of Bridlington*: ‘Lilia terna  
dies libre’; ‘H. parte submercet’; ‘Mens cur cor’; ‘Ter tria lustra’ and ‘Anglia  
transmittet’.
- Febribus infectus: requies fuerat mihi lectus – Ad mortem tendo: morti  
mea carmina pendo. Expliciunt.
- With an additional poem set as a rubricated colophon (epitaph of Bridlington):
- [E]xpliciunt versus: quos scripsit scriba Robertus  
Quique prior quartus: fuit est sub humo modo mersus  
Infra claustra iacens: de Bridlington [!] ubi rexit  
Non est Ipse tacens: quamvis cum pluribus exit  
Doctor clarus erat: indulgens biblijs iste  
Quas planas feceret: nunc esto salus sua Christe.
- ff. 291r-291v     Brigitta of Sweden, *Revelationes*, Book 4 (extract), with six political prophecies  
concerning England and France: ‘Arbor fertilis’; ‘Sicut rubeum draconem’;

‘Lilium in meliore parte’; ‘Bullescamp ecce dies’; ‘Cesaris imperium’ and ‘Brutus finitur’.

Visiones sancte Brigitte vidue filie regis Swavie [!] de regibus Anglie et Francie Orante Chrsti sponsa vidit in visione qualiter beatus. Dionisius orabat pro regno Francie ad virginem Mariam.

Cum essem orando vidi qualiter ad virginem Mariam – ad legitimum heredem at bonam pacem: Hec omnis in capitula 203 et 228 et in alijs locis libri quarti et quinti.

fol. 291v

Prophecy of Merlin

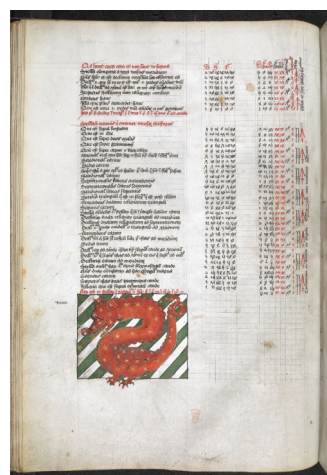
Hec prophesia Merlini Silvestris Anglorum Edwardo regi sancto nomis huius tercio revelata fuit per spiritum sub testimonio duorum sanctorum.

Arbor fertilis a proprio trunco decisa as spacium – Centum cum deno: populo privatur utroque.

## illustrations



fol. 33r



fol. 33v



fol. 34r



fol. 34v





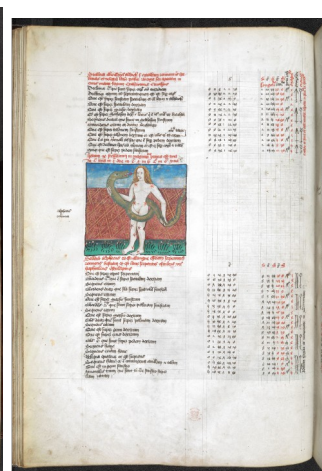
fol. 35r



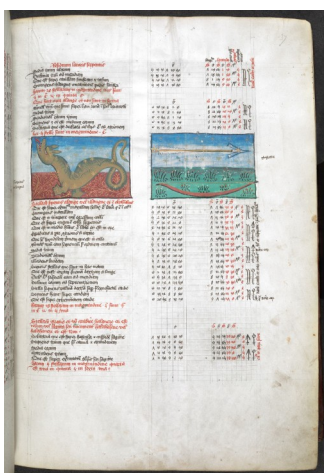
fol. 35v



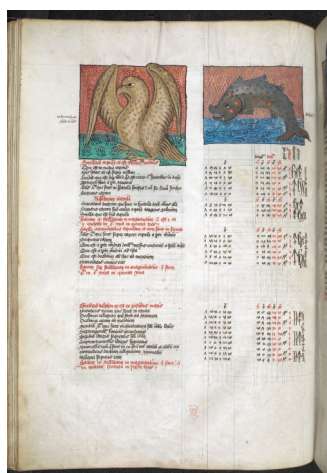
fol. 36r



fol. 36v



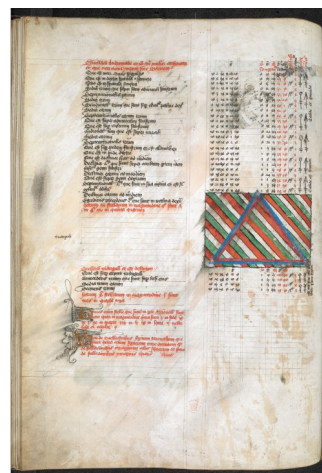
fol. 37r



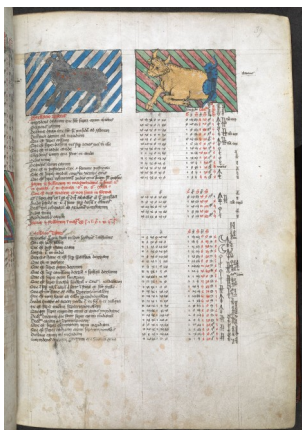
fol. 37v



fol. 38r



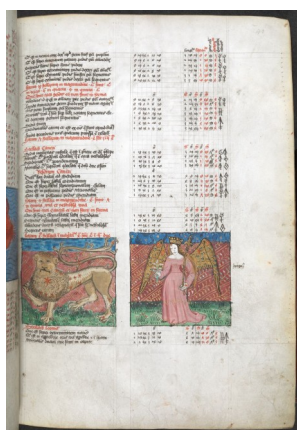
fol. 38v



fol. 39r



fol. 39v



fol. 40r

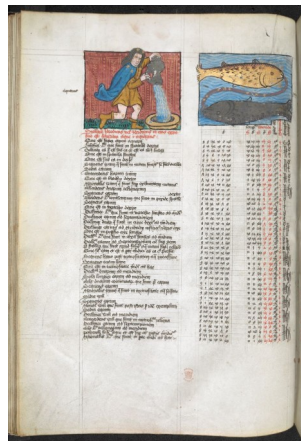


fol. 41r

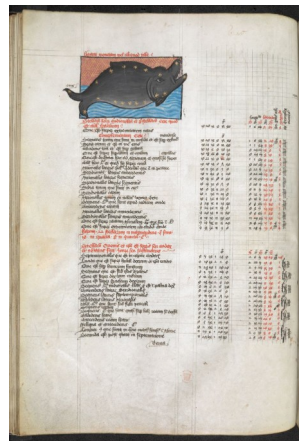




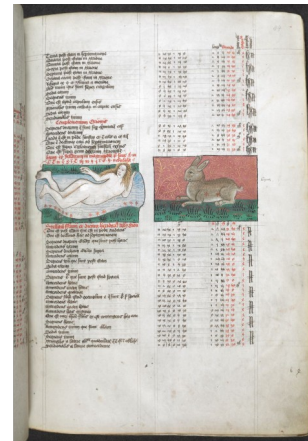
fol. 41v



fol. 42v



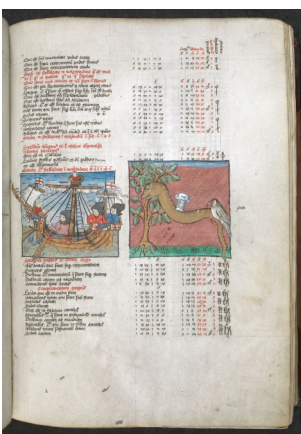
fol. 43v



fol. 44r



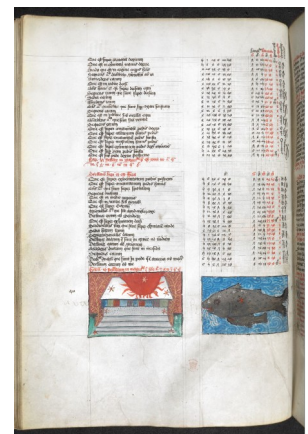
fol. 44v



fol. 45r



fol. 46r



fol. 46v



fol. 53r bis



fol. 57r



fol. 129r



fol. 201

A series of 46 Ptolemaic full-colour constellations set within frames with decorative backgrounds. Many of the figures are labelled and the stars are marked by gold (and sometimes blue or red) six-pointed stars. Most of the figures have small catchwords in the margins as indications to the illustrator. EQUULEUS and ORION are missing.

The iconography of the pictures follows the conventions drawn from Michael Scot and are very close to those that appear in the editions of Hyginus printed by Ratdolt in 1482. See the comments in BLUE/HAFFNER/METZGER, 2016, II, p. 540 (as cited below in the **Bibliography**).

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- fol. 33r      **URSA MINOR** (labelled: Ursa minor) is a small brown bear walking to the right with its nose down and wearing a collar around its neck. The background is blue and red with gold tendrils.
- URSA MAIOR** (labelled: Maior) is a large bear, walking to the left, with its snout lifted. The background is blue and red with gold tendrils.
- fol. 33v      **DRACO** (not labelled) is a red dragon with two legs facing to the left. Its tongue is sticking out and it has a second dragon's head at the tip of its tail. The background is green and white stripes. The BL entry notes that this is Henry's 'badge' and that green and white are Tudor livery colours.
- fol. 34r      **CEPHEUS** (labelled on banderoles: Cepheus sive Inflammatus) is a male figure that walks to the right. He wears a short red robe that is tied with a blue belt and has blue cuffs. His knee-boots are tan. He wears a sword in a scabbard on his waist. He is set within a decorative landscape against a gold-and-green diaper-pattern.
- BOOTES** (labelled on banderoles: Boetes sive Plorans) is a male peasant who walks to the right. He wears a short blue jerkin with red and yellow cuffs and tan leggings with grey, open-toed shoes. He holds a sickle in his right hand and a spear in his left. He carries a tan bag cross-chest from his right shoulder and a flat black brimmed hat. He walks within a stylised landscape the middle section of which is red with gold floral decoration.
- fol. 34v      **CORONA BOREALIS** (not labelled) is a marchesate golden crown with floral spikes and inset with blue gemstones. The background is green and white striped.
- HERCULES** (not labelled) is a nude, bearded male with prominent genitals, who rushes to the left. He holds a spiked club in his right hand and has a tan lion's skin (with face) draped over his extended left arm. In front of him there is a tree around which a brown snake is coiled. The stylised landscape background has a red panel with a gold pattern of squares.
- fol. 35r      **LYRA** (not labelled) is a U-shaped set of grey horns with a tan bar at the top with 6 blue and tan string. There is a landscape background.
- CYGNUS** (not labelled) is a swan standing to the right with its wings raised and is bending its head towards its breast. It may have originally been painted silver, but is now dark grey. The background is pink and blue stripes.
- fol. 35v      **CASSIOPEIA** (not labelled) is seated slightly to the right on a wooden throne with two uprights to which her hands are tied. She is dressed in a loose blue mantle with a red reverse that slips to expose part of her breast. She has a comb in her left hand and blue water pours from her left hand. Her stylised landscape has a central section of red with a gold diaper pattern.
- PERSEUS** (not labelled) stands to the left, but looks towards the right. He is nearly nude, but covered by a red mantle. He holds a scimitar with a blue and

red blade vertically in his right hand and hold the decapitated head of a bearded male figure in his left hand. He is set within a landscape. The stars are marked in red.

- fol. 36r **AURIGA** (not labelled) is a male peasant dressed in a blue jerkin with a tan cap on his head. He stands in a wooden cart drawn to the right by a pair of horses (grey and tan) and oxen (white and brown). The man raises his right hand. The background is red with gold fleur-de-lis.
- fol. 36v **OPHIUCHUS** (not labelled) is a nude female figure standing slightly to the left. She has long blonde hair. She carries the SERPENS so that it loops once around her hips, with its head to the left and turning back to look at her. It has sharp teeth and its tongue sticking out. The stars are marked in red. The landscape has a middle panel that is red with vegetal decoration in gold. The stars on the man are in red and are gold on Serpens.
- fol. 37r **SERPENS** (not labelled) is a winged, green dragon with two legs, that walks to the left. It has a curl in its tail and lifts its head, sticking out its red tongue. The 'ground' is red with gold tendrils.
- SAGITTA** (not labelled) is a arrow that points to the right, se above a red bow.
- fol. 37v **AQUILA** (the heading of the section crosses over the edge of the picture: *Stellacio aquile et est vultur volans*) is a tan bird that faces to the left and raises both wings. The background is red with golden tendrils. Also note the similarity of this figure to the heraldic image on fol. 53r bis with the motto 'Vive le roy'.)
- DELPHINUS** (not labelled) is a dark grey fish with a curved body. It appears to leap out of the water towards the left. The background is red with a gold pattern and the stars are marked in red.
- fol. 38r **PEGASUS** (not labelled) if half of a winged tan horse that flies to the right. Its cut-off is masked by blue clouds and both its front legs are bent. The background is red on the left and blue on the right.
- ANDROMEDA** (not labelled) is a standing female figure in a short lavender shift. Her feet are bare and her arms are extended to each side and tied to two tan trees. The landscape had a red band with a gold diaper pattern.
- fol. 38v **TRIANGULUS** (not labelled) is a red and blue equilateral triangle set against green, white and red stripes.
- fol. 39r **ARIES** (not labelled) is a ram with curly fleece that walks to the left and turns its head back to the right. It may have been silver, but is now grey. The stars are marked in red and the background is blue and white stripes.
- TAURUS** (not labelled) is a golden half-bull that faces to the left. It looks upwards and has a semi-circle of stars around its nose. Its left leg is tucked under and its right leg is extended, the cut-off is covered by clouds. The background is green and red stripes.
- fol. 39v **GEMINI** (not labelled) are two winged nude youths with long brown hair. The Left Twin wears a blue mantle and the Right Twin has a red mantle. They face each other so that the Right Twin rests his hand on the other Twin's breast and the Left Twin rests his arm on the Right Twin's shoulder. The Left Twin holds a sickle



in his right hand, and the left forearm of the Right Twin is covered by something that looks like a column with a feathered top (=lyre). The middle section of the background is red with gold tendrils.

**CANCER** (not labelled) is a red, round-bodied crab that faces to the left. It has two slightly larger claws and 10 legs. There are flames (?) coming from its posterior. The stars are marked in silver and the background is blue water.

fol. 40r **LEO** (not labelled) is a tan, quasi-heraldic lion facing to the left. It raises its right front paw and its tail is curled over its back in an S-shape. The middle section of the background is red with a golden diaper pattern.

**VIRGO** (not labelled) is a maiden dressed in a long pink robe who stands slightly to the left. She has large golden wings with indications of peacock's eyes in the, She wears a crown and holds a long sceptre vertically in her left hand and a flower in her right. The central section of the background is red with golden leaf patterns.

fol. 41r **LIBRA** (not labelled) is an angel dressed in blue with large wings that are blue with red interiors. It stands slightly to the left, and point to a set a scales that she holds in her right hand. The upper section of the background is red with a striped pattern in gold.

**SCORPIO** (not labelled) is a large dark brown scorpion that faces to the left. It has two large claws, 8 smaller legs and a tail that end s in a small circular sting. The background is red with golden trident patterns. It has multiple gold stars running down its spine.

fol. 41v **SAGITTARIUS** (not labelled) is a centaur that leaps to the left. Its equine half is gold and the human half wears a blue shirt. There is a tan skin that flies like a cape from its shoulders. It has horns on its head and holds its bow with its left hand. There is a circlet of stars near its front hooves, The background is red with golden fleur-de-lis.

**CAPRICORN** (not labelled) has a silvered goat's front half (now dark grey) and the back half is yellow. The tail is knotted and ends in a banded tripartite fin. The goat raises its right foreleg, is bearded and has short, curled horns. The upper section of the panel is red with gold decorative stripes.

fol. 42v **AQUARIUS** (not labelled) is a peasant dressed in a short tan robe with short tan boots and a blue cape. It bends to the right and pours water from a silvered urn into a round basin of water, The background is red with golden decorative stripes.

**PISCES** (not labelled) are two fish swimming in opposite directions with both backs upwards. The to one is tan and the bottom one is silver (now dark grey). They are tied at the mouths by a red stream. The background is blue.

fol. 43v **CETUS** (not labelled) is a large grey fish that swims to the left with its mouth open. The upper pat of the background is pink with a gold diaper pattern.

fol. 44r **ERIDANUS** (not labelled) is a nude female (?) figure with long blonde hair lying in a stream with her head to the right. She reast her head on her bent left arm and her right arm is extended backwards over her back.

- LEPUS** (not labelled) is a brown and white hare that crouches to the left.
- fol. 44v **CANIS MAIOR** (not labelled) is a sleek tan dog that leaps to the left.
- CANIS MINOR** (not labelled) is a furry white dog that walks to the left.
- fol. 45r **NAVIS** (not labelled) is a full ship that sails to the right. There are 3 men wearing helmets and one younger boy on the deck and another in the crow's nest. One of the men seems to hold a spy-glass. The ship is festooned with red and white badges and flags (flag of St George).
- HYDRA, CRATER, CORVUS** (not labelled) with HYDRA as a tan snake that crawls to the left, so that its head is set in the branches of a tree. CRATER is a blue, white and gold majolica tumbler and CORVUS appears to be a kind of finch with a red face and grey plumage. The background is red with golden tendrils.
- fol. 46r **CENTAURUS** (not labelled) has a golden ox's body (note cloven feet) and its human half wears a blue shirt. He carries a censer on its right elbow and carries an animal (cow?) with its legs in the air in his right hand. He rests a long spear on his left elbow from which a hare hangs by its feet. The background is red with a golden diaper pattern.
- LUPUS** (not labelled) is a silver (now grey) fox that walks to the left. The sky is blue with a golden diaper pattern.
- fol. 46v **ARA** (not labelled) is a square altar set on 4-5 steps with a multi-coloured band along the top. There is a large, red flame issuing from the top. The background is red with golden tendrils.
- PISCIS AUSTRINUS** (not labelled) is a large silver (now grey) fish that swims to the left, with a small silver fish under its belly. There is only 1 red star on its middle.
- fol. 53r bis Frontispiece of with heraldic emblem of eagle with 'Vyve le Roy'.
- fol. 57r Dragon at chapter marker *Tractatus secundus (De divisione orbis signorum)* of Guido Bonatti's *Introductorius*.
- fol. 129r Frontispiece of *Tractatus septimus (De electionibus)* of Guido Bonatti's *Introductorius* with Dragon whose breath pierces the trunk of a tree in the initial
- fol. 201 Henry VII receiving the French Ambassador. Note the copious use of red and white roses and mottoes.

### notes

written in Latin and French; Gothic hybrid (English bastarda formata); 440 x 300 (305 x 210) in two columns; parchment codex; ff 291 (+ 4 medieval blank ruled parchment leaves after f. 52, f. 147, f. 186, and 249; + 2 modern paper flyleaves at the beginning, and 3 at the end).

BL database records that: A team of three artists created its decoration, varying with first- and second-rate renditions of later 15th century English painting and highly skilled work in Flemish

style, attr. to the 'Bruges Master or 1482' or a close follower (for the division of hands, see SCOTT 1996 pp. 366-67).

The miniature on f. 201 is by the artist responsible for the large miniature at the opening of the *Chroniques de France*, Royal 20 E i, f. 47, a Flemish artist of the circle of the Master of 1482 (ex info. Scot McKendrick; for a colour reproduction of the miniature in the Royal manuscript see his *Flemish Illuminated Manuscripts 1400-1550* (London: British Library, 2003), pl. 91).

#### Provenance (from the BL webpage)

- Johannes Wellys, perhaps to be identified with John Willis, doctor of medicine, noted in the Cambridge University Grace Book between 1456 and 1480 (see Charles Hugh Talbot and Eugene Ashby Hammond, *The Medical Practitioners in Medieval England: A Biographical Register* [Publications of the Wellcome Historical Medical Library, New Series 8], London, 1965, p. 194). His note relating to the producing and bringing up to date of Guido Bonatti's text on 30 June 1490: 'Finitur hic liber Guydonis Bonacti de Forlivio anno Christi 1490 30 die lunii hora 12 minuta 24a per me Iohannem Wellys composit' et renovat' et anno H. vii 4to pontificatus sanctissimi in Christo patris nostri Innocentii pape 4to 5to [4to is apparently an error for 8to] (f. 249r).
- King Henry VII (b. 1457, d. 1509), King of England and Lord of Ireland, probably made for him: a bird with a scroll inscribed 'vyve le roy' (f. 53r); his badges: a red dragon against the Tudor livery colours of white and green (f. 33v), and a crowned tree (f. 129r); numerous white roses of York with red roses of Lancaster referring to Henry's marriage to Elisabeth of York (e.g., ff. 53r, 201r); and a miniature of the king enthroned under a canopy bearing the royal arms of England (f. 201r). Inscribed 'Thomas Norll (Nortt?)', 16th century (f. 1r, effaced; f. 202v).
- also John Norll (Nortt?) on f. 1r (effaced) and 202v in 16th C hand.
- Thomas Howard (b. 1585, d. 1646), 2nd Earl of Arundel, 4th Earl of Surrey, and 1st Earl of Norfolk, art collector and politician: perhaps owned by him.
- Henry Howard (b. 1628, d. 1684), 6th Duke of Norfolk, presented to the Royal Society in 1667.
- The Royal Society, London (its ink stamp: 'Soc. Reg. Lond / ex dono HENR. HOWARD / Norfolciensis.', f. 1);
- stored in the Gresham College: inscribed 'Gresham' (f. 1r);
- Purchased by the British Museum from the Royal Society of London together with 549 other Arundel manuscripts in 1831.

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Canones tabularum facilis compositionis Almanak secundum modum universitatis Oxoniensis' (f. 1); Killingworth's tables, an adaptation of the famous tables completed under the patronage of King Alfonso X of Castile (1221-1284), were composed between 1442 and 1444. The canons attributed to Master Thomas Pray of University College were probably completed just after Killingworth's death in 1445, see J. D. North, 'The Alphonsine Tables in England', in *Stars, Minds and Fate: Essays in Ancient and Medieval Cosmology* (London: 1989), pp. 327-59 (pp. 343-6) and J. D. North, 'Killingworth, John (d. 1445)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004 [<http://www.oxforddnb.com/view/article/5307>, accessed 25 Jan. 2010].

Says that the Tables were 'obviously' included as a preface to Bonatti's text; the date in the colophon of 1449 must be wrong and probably should be 1445 or, possibly, 1440 (the year for which the longitude is calculated).

See also for a discussion of the heraldic elements and the prophecies contained in the last section of the ms that connecting it to Henry VII and the political situation (esp. in relation to France and Scotland) at the time.

BLUME/ HAFFNER/ METZGER (Katharina Glanz), *Sternbilder des Mittelalters und der Renaissance*, Berlin: Walter de Gruyter 2016, II, pp.538-41 and figs 480-82.

Identify 'Bridlington' as Robert of Bridlington, , fourth prior of Bridlington (around 1160, † before 1181 They note that 'the historian Leland visited the monastery in 1534 and reported a tombstone near the entrance door of the chapter house with the inscription "Robertus scriba, quartus prior." Lit.: Lynn Thorndike, *Unde versus*, in: *Traditio* 11 (1955), pp. 163-193, there 165: Parallel tradition: BL, Cott. Vespasian E.VII, fol. 134(137)v. About Robert: DNB 16, p. 1254'.

Regarding the pictures in the Stellar Tables, they note: 'The model for the depictions of the constellations is clear; it is the woodcuts in Ratdolt's Hyginus edition (Hyginus, *Poetica astronomica*, Venice, Erhard Ratdolt, October 14, 1482; Hain 9062 and Venice, Erhard Ratdolt, January 22, 1485; Grove 9063). Bonatti's treatise is also richly detailed, but there are no parallels to the Ratdolt print (Augsburg, March 26, 1491). The images based on Michael Scotus were transferred to the star tables; the names listed in the categories correspond to the star table tradition. The sequence and selection of the constellations also remained unchanged, which is why the images that only appear in Michael Scotus are missing.

However, the process also results in characteristic deviations from the woodcut illustrations. Two representations each take up an image field at the top of the tables. The arrangement of the panels forced the combined image of the "draco inter arctos" to be broken down into three individual images of the bears and the dragon. The latter seems to have been simply taken from the usual supply of decorative figures; the bears are simple animal pictures. The

images of the Ophiuchus snake and the "Lupus" as a separately repeated sacrificial animal of the centaur also correspond to the conception of the Ptolemaic tablets and clearly deviate from al-Sufi's redaction, which was adopted in the *Sufi latinus*. For Lupus, a relatively stereotypical representation of animals was also used; stars were not entered here. The Altar appears here as a block altar with flames, not as a *puteus* with devils. Compared to the variant of the Ratdolt print, however, only the devils were omitted.

The manuscript is fully digitised on: [https://www.bl.uk/manuscripts/FullDisplay.aspx?index=0&ref=Arundel\\_MS\\_66](https://www.bl.uk/manuscripts/FullDisplay.aspx?index=0&ref=Arundel_MS_66)

### **ADDENDUM:**

The star positions - comparing Arundel 66 with Hyginus 1482 edn.

*Draco inter arctos* is divided into three individual constellations

URSA MINOR: does not follow text, which indicates 7 stars. It has 3 gold stars on the tail, 2 blue stars in the body, 3 gold stars in the body, 1 small gold stars in the head, 1 gold stars beneath the stomach and 1 gold star above the shoulder or 1 star in all. Possible blue star (dot) in the collar.

URSA MAIOR: text indicates 27 stars, but the figure has 28 stars. 3 above the head, 1 on the forehead, 3 on the neck, 2 on the chest, 3 on the right front leg, 2 on the left front leg, 3 gold and 2 blue stars on the body, 1 on the rump, 1 on the left thigh, 2 on the right hind leg, 2 on the left hind leg and 3 on the tail, or 28 stars in all.

DRACO: text indicates 32 stars. 47 gold and 2 blue are stars are simply scattered all over the body in a decorative pattern, with 1 outside the body on the tip of its tongue. Note that title says ... qui continent utrosque arthuros [!]

CEPHEUS: text indicates 11 stars. 33 stars spread in a decorative pattern across the body and the sky behind, though it does feature 3 in the head, 3 in the bet and 1 in each hand and 3 in each foot as per 1482 HYGINUS.

BOOTES: text indicates 22 stars. 35 stars spread across the body, though does include 1 on the hat, 1 on each shoulder, 1 on the right elbow, and 1 on each foot as per 1482 HYGINUS.

CORONA SEPTENTRIONALIS: text indicates 8 stars. Image includes 9 stars as per 1482 HYGINUS.

HERCULES: text indicates 28 stars. The stars are badly abraded, but there are more than 28 and they do not closely co-incide with the 1482 HYGINUS apart from 1 in the head 1 on each shoulder and 1 on the right elbow. There is also an anomalous star between his legs.

LYRA: text indicates 10 stars. There are 9 stars in positions very close to the 1482 HYGINUS.

CYGNUS: text indicates 17 stars. Ther are red 5 stars in each wing, 1 in the head, 1 in the neck, 1 in the chest and 1 in the tail. This is similar to the 1482 HYGINUS, though the latter lacks the star in the chest.

CASSIOPEIA: text indicates 13 stars. The image has 13 stars, in positions that are close to the 1482 HYGINUS.

PERSEUS: text indicates 26 stars. The figure lacks the wings on its feet as per the 1482 HYGINUS, and the female head has been transformed into a decapitated head of a bearded male. There are 12 stars in the figure, and 4 in the *caput diaboli*, which are very close to the 1482 HYGINUS.

AURIGA: text indicates 14 stars. The image has 20 stars: 3 in the hat, 1 on each shoulder, 1 on the right hand, 1 on the waist, 1 on each elbow, 1 in the right hip, 1 on the forehead of the grey horse, 1 on the belly of the brown ox and 1 on its left rear hoof and 7 in the wheels of the cart. The illustration is close to the 1482 HYGINUS, but the stars are not.

OPHIUCHUS: text indicates 24 stars. The image has 10 stars in the human and 21 in the Snake, close to the 1482 HYGINUS, but missing the 3 stars by the left hand of the Serpent-holder.

SERPENS: the text indicates 18 stars. The figure has 18 stars spread across its body. Note that there is no independent figure of Serpens in the 1482 HYGINUS.

SAGITTA: the text indicates 4 stars. The image has 3 stars. The illustration is close to the 1482 HYGINUS, but the stars are not.

AQUILA: the text indicates 9 stars. The image has 10 stars: 1 in the head, 1 in the neck, 1 in the chest, 2 in the right wing, 3 in the left wing, 1 between the feet and 1 on the tail. Neither the image, nor the placement of the stars is close to the 1482 HYGINUS.

DELPHINUS: the text indicates 10 stars. The image has 10 stars. Both the image and the placement of the stars are very close to the 1482 HYGINUS.

PEGASUS: the text indicates 20 stars. The image has 18 stars, the placement of which is fairly close to the 1482 HYGINUS. (et est Bellefrons)

ANDROMEDA: the text indicates 23 stars. The figure has 20 stars that are very close to the placement of those in the 1482 HYGINUS. The figure is also very close, but the skirt has been lengthened to cover the figure's genitals.

TRIANGULUS: the text indicates 4 stars, but the image has 3 stars, following the 1482 HYGUNS illustration.

ARIES: the text indicates 13 stars. The image has 10 visible stars, but there has been some abrasion. The stars in the body are close the 1482 HYGINUS, but the several stars in the head and the 2 in the feet appear to be missing.

TAURUS: the text indicates 33 stars. Again, there is some abrasion, but the stars appear to be close to those in the 1482 HYGINUS edition, allowing for some loss in the face.

GEMINI: the text indicates 18 stars. The image has 15 stars (with some possible loss) that seem to follow the general outline of the stars in the 1482 HYGINUS. Note the similarity of the harp in both images.

CANCER: text indicates 7 stars. The image has 21 stars. There stars are similarly placed to the 1482 HYGINUS, though a problem arises from the fact that the image has one additional leg one each side with stars on them.

LEO: the text indicates 27 stars. The image has 18 stars, placed very close to those in the 1482 HYGINUS, but missing one in the belly.

VIRGO: the text indicates 26 stars. The image has 18 stars that are very close to the 1482 HYGINUS, save that the star in Spica has been moved to the figure's waist.

LIBRA: the text indicates 8 stars in the form. The figure has 10 stars. There is no independent image of Libra in the 1482 HYGINUS.

SCORPIO: the text indicates 21 stars. The image has 22 stars in the figure and an additional 15 stars running down the spine of the creature.

SAGITTARIUS: the text indicates 31 stars. The image has 11 stars that are close to the 1482 HYGINUS, save an extra stars in the face and missing the ones on the bow and the left hand. The 7 stars of Corona Austrinus appear by the forefeet.

CAPRICORN: the text indicates 28 stars. The image has 22 stars placed close to those that appear in the 1482 HYGINUS.

AQUARIUS: the text indicates 42 stars. The figure has the 14 stars in the same locations at the 1482 HYGINUS and there is a trail of numerous similar stars in the water.

PISCES: the text indicates 34 stars. The image has 12 in the northern fish, 12 in the steam and indeterminate number of stars (due to oxidation) in the southern fish. Tis is close to those that appear in the 1482 HYGINUS.

CETUS: the text indicates 22 stars. He image has 18 stars, which is 5 more than the 1482 HYGNUS edition.

ERIDANUS: the text indicates 34 stars. The image has 13 stars in the stream, identical to the 1482 HYGINUS illustration.

LEPUS: the text indicates 12 stars. The image has 6 stars in the same positions relative to the body of the animal as the 1482 HYGINUS, even though the figure itself has a different shape (the Hyginus image runs to the left).

CANIS MAIOR: the text indicates 18 stars. The image has 19 stars in the same positions as the 1482 HYGINUS illustration.

CANIS MINOR: the text indicates 2 stars. The image has 3 stars in the same positions as the 1482 HYGINUS illustration.

NAVIS: The text indicates 45 stars. The image has 23 stars, close to the position of those in the 1482 HYGINS image. (labelled: stellacio puppis).

HYDRA, CRATER, CORVUS. The text indicates 24 stars in Hydra, 7 in Crater and 7 in Corvus. The image has 23 in Hydra, 6 (?) in Crater and 7 in Corvus, which are close to those in the 1482 HYGINUS. edition.

CENTAURUS: the text indicates 37 stars. The image has 26 (?) stars in the body of the centaur, 2 in the hare, 1 in the spear and 13 in the beast. This is similar to the disposition in the 1482 HYGINUS illustration.

LUPUS: the text indicates 19 stars. The image has 20 stars. There is no image of Lupus in the 1482 HYGINUS edition.

ARA: the text indicates 7 stars. The image has 7 stars. Both the image and the placement of the stars in not like the 1482 HYGINUS illustration

PISCIS AUSTRINUS: the text indicates 11 stars. The stars in the illustration are difficult to determine due to oxidation of the silver. They seems to follow the outline of the larger fish, but there is



an anomalous large red star in the middle of the body that does not appear in the 1482 HYGINUS illustration.

consulted: October 2023.