

## pseudo - Bede, *De signis caeli*

The *De signis caeli* is a catalogue of the stars in 40 constellations.<sup>1</sup> Each entry is made up of two parts: the first is very short listing of the name or names of the constellation and the second is a listing of the stars, with each star described in terms of its position within the body of the constellation. In a number of the manuscripts, the catalogue is followed by a section on the five planets taken or adapted from the *Aratus latinus*.<sup>2</sup>

The attribution of *De signis caeli* to the Venerable Bede first appears in print in the *editio princeps*, edited by Herwagen in 1543.<sup>3</sup> It was rejected by Giles in his edition of 1843,<sup>4</sup> and the text was listed amongst the '*dubia et spuria*' by Migne in 1862.<sup>5</sup> In his 1898 edition of the text, Maass reaffirmed an attribution to Bede,<sup>6</sup>

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<sup>1</sup> With the exception of a small family of three manuscripts to which extra catalogue entries have been added. For additional information, see below.

<sup>2</sup> *De stellis, quae vocantur planetae id est erraticae, quod eo pro proprio motum habeant ... eo quod tantam claritatem ostenderit*. Whereas Maass identifies this as a part of the *Aratus latinus* tradition (see MAASS 1898, p. 272-75), dell'ERA sees it as an integral part (chapter 41) of the ps-Bedan text. See dell'ERA 1979, p. 296, with the variant wording: *De V stellis, quae dicuntur Planetae nec non et Erraticae, eo quod proprium motum habeant. ... Peragit CCCXLVIII diebus signiferum cursum suum complens*. When one looks at the catalogue he provides on pp. 270-71, this 'chapter' is conspicuous by its absence, appearing in only two manuscripts (Montecassino 3 and Durham Hunter 100). The text also appears in the Freiburg-am-Breisgau manuscript, which he doesn't mention. On the other hand, the passage cited by MAASS as being part of the *Aratus latinus* appears in three manuscripts (Klosterneuberg 685, Vat. lat 643 and Zwettl 296).

<sup>3</sup> *Opera Bedae Venerabilis* 1563, pp. 442 ff.

<sup>4</sup> *Venerabilis Bedae Opera* 1843, VI, p. xv.

<sup>5</sup> MIGNE PL 1862, XC, col. 945 ff.

but all subsequent scholars - including Van de Vyver,<sup>7</sup> Jones,<sup>8</sup> dell'Era<sup>9</sup> and LeBourdellès<sup>10</sup> - have soundly rejected the connection. The desire to attribute the text to Bede is understandable as almost all of the early manuscript copies of the text appear as part of compilations of authentic Bedan writings. Nevertheless, as recent studies have shown, 1) the text of the *De signis caeli* certainly postdates the composition of the *Aratus latinus*, 2) there is no evidence that Bede himself was acquainted with the Greek version of the *Phaenomena* and 3) in his almost verbatim copy of the *De signis caeli*, completed in 820, Hrabanus Maurus - who is scrupulous about naming his sources, and repeatedly cites Bede for other passages in his work - does not name Bede as the author of this work. Instead, he describes his authority as ‘... *ut Arati Phaenomena testantur*’.<sup>11</sup> Most often, the text is now referred to as being by an anonymous ‘pseudo-Bede’.

During a particularly unfortunate episode, Breysig published part of *De signis caeli* text he had found in the 10th-century manuscript, Bern, Burgerbibliothek Ms 88, as a new discovery, which he called the ‘Scholia Bernensia ad Germanicum’.<sup>12</sup> He also reordered the chapters to follow the sequence provided by Germanicus’s poem, thus managing to conceal the text’s true identity even further.<sup>13</sup> The slip

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<sup>6</sup> MAASS 1898, pp. 582 ff.

<sup>7</sup> VAN DE VYVER 1936, p. 686 and n. 40.

<sup>8</sup> JONES 1939, p. 87.

<sup>9</sup> dell’ERA 1979, p. 270.

<sup>10</sup> LE BOURDELLÈS 1985, pp. 82-83.

<sup>11</sup> LE BOURDELLÈS 1985, pp. 82-83. The quote from Hrabanus Maurus appears in MIGNE *PL*, CVII, col. 695 and in *Commentariorum in Aratum reliquiae*, ed. Maass, 1898, p. 582.

<sup>12</sup> *Germanicus Caesar, Aratea cum scholiis*, ed. BREYSIG 1867, pp. 233-38.

<sup>13</sup> See, for example, the acceptance of the ‘Scholia Bernensia’ by MANITIUS 1899, p. 293.

still causes confusion amongst scholars new to the field.

The text itself is closest to the *Aratus latinus* and the *Revised Aratus latinus*. As dell’Era has shown, it appears to share a nearly equal numbers of readings with both texts suggesting that the *De signis caeli* may represent an intermediate stage between the two, perhaps analogous to the most antique phase of the *Revised Aratus latinus*. If true, then its creation must date sometime between the 7th and 8th centuries.<sup>14</sup> As Le Bourdellès notes, all the Carolingian manuscripts of *De signis caeli* are either French or Germanic in origin, thus coming from the same geographical region as the *Aratus latinus* itself.<sup>15</sup>

Finally, the text of *De signis caeli* reappears in two other guises. The first, as mentioned above, in the close copy of the text that appears as chapter 51 of the *De computo* of Hrabanus Maurus, which was written in Fulda in 820.<sup>16</sup> The second is as the so-called ‘Scholia Stroziana’ to Germanicus’s Latin translation of the *Phaenomena*, in which the text is a mixture of material taken from the *Revised Aratus latinus* and the other Germanicus scholia, but the backbone of the star catalogue is certainly *De signis caeli*.<sup>17</sup>

Turning to the illustrations that accompany the text of *De signis caeli*, the illustrated manuscripts traced to date include:

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<sup>14</sup> dell’ ERA 1979, p. 277.

<sup>15</sup> LE BOURDELLEÈS 1985, p. 83.

<sup>16</sup> The text is edited in MIGNE PL 1864, CVII, col. 695-96 and MAASS 1898, pp. 582-94.

<sup>17</sup> The text is edited in *Germanicus Caesar, Aratea cum scholiis*, ed. BREYSIG 1867, pp. 105-220.

1. Amiens  
Bibliothèque municipale  
Ms 222  
ps-Bede, *De signis caeli* (fragment)  
French (Corbie?)  
9th century
  
2. Dijon  
Bibliothèque municipale  
Ms 448  
ps-Bede, *De signis caeli*  

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end 10th/ early 11th century
  
3. Durham, Cathedral Library  
Hunter 100  
ps- Bede, *De signis caeli*  
English  
1100-1135
  
4. Freiburg-im-Breisgau  
Bibliothek des erzbischöflichen-Ordinariats  
Ms 35 (B.D. 1442)  
ps-Bede, *De signis caeli*  
probably Lotharingia  
mid-9th century
  
5. Klosterneuberg  
Stiftskirche  
Ms 685  
ps-Bede, *De signis caeli*  
German  
12th century
  
6. Laon  
Bibliothèque municipale  
Ms 422  
ps-Bede, *De signis caeli*  
French  
9th century (800-830)
  
7. Montecassino  
Badia (Biblioteca abbaziale)  
Ms 3  
ps-Bede, *De signis caeli*  
Montecassino  
874-92

8. Oxford  
Bodleian Library  
Laud Misc 644  
ps-Bede, *De signis caeli*  
French (Bayeux)  
2/2 13th century (1268-1274 ?)
  
9. Padua  
Biblioteca Antoniana  
Ms Anton. 27  
ps-Bede, *De stellis celorum*  
Verona ?  
early 10th century (post 881)
  
10. Paris  
Bibliothèque nationale  
Lat 5239  
ps-Bede, *De signis caeli*  
Limoges  
10-11th century
  
11. Paris  
Bibliothèque nationale  
Lat. 5543  
ps-Bede, *De signis caeli*  
Fleury  
9th-10th-11th century
  
12. Rouen  
Bibliothèque municipale  
Ms 26 (A. 292)  
ps-Bede, *De signis caeli* (fragment)  
Jumièges  
9th century (853-867)
  
13. Vatican  
Biblioteca Apostolica  
Vat lat 643  
ps-Bede, *De signis caeli*  
German  
11th century

14. Venice  
Biblioteca Marciana  
Ms VIII, 22 (2760)  
ps-Bede, *De signis caeli*  
                      
beginning 13th century

15. Zwettl  
Stiftskirche  
Ms 296  
ps-Bede, *De signis caeli*  
                      
12th century (1200?)

The incipits and explicits of the text are virtually identical across the fourteen manuscripts:

inc.: Helix arcturus maior habet in capite stellas obscuras vii, in spatula i, super pectus i, in pede i, in dorso i ... (cf. Maass 1898, p. 582)

expl.: Anticanis dicitur subter geminis bene parere. Habet stellas iii, quarum una splendidior est ceteris et ideo anticanis vocatur, eo quod contraria sit cani. (cf. MAASS 1898, p. 594)

And the constellations are presented and named in the following order for all but three of the manuscripts:

1. Helice/helix, arcturus maior
2. Fenix, arcturus minor, canis cauda — with Ludentes and Polus named
3. Draco, qui continet utrosque Arcturos
4. Hercules/ Ercules, qui stans genuflexo
5. Corona vero
6. Serpentarius, Asclepius
- 6a. Serpens

7. Scorpio / Scorphius
8. Arcas/ Arcus/ Arcades qui et Bootis, custos plaustris
9. Virgo, Iustitia
10. Gemini
11. Cancer
12. Leo
13. Agitator – with Haedi named
14. Taurus – with Subuculae and Pliades/Viriliae named
15. Cepheus / Cephheus / Zepheus
16. Cassepia / Casiepia / Sasepia
17. Andromeda
18. Equus, bellorum fons
16. Aries
20. Triangulus
21. Piscis (aquilonius, austris/ australis)
22. Perseus, qui fertur tenere capud Gorgonis
23. Lira/ lyra
24. Cignus/ cygnus
25. Aquarius – with Effusio mentioned
26. Capricornus
27. Sagittarius (**note:** there is no text for Sagitta)
28. Aquila
29. Delphinus/delfinus
30. Orion
31. Canicula – with Syrius/ Canis named
32. Lepus
33. Navis, Argo

34. Cetus / coetus
35. Eurus, Eridanus, Nilus, Gion / Gyon – with Canopus named
36. Piscis magnus, auster
37. Sacrarius / sacrarium, farum
38. Centaurus, ferter habere bestiam
39. Serpens with Corvus and Urna
40. Anticanis

This table reconfirms the relative consistency of the text across these manuscripts, the only structural differences being the slight mixing in the order of the first five constellations in some of the manuscripts and minor variations in spelling throughout.<sup>18</sup>

Alongside this textually homogenous group, there is an intriguing family of three *De signis caeli* manuscripts:

Klosterneuberg, Stiftskirche, Ms 685

Vatican, Vat lat 643

Zwettl, Stiftskirche, Ms 296

All of these manuscripts have a German provenance and, from an examination of the text and illustrations, it is clear that the Vatican manuscript is the prototype. The Zwettl manuscript was copied directly from the Vatican manuscript; and the Zwettl manuscript served, in turn, as the model for the Klosterneuberg manuscript. Each of these manuscripts preserves a variant of the *De signis caeli* catalogue, to which passages taken from the *Aratus latinus* and Isidore have been

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<sup>18</sup> The Laon manuscript begins with Ursa maior, Draco and Ursa minor. Paris BN lat 5239 and lat 5543 name both Ursa maior and Ursa minor as 'Fenix' or 'Felix'; and Venice VIII, 22 begins with Ursa maior, Hercules, Corona borealis, Ursa minor and Draco.

added. Beyond the addition of these discrete passages, however, there is evidence that a number of the individual entries of the pseudo-Bedan catalogue in these manuscripts has been modified or influenced by consultation with other catalogues – sometimes from the original version of the *Aratus latinus* and sometimes from the *Revised Aratus latinus*. Textually, then, a significant portion of these catalogues is from a non-ps-Bedan provenance. This realization is particularly relevant to any study of the development of the constellation texts of the early middle ages. Given dell’Era’s suggestion that the *De signis caeli* represents an intermediate stage between the *Aratus latinus* and the *Revised Aratus latinus*, one can use the texts found in these three manuscripts to track one example of how material has been brought together to form a unique hybrid.<sup>19</sup>

In the Vatican manuscript, for example, one finds that the *De signis caeli* star catalogue actually begins with an introductory passage taken from from *Aratus latinus* (fol. 82v): *Quidam tamen multa dicunt et aliter narasse caelum diversis proferentes vocabulis ... sed a navigantibus observantur. Maria enim conturbat.* (= *Aratus latinus*, cf. Maass 1898, pp. 179-80).<sup>20</sup>

In the star catalogue itself, the entries are altered as follows:

fol. 82v	<b>URSA MAIOR</b>	(an abbreviated version of the text found in most of the ps-Bedan catalogues): Habet enim helix arcturus maior. In capite stellas obscuras vii, in spatula, unam, super pectus unam, in pede unam, in dorso unam, in tibia anteriore duas, super caudam tres. Sunt omnis <sup>21</sup>
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<sup>19</sup> dell’ ERA 1979, p. 277.

<sup>20</sup> Saxl notes the incipit for this section, but does not recognise it as from the *Aratus latinus*. See SAXL I 1917 p. 70.

<sup>21</sup> Omnes in Klosterneuberg ms.

xvi. (cf. Maass 1898, p. 582).

It is worth pointing out that throughout the catalogue, one finds a mis-match between the number of stars listed and the total provided in the last line. In many cases, the summing-up line is omitted.

	<b>URSA MINOR</b>	Fenix qui et arcturus minor et a quibusdam canis cauda vocatur.. Habet autem per unumquemque angulum in humero splendidam stellam unam, in cauda iii. Sunt autem inter ambos, quae vocatur polus, ubi dicunt totum mundum revolvi. (= abbreviated ps-Bede, cf. Maass 1898, pp. 582-83)
fol. 83r	<b>DRACO</b>	(= ps-Bede, cf. Maass 1898, p. 583)
fol. 83v	<b>HERCULES</b>	Hercules qui stans genuflexu. <sup>22</sup> Habet autem in capite stellam unam, in utroque humero stellam unam, in cubito sinistro unam, in dextro femore duas, in genu dextro i, in eadem tibia unam, in dextera manu i, et in ropalo <sup>23</sup> quem tenet in eadem manu unam. (= abbreviated ps-Bede, cf. Maass 1898, p. 583)
fol. 84r	<b>OPHIUCHUS</b>	(= ps-Bede, cf. Maass 1898, p. 584)
	<b>CORONA BOREALIS</b>	(= ps-Bede, cf. Maass 1898, p. 584); note that Corona is placed between the description of Serpentarius and Scorpio.
	<b>SCORPIO</b>	(= ps-Bede, cf. Maass 1898, p. 584)
fol. 84v	<b>BOOTES</b>	Arcades qui est Bootes (= ps-Bede, cf. Maass 1898, p. 584)
fol. 8r	<b>VIRGO</b>	(= ps-Bede, cf. Maass 1898, p. 585) There is an added passage reading: Proxime istius vrginis iacet figura. Primum enim in hac stella sol vir incorrupta terre cuncta

<sup>22</sup> Genuflexo in Klosterneuberg.

<sup>23</sup> Ropolo in Klosterneuberg.

observant genera. Quemcumque finem acceptura corruptionis denominatur omnibus virginis vita. There is also one one reading: Libra autem quod tercium in domibus brutorm trigenis manibus ... et sine certaman ad summum introductus.

fol. 85v **GEMINI**

There are additional passages: Gemini autem iacent in ordine manifesto eo quod fructus ad \_\_\_\_\_ (CHECK)virides ... ad serenitate sacres disciplines.

Ex Geminis prior ... (= ps-Bede, cf. Maass 1898, p. 585)

Ysidorus dicut Castorem quoque que Pollucem per mortem inter novissima sydera constituti quod signum Gemini dicunt (\*\*\*) CHECK

**CANCER**

Additional passage: Hic mutatio elementi recipienda est cancer existens temporibus canceris quod maximum fructum demonstrat maotalibus aqua constitutus ordine manifesto. (CHECK)

This follows with: Habet autem stellas splendidas in testa ii, in dextris pedibus per singulos i, in sinistro priori i et in sinistro tertio i, in quarto i, in ore i, in dextro labio iii, in sinistro ii. Sunt omnes xv. (= between *Aratus latinus* and ps-Bede, cf. Maass 1898, pp. 204-05 and 585)

fol. 89r **LEO**

Begins with: Pedibus quidem retrorsis Leo subsistens bene decet ... quidem transcurrit gubernacula tendens. (= *Aratus latinus*, cf. Maass 1898, p. 205)

Then: Hic autem de inlustrissimis astris ..., sed adprehensum effocavit. (= *Aratus latinus*, cf. Maass 1898, p. 206)

And: Habet stellas in capite iii, in cervice ii, sub pectore i, in dorso iii, in summitate caude splendidam i, sub pectore ii, in anteriori pede splendidam unam. Sunt omnes xiii. (= between *Revised Aratus*

*latinus* and ps-Bede, cf. Maass 1898, pp. 206 and 585)

Finally: Ysidorus dixit: Leonem in greca ingentem hercule occidit.  
Et propter virtutem suam sunc inter sydera xii constituit. Hoc signum  
sol eum attingerit \_\_\_\_\_ calorem mundi reddit et aestas facit.  
(= CHECK)

fol. 86v    **AURIGA**                    (= ps-Bede, cf. Maass 1898, pp. 585-86)

fol. 87r    **TAURUS**                    Thaurus quidem iacet post ipsum quasi labriosus figura similis illi  
tamquam in cervice continentem qualem condecet iugum directis  
aratus (?) fulcis dividit terras in stellarum ordo qui olim dimicatus  
thaurus. Sed que hic mortalis sic vocatur universorum finum custos.  
(= ??? \*\*\* CHECK)

Then: Habet autem stellas ( = ps-Bede, cf. Maass 1898, p. 586)

fol. 87v    **CEPHEUS**                    Cepheus accaron habet in capite ... ( = modified ps-Bede, cf. Maass  
1898, p. 586)

fol. 88r    **CASSEPIA**                    ( = ps-Bede, cf. Maass 1898, p. 586)

fol. 88v    **ANDROMEDA**                    ( = ps-Bede, cf. Maass 1898, p. 587)

fol. 89r    **EQUUS**                            ( = ps-Bede, cf. Maass 1898, p. 587)

**ARIES**                            ( = ps-Bede, cf. Maass 1898, p. 587)

fol. 89v    **TRIANGULUS**                    ( = ps-Bede, cf. Maass 1898, p. 587)

**PISCES**                            ( = ps-Bede, cf. Maass 1898, p. 588)

fol. 90r:    **PERSEUS**                    (= slightly abbreviated ps-Bede, cf. Maass 1898, p. 588)

fol. 90v    **PLEIADES**                    Coarte quidem pluresve conveniunt omnes Pliades videntur ... a

- quodam viro nominari Ipodamia. (= *Aratus latinus*, cf. Maass 1898, p. 228-30)
- fol. 91r: **LYRA** ( between *Aratus latinus* and ps-Bede, cf. Maass 1898, pp. 232-33 and 588)
- CYGNUS** (= ps-Bede, cf. Maass 1898, p. 588)
- fol. 91v **AQUARIUS** (= slightly modified ps-Bede, cf. Maass 1898, p. 589)
- CAPRICORN** (= ps-Bede, cf. Maass 1898, p. 589)
- fol. 92r: **SAGITTARIUS** (= ps-Bede, cf. Maass 1898, p. 589). Note that the ps-Bedan tradition of omitting a separate paragraph for SAGITTA is maintained in this version.
- AQUILA** (= ps-Bede, cf. Maass 1898, p. 590)
- fol. 92v **DELFINUS** (= ps-Bede, cf. Maass 1898, p. 590)
- ORION** (= ps-Bede, cf. Maass 1898, p. 590)
- fol. 93r: **CANICULA** (between *Aratus latinus* and ps-Bede, cf. Maass 1898, pp. 253 and 587)
- LEPUS** (= ps-Bede, cf. Maass, p. 591)
- fol. 93v **NAVIS** ( between *Aratus latinus* and ps, Bede, cf. Maass 1898, pp. 256 and 591)
- CETUS** Cetus sub oriente (*sic*) et piscibus gradiens. ... (= ps-Bede, cf. Maass 1898, p. 591)
- fol. 94r: **ERIDANUS** Eurus qui et Eridanus (= ps-Bede, cf. Maass 1898, p. 591-92)

	<b>PISCIS MAGNUS</b>	( = ps-Bede, cf. Maass 1898, p. 592)
	<b>SACRARIUM</b>	( = ps-Bede, cf. Maass 1898, p. 592)
fol. 94v	<b>CENTAURUS</b>	( = ps-Bede, cf. Maass 1898, p. 593)
	<b>SERPENS</b>	( abbreviated ps-Bede, cf. Maass 1898, p. 593)
fol. 95r	<b>CANIS MINOR</b>	Anticanis dicitur subtus geminos parere bene. Habet stellas iii quarum una splendidior est ceteris et ideo anticanis vocatur eo quod contraria sit cani. (cf. Maass, p. 594)

The catalogue is followed by a number of texts and illustrations taken from the *Aratus latinus*, including:

ff. 95v	De stellis ergo quae vocantur planetae ... eo quod tantam claritatem ostenderit. ( = <i>Aratus latinus</i> , cf. Maass 1898, pp. 272-75)
ff. 96r-97v	Signalem autem circulum ita appellaverunt ... (ends imperfectly) tunc nequaquam caeti nihil veniet. ( = <i>Aratus latinus</i> , cf. Maass 1898, pp. 279-86)
ff. 99r-99v	Iam cum videris parvulis cornibus esse lunam vespere lucentem ... et satis facit nos ita esse. ( = <i>Aratus latinus</i> , cf. Maass 1898, pp. 287-291)
f. 99v	Sole autem ex utraque parte oriente ... (ends imperfectly) advenientibus nubibus. ( = <i>Aratus latinus</i> , cf. Maass 1898, pp. 291-92) <sup>24</sup>

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<sup>24</sup> Whereas the insertion of the preface and various passages from the *Aratus latinus* have not been commented upon previously, Saxl did note the Aratean texts which followed the *De signis caeli* catalogue. See SAXL I 1917, pp. 70-71.

As mentioned, this collection of texts and textual variants found in Vat lat 643 is faithfully copied into the Zwettl and Klosterneuberg manuscripts.

As will be shown below, the illustrations found in these three variant *De signis caeli* manuscripts are very closely tied to a group of standard manuscripts (which we call *De signis caeli II*). As a whole, though, the *De signis caeli II* group does share certain iconographic affinities with some of the illustrative cycles found outside of the *De signis caeli* tradition, resulting in an unusually high level of fluidity between what most would consider to be four different texts. To my knowledge, it represents a unique phenomena in the history of these illustrated constellation manuscripts.

## The pictorial families of the ps-Bedan, *De signis caeli*

Apart from the three anomalous manuscripts in this group, the texts of the majority of the *De signis caeli* manuscripts are remarkably consistent. The illustrations accompanying these texts, however, are much less uniform than the texts they purport to illustrate. As seems to be the case with so many of these constellation manuscripts, the division into pictorial families fails to accord with what one might expect given established philological stemmata of the texts.

Based on the criterion that a pictorial family indicates a more than 50% agreement in the iconography of the individual constellations figures, the *De signis caeli* manuscripts can be grouped into three distinct families.

### *De signis caeli* I:

The first group consists of three manuscripts:

Oxford Laud 644

Padua 27

Venice VIII, 22

Although Oxford Laud 644 and Padua 27 are not sufficiently close to be true ‘sister’ manuscripts, their illustrations share such a large number of very specific similarities that one must conclude that they are closely related. Venice VII, 22 can also be included as part of this group, though it is one step removed as it has a number of features that separate it from the other two. In some instances, however, the Oxford and Venice manuscripts share features that are not included in the Padua manuscript.

One specific feature that binds these manuscripts together is the depiction of ARA (called 'sacrarium'). In all three, there has been a basic misunderstanding of the form and/or the perspectival rendering of the altar and it is drawn as a distorted series of lines that falls somewhere between a depiction of two boxes, one stacked on top of the other, and a mobius strip. This kind of drawing seems to indicate a tradition of ignorant or, possibly, illiterate draughtsmen copying pictures from pictures, with little or no understanding of their significance.

The family profile of *De signis caeli I* is based on the characteristics that all three manuscripts have in common. These are:

1. The three constellations of URSA MINOR, URSA MAIOR and DRACO are all shown as individual constellations, each with its own paragraph of explanatory text.
2. URSA MAIOR and URSA MINOR face in opposite directions (MAIOR to the left and MINOR to the right).
3. URSA MINOR is shown in a crouching position, with its front legs splayed and its roaring head turned backwards, over its right shoulder to the left.
4. HERCULES is shown striding to the left with his buttocks exposed (body twisted). The lion skin that he carries over his (right) arm shows the lion's face, forefeet and tail is shown the picture does not include the Garden of Hesperides or its snake.
5. OPHIUCHUS is shown walking to the left with his buttocks exposed (his body is twisted). He holds the snake so that it wraps once around his body and makes an X-crossing near his waist. The snake is shown facing the man.
6. OPHIUCHUS does not stand on Scorpio. Instead, Scorpio is presented separately, with its own paragraph of explanatory text.
7. BOOTES (variously named 'Arcus', 'Arcas' and 'Arctus') stands facing the viewer in a short toga-like garment, with bare feet and his left shoulder exposed. His head turned towards the

left and he holds his right hands outstretched at shoulder height and turned so that the palm faces upwards. He has a plant-like object held in his left hand.

8. VIRGO has wings and holds a plant in her (right) hand, but her left hand is held down by her side.
9. GEMINI are depicted as two youths. The left one appears not to have any attributes (though there might be something resting on top on the mantle held by the Left Twin on in Padua 27) and the Right one holds a lyre in his left hand. The Right Gemini also stretches out his right arm so that it rests on the shoulders of the Left Twin.
10. CANCER faces to the right.
11. LEO rushes to the left.
12. AURIGA (always called 'Agitator') is depicted riding in a chariot drawn by more than two horses. He holds a shield in front of his body. Here, Oxford Laud 644 and Padua 27 are particularly close, both showing the charioteer holding a long spear and turning his head backwards, towards the right.
13. TAURUS is depicted as half a bull and facing to the left.
14. CEPHEUS is depicted in a long tunic, wearing a sword or scabbard on a strap or string slung across his chest.
15. CASSIOPEIA is shown seated on a throne composed of sticks. She wears a cloak draped over her left shoulder and she exposes her right breast and her belly button. (in Padua and Venice only)
16. ANDROMEDA wears a short skirt, with a cloak draped over her left shoulder and exposing her right shoulder and breast. She rests her hands on top of what appear to be tree stumps.
17. PEGASUS is a winged horse facing to the left, with his head turned back to the right. His right foreleg is bent and his left foreleg is straight so that they are rather daintily crossed in all three illustrations. All three were originally depicted as half a horse, but a later hand has

added the rear section and genitalia to the horse in Venice VIII, 22.

18. PISCES are identically placed and tied by a single line.
19. PERSEUS is completely nude, except for a cloak that covers his advanced shoulder and then flows out behind him in such a way that his buttocks are exposed (his body is twisted). He walks to the left, with large wings on his feet and carries the Medusa's head in one hand outstretched in front of him. He raises his *harpe* in his other hand behind his head.
20. CYGNUS stands on his feet, as if on the point of moving to the left.
21. AQUILA stands on SAGITTA, and the arrow flies to the left. He is positioned so that his head touches his right wing.
22. DELPHINUS swims to the left and possesses an elongated, tapering 'horn' on top of its head. The depictions of DELPHINUS are nearly identical in Oxford Laud 644 and Venice VIII, 22.
23. ORION wears a knee-length toga and his left shoulder is covered by his cloak. Also, he holds a straight sword upright in his right hand and rests his left hand on the end of his scabbard.
24. CANIS MAIOR walks to the left with his right paw raised. He looks backwards over his shoulder and his head is encased within a large halo.
25. LEPUS jumps to the left.
26. ERIDANUS is a bearded river god in classical garb, seated beside his flowing urn and holding a plant or palm frond in his right hand.
27. ARA is bizarrely constructed as a two-storey box.
28. CENTAURUS is depicted as a centaur holding BESTIA / LUPUS in his extended left hand so that its feet stick upwards. He also rests a plant on his left shoulder.
29. HYDRA, CORVUS and CRATER (called 'urna') are depicted as a single constellation, with HYDRA as a snake crawling to the left and CORVUS placed so that he faces the tip of HYDRA's

tail.

Notable differences in the *De signis caeli I* family include:

1. Oxford Laud 644 and Padua 27 depict DRACO as a flat snake, slithering to the left, while Venice VIII, 22 has DRACO as a two-legged dragon with bird-like feet.
2. CORONA differs in all three manuscripts.
3. In Padua 27, the GEMINI are depicted as two nude youths wearing long cloak; in Oxford Laud 664 and Venice VIII, 22, the boys are wearing ankle-length robes.
4. CASSIOPEIA exposes her right breast in Padua 27 and Venice VIII, 22.
5. Padua 27 is the only one to add a belt around the middle of ARIES.
6. TRIANGULUS differs in all three manuscripts
7. In both Oxford Laud 644 and Venice VIII, 22, LYRA is depicted as a peculiarly lobed lyre that foreshadows the instrument's transformation into a lily or vase when it migrates into Arabic constellation imagery
8. The greatest difference amongst the three manuscripts is found in the depictions of AQUARIUS and SAGITTARIUS. Whereas the postures of Aquarius are similar in Oxford Laud 644 and Padua 27, in the former, he is fully clothed with a cloak over his head and, in the latter, he is nude. The illustration in Venice VIII, 22 comes from a different tradition all together. All three versions of SAGITTARIUS show a centaur running to the left, but in the Oxford manuscripts, he has tufts of hair that resemble horns on his head. The Oxford and Padua manuscripts share the feature of a tufted, hairy band marking the juncture of the creature's human and animal halves
9. The representations of CAPRICORN are closer in the Oxford and Venice manuscripts, both showing the beast with an acanthus-shaped ending to his tail.
10. In all three manuscripts, ORION wears a knee-length toga and his left shoulder is covered by

his cloak. Also, he holds a straight sword upright in his right hand and rests his left hand on the end of its scabbard

11. In Padua 27 and Venice VIII, 22, there are also rays of light emanating from CANIS MAIOR's head.
12. ARGO (Navis) is completely different in each of the manuscripts.
13. The depictions of CETUS are closer in Oxford Laud 644 and Venice VIII, 22. They both show the beast as if he had an aardvark's head, with extremely long ears. The creatures are positioned facing in different directions, however.
14. Finally, CANIS MINOR bears a halo only in Oxford Laud 644 and Padua 27.

There is another manuscript which is related to the *De signis caeli* I family. Although sharing a number of the defining traits of the family, Dijon 448 has a sufficiently high number of significant variants to warrant the recognition of that extra distance. For this reason, a sub-group of *De signis caeli* Ia has been suggested. Comparing the illustrations with the *De signis caeli* I family, one sees that the following constellations in Dijon 448 conform to the norm:

1. HERCULES
2. OPHIUCHUS
3. AURIGA (closest to Oxford laud 644 and Padua 27)
4. CEPHEUS
5. PEGASUS (but see below for a significant difference)
6. PISCES
7. CYGNUS (closest to Oxford laud 664)
8. AQUILA
9. ORION
10. CANICULA (closest to Oxford laud 644)
11. ERIDANUS (closest to Padua 27)
12. PISCIS AUSTRINUS
13. HYDRA, CRATER and CORVUS

The slight deviations from this norm are as follows:

1. URSA MAIOR lacks the peculiar crouching position
2. BOOTES shares the posture, attributes and the way in which his cloak exposes his left shoulder, but the bizarre manner in which the cloak billows out to the side suggests an intermediary illustration.
3. PERSEUS has no wings on his feet and his cloak falls evenly from both shoulders.
4. CENTAURUS has a second animal held in his right hand, which appears to stand on his rump.

Features that Dijon 448 share with individual constellation pictures in the group include:

1. DRACO is generically similar to the one in Oxford Laud 644.
2. The rope-like texture of the bands in CORONA BOREALIS is reminiscent of the bands in Oxford Laud 644.
3. ARIES with a belt is very close to Padua 27.
4. CAPRICORN is generically similar to the one found in Oxford Laud 644 and Venice VIII, 22.
5. SAGITTARIUS has no hairy band separating his human and animal halves, but otherwise it is generically similar.
6. ANTICANIS is very close to those found in Oxford Laud 644 and Padua 27.

Clear deviations from the *De signis caeli* I family profile include:

1. VIRGO is markedly different as the tips of her wings are held high, rather than down by her sides, she holds a branch in her left hand, rather than her right; and she makes a gesture of

benediction (two fingers extended) with her right hand.

2. The GEMINI have no attributes and stand together with their inner arms crossing so they each hold the other under the shoulder blades.
3. CASSIOPEIA sits on a circular throne and does not expose shoulder or breast.
4. ANDROMEDA is naked to the waist, but is tied by hoops or ropes to two large plants at either side.
5. LYRA is unique in that it is shown with some sort of attachment, like a key or a plectrum (?).
6. AQUARIUS is nude to the waist, wears a short skirt and holds an upside-down, water-pouring urn in front of him (to the right) with both hands.
7. DELPHINUS has such an odd facial structure that he is unique amongst all the Aratean manuscripts.
8. CETUS is much more classically-inspired.
9. ARA is a sensible, two-storey brick structure with a tiled roof.

It might be added that the Dijon manuscript has a second, illustrated version of the pseudo-Bedan text in a series on the zodiacal constellations (ff.64v-67r, see the catalogue entry below). These pictures, however, have not been drawn from the same source as those found in the full set of constellation illustrations.

Instead, they have more in common with the *De signis caeli* II group discussed below. This suggests that the scribe of the Dijon manuscript (or the source from which it was drawn) must have had two illustrated versions of the *De signis caeli* from which to choose.

## ***De signis caeli II***

The second group of *De signis caeli* manuscripts consists of five manuscripts:

Klosterneuberg 685

Paris BN 5239

Paris BN 5543

Vat lat 643

Zwettl 296

The illustrations in the *De signis caeli II* differ from the *De signis caeli I* group in the following features:

1. URSA MINOR and URSA MAIOR are depicted twice: once as separate bears and once as part of the *DRACO INTER ARCTOS* grouping, DRACO having 4 curves in his body.
2. HERCULES is set in the Garden of Hesperides with the snake.
3. OPHIUCHUS stands on SCORPIO and this image is followed by a second, individual depiction of SCORPIO.
4. VIRGO has two attributes: a branch and the balance.
5. The GEMINI hold spears.
6. AURIGA is set in a chariot.

In considering other aspects of the pictures in the *De signis caeli II* group, it is tempting to sub-divide the family into two parts. Immediately, one notices that Paris BN 5543 and Paris BN 5239 are very similar in terms of the way the figures themselves are formed; and the Zwettl and Klosterneuberg manuscripts are obviously a mother-daughter pair. Strictly speaking, if one were to compare the

eldest with the youngest (Paris BN 5543 with Klosterneuberg), it might be difficult to see the family resemblance at first glance. Nevertheless, almost equidistant between these two pairs is the Vatican manuscript, which, on the one hand, is closely related to the Paris manuscripts in terms of iconography and style; but, on the other hand, is obviously the model for the Zwettl/Klosterneuberg pair. Vat lat 643 overlaps these two seemingly distinct circles in such a way that it acts as a bridge from one set to the next. In short, the existence of Vat lat 643 allows us to see how this group of five manuscripts can be pulled in together to form a single pictorial family.

Having said this, the iconographic continuity in the *De signis caeli II* family is somewhat undermined by the fact that the constellation cycle in Vat lat 643 includes text and illustrations for two constellations that are not, strictly speaking, part of the *De signis caeli* corpus. These additions are carried into the Zwettl and Klosterneuberg manuscripts. It is tempting, therefore, to see this group of three manuscripts as sub-set of the *De signis caeli II* family. But, when one analyses the pictorial similarities between these three manuscripts and the two, elder Paris manuscripts, the level of co-incidence significantly outweighs the differences. Despite the introduction of the rogue constellations, the group of five manuscripts remains sufficiently close to form a coherent pictorial family. Indeed, the splitting of this family into two parts deflects one from fully appreciating the manner in which its constellation images undergo a series of interesting stylistic developments over a period of nearly 300 years. If one paces these changes from one manuscript to the next, it becomes slightly clearer how one set of pictorial conventions leads into the next as they cross temporal and geographical boundaries.

For example, if one considers the figures in Paris BN 5543, they are all set within heavy, coloured frames and rendered in a highly-coloured, painterly fashion. This suggests that Paris BN 5543 is stylistically closer to a classical prototype than the

others in the family. Paris BN 5239 and Vat lat 643, though, rely primarily on line or on line-and-wash to convey the forms of the constellations. The subtlety and details conveyed in the Paris BN 5543 illustrations are often abbreviated or lost due to the medium employed and to the relative lack of artistic talent shown by both the illuminators of Paris BN 5239 and Vat lat 643. In the Zwettl and Klosterneuberg manuscripts, one sees a similar employment of line to form the shapes of the constellations, but there is a tremendous jump in artistic standard - particularly in the Klosterneuberg manuscript, which has some truly lovely drawings.

Considering the pictorial similarities between the five manuscripts: \*\*\*

1. URSA MAIOR and URSA MINOR run towards the left and URSA MINOR has a longer tail.
2. In the depiction of *DRACO INTER ARCTOS*, DRACO's body has three curves. Also, the long tail of URSA MINOR is preserved in all of the manuscripts.
3. **Hercules** is shown kneeling before the snake in the Garden of Hesperides. The hero advances his right leg, he is bearded, only the lion's face is discernable and the tip of the tail is trod upon (or nearly). Stylistically, Paris BN 5543 and Vat lat 643 are quite close in their depiction of the curves of the snake and the way in which the hero's pointed beard juts out from his chin.
4. **Corona** is shown as a circlet with ribbons placed at the bottom.
5. **Serpentarius** holds the snake so that its body crosses under his left arm (see the similar form in the *De signis caeli I* manuscripts). The man's feet are placed on the back of Scorpio that faces to the left. Stylistically, the shape of the Scorpio in Paris BN 5543 and Vat lat 643 are the most similar.
6. In all but the Klosterneuberg manuscript, **Scorpio** is depicted twice.
7. **Bootes** (Arcas/ Arcades) is depicted in similar postures.

8. **Virgo** has long wings that point downwards and holds the balance in her left hand and a plant in her right.
9. In all but the Klosterneuberg manuscript, the **Gemini** are posed in mirror image, holding spears in their outer hands and rest their inner hands on their hips. See below for differences in the Vatican, Zwettl and Klosterneuberg manuscripts
10. **Agitator / Auriga** is depicted in long robes, facing to the left, holding a single-thong flail in his right arm behind his head. He wears a similar cap in all three and has two small goats facing each other as they stand on his extended left arm. A larger goat, Capra, stand in front of him, facing towards him.
11. **Taurus** is shown with his right leg tucked under him and his left leg extended in front of him. He also has a peculiar 'X' drawn on his face in Paris BN 5239, PARIS BN 5543 and Vat lat 643.
12. **Cepheus** appears in a short tunic with a short cape. He wears a mitre-like hat in Paris BN 5543 and Vat lat 543, which has become a bit flattened in Paris BN 523 and rounded in Klosterneuberg and Zwettl, but all share the odd feature of tassels or ribbons that float outwards from the base of the cap.
13. **Cassiopeia** sits on a throne, which has a tall curved back. In this case, the rendering of the throne is closest in Paris BN 5239 and Paris BN 5543, but the detailing of her garment is closest between Paris BN 5543 and Vat lat 643. In all of these, she wears a pointed or Phrygian cap.
14. As mentioned above, one important shared feature of the *De signis caeli II* group is the appearance of **Andromeda**, set between her toilet articles and with a large dragon curled at her feet. The major differences within the group, however, is that in Paris BN 5543 and Vat lat 643, she is dressed in along robe and her shawl (in Paris BN 5543) or her belt (in Vat lat 643 and Zwettl) are drawn so that the ends of the garment fall over her outstretched arms at the elbow. In Paris BN 5239, though, she is nude; her mantle hangs behind her with its long tube-like sleeves dangling over her outstretched arms. For the differences in the Klosterneuberg manuscript, see below.

15. **Equus/Pegasus** is depicted as half a horse and flying to the right.
16. **Aries** is depicted leaping to the left, with an extremely long tail.
17. The position of the **Pisces** is similar, but the substance of their stream is different in Paris BN 5239, where it appears to be a length of cloth. Paris BN 5543, Vat lat 643, Zwettl and Klosterneuberg have quite beaky fish.
18. The depictions of **Perseus** are the same, but the orientation of the individual features changes among the three manuscripts. All versions of Perseus have winged feet.
19. The depiction of **lyra** is equally odd in all the manuscripts, with the Klosterneuberg manuscript being the possible exception in that the scribe has tried to make better pictorial sense from the original image presented to him. It has a square base and two vertical bars and a horizontal bridge, with curved lines presumably representing the shell.
20. **Cygnus** stands to the right and bites (?) its breast in all of the manuscripts.
21. The depictions of **Aquarius** are very close. He holds both hands in front of him and has the base of an upturned vase in them. The water pours from the vase in a curve that comes towards (or under) his feet.
22. The meeting of the goat and fish halves **Capricorn** is marked in all of the images.
23. **Sagittarius** is also similar in the two Paris and Vatican manuscripts, each having the peculiar feature of the man wearing an animal-skin cape that flows away from his shoulders as he runs. Paris BN 5239, however, does not have an arrow beneath its feet, whereas the other two manuscripts do.
24. **Aquila** stands on an arrow and faces back over his right wing.
25. **Delphinus** looks like a classical dolphin. Paris BN 5543 and Vat lat 643 are especially close
26. **Orion** walks to the left and his cape is draped over his extended forearm. He also has an empty scabbard by his side.

27. **Canicula** has both a halo and rays around his head in all of the manuscripts.
28. For all the dis-similarity in the depictions of **navis** in the *De signis caeli I* manuscripts, in this group, the ship is nearly identical in all the early manuscripts -- a half-ship is cut-off at the tight at the mast, which bears a flag or banner. There are two shields on deck and the curved end of the ship ends in a trefoil ornament. Below this, there is a small dog's head. The depiction of water in Paris BN 5543 and Vat lat 643 has been slightly misunderstood by the illustrator of Paris 5239, who seems to show it as a structural part of the ship. For the differences in Zwettl and Klosterneuberg, see below.
29. **Cetus** is a beaky, clawed sea monster with a long horn on his head in all the manuscripts.
30. **Eurus/ Eridanus** is depicted as a bust of a figure with wild hair he holds his open right palm in front of him and he has a long rectangular shape (like the bottom of a window frame) beneath him. The figure has a large star in his hair in all the manuscripts and in Paris BN 5239, Vat lat 643 and Zwettl, there is a plant to one side.
31. **Piscis** is upside down.
32. **Hydra, Corvus** and **Crater** are positioned similarly, with corvus pecking at the snake and facing towards his head.
33. **Anticanis** leaps to the left and has a collar in all of the manuscripts

The differences seen in the manuscripts of the *De signis caeli II* family include:

1. **Ursa maior** and **Ursa minor** are depicted running in Klosterneuberg, Paris BN 5543, Vat lat 643 and Zwettl, but stand in Paris BN 5239.
2. In the earlier manuscripts, **Draco's** body is depicted as a snake, but in the Zwettl and Klosterneuberg manuscripts, it has been changed into a dragon with the addition of two feet and a small pair of wings. Also, draco is beardless in both and the Zwettl manuscript illustrates his tongue as arrow-shaped.

3. In Vat lat 643, Zwettl and Klosterneuberg, the supposed lion's head held by **Hercules** looks more like a man's head. This is particularly true in the Zwettl and Klosterneuberg manuscripts, where he has a long beard. All three share the feature of a straight club with a bulbous tip.
4. In Vat lat 643, Zwettl and Klosterneuberg, **Corona** is 'misplaced' on the page so that it falls between Serpentarius and Scorpio.
5. In Paris BN 5543 and Vat lat 643, it is clear that the figure of **Serpentarius** is intended to be seen from the rear, but the orientation is not as clear in Paris BN 5239, due to the less proficient draftsmanship. See below for the change of orientation in Zwettl and Klosterneuberg. All have a piece of cloth draped over his extended arm.
6. In the Zwettl and Klosterneuberg manuscripts, the **Scorpio** upon which Serpentarius is standing has a humanoid face, sporting a mustache in the former and whiskers in the latter. Also note that in the Klosterneuberg manuscripts, the second depiction of Scorpio has been deleted.
7. In the two Paris manuscripts the orientation of **Bootes** is unclear. In Vat lat 643, Bootes is seen from the rear, but in the Zwettl and Klosterneuberg manuscripts, he is certainly depicted from the front.
8. In Paris BN 5543 and Vat lat 643, **Virgo** seems to be flying, but in Paris BN 5239, Zwettl and Klosterneuberg manuscripts, her feet are firmly planted on the ground. In the Vatican and Zwettl manuscripts, the scales are labelled 'LIBRA' to accord with the additional text added at the bottom of the page. This is omitted in the Klosterneuberg manuscript.
9. In the two Paris manuscripts, **Cancer** is illustrated in a separate picture, following the **Gemini**. In Vat lat 643, Zwettl and Klosterneuberg, Cancer is placed between the feet of the Gemini (a feature seen also in the Aberystwyth and Siena L.IV.25 Germanicus manuscripts and the Leiden 8° 15 Hyginus manuscript). Interestingly, however, the Vatican and Zwettl Gemini maintain the postures seen in the other *De signis caeli II* manuscripts. The Vatican Cancer is circular and the Zwettl one is shaped like a crayfish. In the Klosterneuberg manuscript, the posture of the Gemini is different from the others in the family with the Twins shown in full

medieval armour. They hold their shields in their right arms and have large shields. Cancer is shaped like a crayfish.

10. In the Zwettl and Klosterneuberg manuscripts, **Leo** has an ivy-leaf tip to his tail.
11. In Vat lat 643, Zwettl and Klosterneuberg, **Agitator/Auriga** holds a flail that has a thong that looks a bit like a snake wrapped around a stick.
12. **Taurus** does not have the 'X' on his face in the Zwettl and Klosterneuberg manuscripts
13. If one follows the historical progression through these manuscripts, one can see that the understanding of **Cassiopeia's** throne changes from a throne with a curved back in the three earlier manuscripts to a backless throne set within a curved arch in the Klosterneuberg manuscript.
14. In the Klosterneuberg manuscript, **Andromeda** has lost her toilet articles and the two 'trees' or 'rocks' upon which these articles are usually hung. It would seem that this is an arbitrary deletion made by the artist who, perhaps, did not include them because he did not understand what they were supposed to represent. The figure of Andromeda, however, is still very close to that found in the Zwettl manuscript and there seems no reason to suppose that there has been an intermediary source from which the Klosterneuberg illuminator drew his inspiration for the figure without toilet articles. In both the Zwettl and Klosterneuberg manuscripts, the monster at Andromeda's feet has turned from a snake into a dragon, with the addition of two little feet and a little pair of wings - again, underlining the closeness between these two manuscripts.
15. The series of **Equus/ Pegasus** in these three manuscripts provides a fabulous example of the iconographic degeneration of an image. In Paris BN 5543, Pegasus is depicted as half a horse, flying to the right, with his head bent slightly down so that his muzzle is placed in front of the curve of his left wing. In the more linear rendering of Paris BN 5239, the forward curve of the wing is simplified to two parallel lines. In Vat lat 643, Zwettl and Klosterneuberg, however, the wing has become transformed into a bowl, from which Pegasus seems to be eating.
16. In the three earliest manuscripts, **Aries** has a ring around his middle. In the Zwettl and

Klosterneuberg manuscripts, this ring has disappeared.

17. In Paris BN 5543, it is clear that **Perseus** strides to the left and that he is intended to be seen from the rear, holding the Medusa-head in front of him in his left hand. The orientation of the hero's upper body is less clear in Paris BN 5239 and Vat lat 643. In the Zwettl and Klosterneuberg manuscripts, Perseus is depicted facing the viewer. This means that the Medusa-head is in his right hand and the leafy 'club' in his left. In Paris BN 5239, Vat lat 643, Zwettl and Klosterneuberg, his cape as a piece of cloth that is caught on his forward, right (?) shoulder and flows behind him in two swathes. This is similar to the depiction that appears in the *De signis caeli* manuscripts. Also Zwettl and Klosterneuberg manuscripts share the odd feature of having a bit of his cloak wrapping around his right leg. The Medusa-head in Klosterneuberg has snakes instead of hair.
18. As mentioned above, the additional section on the **Pleiades** in the Vat lat 643, Zwettl and Klosterneuberg manuscripts has been taken from an *Aratus latinus* manuscript. All the figures are presented as heads, set within identically-oriented roundels. In the Vatican manuscript, one of the figures seems to be dressed as an Inuit!
19. In the two Paris manuscripts and the Vatican manuscript, **Cygnus** lifts his right foot. Cygnus does not lift his right foot in the Zwettl or Klosterneuberg manuscripts.
20. In the three earlier manuscripts, **Aquarius** is nude to the waist, but wearing long, close-fitting trousers. In Zwettl and Klosterneuberg, he is completely nude except for his cap and a long cape that blows out behind him. In Vat lat 643, one can see that the artist had difficulty understanding the structure of the urn and its rim and has separated the two parts, creating a visual nonsense. The urn has reassembled itself in the Zwettl and Klosterneuberg manuscripts. Also one part of his cloak has blown between his legs in these two later manuscripts.
21. The meeting between the goat and fish halves of **Capricorn** are marked with a hairy band in the two Paris and Vatican manuscripts. This meeting is marked with a plain band in the Zwettl and Klosterneuberg manuscripts. Oddly, the Capricorn in Paris BN 5239 has two sets of horns on his head. Capricorn has a curled fish tail that ends in a trefoil in all but the Zwettl and Klosterneuberg manuscripts.

22. In the Zwettl and Klosterneuberg manuscripts, the flayed animal-skin cloak held by **Sagittarius** has been changed into a piece of fabric that crosses as it blows behind the figure. Both have an arrow placed beneath the hooves of the centaur.
23. Again, orientation of front and rear is of **Orion** is difficult in all of the earlier images, but he is clearly placed so that he is facing the viewer in the Zwettl and Klosterneuberg manuscripts.
24. The furry belly of the Zwettl **Canis maior** has been transformed into dugs in the Klosterneuberg manuscript.
25. Unlike the three older manuscripts, in the Zwettl and Klosterneuberg manuscripts, **Navis** is depicted with two tapering ends. The detail of the dog's head is repeated in the Zwettl manuscript, but additional heads have been added to the both bow and stern. In the Klosterneuberg manuscript, all the dogs found in the other versions have disappeared, but a dog's head can be seen on the top of the mast.
26. The plant seen beside **Eurus/ Eridanus** is missing in the Klosterneuberg manuscript.
27. In the three elder manuscripts, **Ara/ sacrarium** tapers towards the top. The illuminator of both Paris BN 5239 and Vat lat 643 seem not to have understood that the element coming from the top of the altar is supposed to be a flame and have drawn a trefoil shape. In the Zwettl and Klosterneuberg manuscripts, Ara is depicted as a multi-story church, with three towers.
28. The depiction of **Centaurus** is problematic for all the artists of this family. In Paris BN 5543 and Paris BN 5239, the cloak carried by the centaur seems to be enveloping his arm in a somewhat sinister fashion. The 'bestia' in Paris BN 5239 is certainly a lion. In Vat lat 643, Zwettl and Klosterneuberg, a number of features have been added that do not appear in the other two manuscripts, such as a rabbit and a sword in his right hand and a bucket-like purse hung from his left elbow. The 'bestia' is a dog and the artist has also included a second depiction of Ara (following the description in the text) below the centaur's right feet. The flame-like cloak (?) held in the man's right hand is omitted from the Klosterneuberg manuscript.
29. In Vat lat 643, Zwettl and Klosterneuberg, the **Crater** ('urna') is a bucket.

As mentioned, it is worth noting that a number of the iconographic idiosyncrasies of the *De signis caeli II* group reappear in other illustrative cycles. For example, in the cycle that accompanies the Germanicus text in Aberystwyth 735C and the Hyginus text in Leiden 8° 15, one finds the following *De signis caeli II* features:

1. **Hercules** has the pointed beard similar to that depicted in Paris BN 5543 and Vat lat 643 and the skin he carries shows the lion's face as found in Paris BN 5543 and Paris BN 5239.
2. **Serpentarius** carries the snake so that it makes an 'X' across his body.
3. The depiction of **Bootes** (called 'Arcas' in the *De signis caeli* tradition and labelled 'Arcades' in the Aberystwyth manuscript) as a wild man, wearing an animal skin and holding some shredded skin or cloth over his extended arm is almost identical to the image in Paris BN 5543.
4. **Virgo** holds both a plant and the scales.
5. **Cepheus** wears a mitre-like hat with floating ear-flaps or ribbons at the side.
6. The **Gemini** have **Cancer** between their feet as appears in Vat lat 643.
7. The top of **Cassiopeia's** throne is curved in the Aberystwyth manuscript as it is in Paris BN 5543 and Paris BN 5239.
8. **Andromeda** has her toilet articles and the edges of her shawl or her sleeves fall over her arms in a manner almost identical to Paris BN 5543; and there is a dragon at her feet.
9. The oddly shaped **Lyra** found in the *De signis caeli II* manuscripts reappears in Leiden 8° 15, as does the breast-biting Cygnus.

The *De signis caeli* III group:

The third group of *De signis caeli* manuscripts, which we call *De signis caeli* III, consists of two examples:

Laon 422

Rouen 26

Although there are a number of dissimilarities between these two manuscripts themselves, on closer examination, many of these apparent differences seem to reflect a variation in stylistic developments from a single model, rather than developments based on two different models. Unfortunately, the Rouen manuscript has been badly damaged and is lacking the following constellations: Serpentarius, Gemini, Equus/Pegasus, Triangulus, Pisces, Perseus, Lyra, Cygnus, Aquarius, Capricorn, Sagittarius and Aquila. Nevertheless, it is possible to construct a provisional family profile that includes the following features:

1. **Ursa maior** and **Ursa minor** are depicted as bears walking to the right. In both manuscripts Ursa minor (the second bear) is much larger than the first and it has a long, curved tail, while Ursa maior has a short tail.
2. **Draco** is a snake that slithers to the right, though in the Rouen manuscript, Draco is winged and has a cock's comb on his head.
3. **Hercules** is nude and lunges to the right. He has a piece of cloth that has no indication of a leonine origin draped over his left hand, which is stretched out in front of him. He holds a club above his head in his left hand.
4. **Scorpio** has an elongated body and faces towards the right.

5. **Arcas / Bootes** share the very peculiar feature of a tube-like piece of drapery from the figure's cloak being pulled away from his body by his right hand.
6. **Virgo** holds a plant in her right hand. Also, her wings flutter upwards.
7. **Leo** walks to the right and lifts his left paw.
8. **Auriga Agitator** is shown without a cart, without horses and without Capra. In both images (the Rouen picture is, again, badly mutilated), the charioteer holds two animals on his outstretched left arm that look suspiciously like rabbits.
9. **Delphinus** is a creature with a Pharaonic beard.
10. In the Laon manuscript, **Orion** holds a very strange implement that recalls a feather duster in his upraised right hand. This has been transformed into a flower in the Rouen manuscript.
11. **Canis maior** leaps to the right and does not turn his head backwards.
12. **Argo / Navis** is depicted a half-boat, cut off at the right; with a small building on the deck and two oars at the left side.
13. **Cetus** has a snaky head and oddly-patterned flippers.
14. **Eridanus / Eurus** is depicted as a disembodied head with long, wild hair, set above a rectangular block.
15. **Ara** is a lantern-like structure with a triangular top.
16. **Centaurus** marches to the right, holding a stick over his left shoulder to which a dead hare hangs by its heels.
17. **Hydra** has both **Corvus** and **Crater** ('urna') on his back.
18. **Anticanis** runs to the right.

The most obvious differences between the two manuscripts include:

1. Comparing the depictions of **Corona**, they seem quite dissimilar. In Laon 422, Corona is shaped a bit like a torque with a strange apostrophe-shaped object between the two ends. The Rouen Corona is like a dog's collar with a large ring at the top. Conceptually, they share the same structure, though each has evolved into a different object.
2. **Ophiuchus** in Laon 422 walks to the left and has the snake wrapped around his middle. Unfortunately, the Rouen Ophiuchus is largely missing (see descriptions of the damage to the manuscript in the catalogue), but he seems to have been walking to the right, as well.
3. In Laon 422, **Taurus** is cut-off at his waist; in Rouen 26, he is depicted as a full bull. Both images, however, share the feature of the bull tucking his right leg under his body and extending his left leg forward.
4. In Laon 422, **Andromeda** is completely nude and depicted standing between 2 segmented columns (note that Durham Hunter 100 also had a completely nude Andromeda). In the Rouen manuscripts, she is dressed in a long gown and the segmented columns have a more vegetal shape
5. **Canis maior** has a halo in the Laon manuscripts, but not in the Rouen one.
6. In the Rouen manuscript, the **Hydra** has a cock's comb on his head.

*De signis caeli* singletons:

The remaining four manuscripts of the *De signis caeli* do not share a sufficient number of pictorial details with the rest of the manuscripts to fit easily into any of the prescribed family groupings. For the moment, it seems best to isolate them as interesting singleton manuscripts.

a. Amiens 222

On account of its extensive losses and the generally dismal quality of its illustrations, Amiens 222 can only be loosely connected to the *De signis caeli II* group on account of the particular feature of Andromeda being shown with her toilet articles. But, in truth, the drawings are so poor that it is difficult to isolate more than a handful of the details that might allow one to tie this manuscript more closely to an existing model.

b. Durham Hunter 100

Unfortunately, Durham Hunter 100 has also been badly mutilated. It is missing the text for chapters 2-18 (Ursa minor to Andromeda), so that the pictorial cycle begins with the image of Andromeda. Beyond this, however, a number of the drawings in the Durham manuscript are so idiosyncratic that it is difficult to come to a firm conclusion concerning the true relationship of this manuscript to the rest in the *De signis caeli* families. The similarities are closest to the manuscripts in the *De signis caeli I* family, but the divergences are too great to see it as anything but peripheral the group.

For example:

1. The depiction of **Andromeda** in Durham Hunter 100 is markedly different. She is completely nude and, judging from the shape of her upper torso, quite possibly male (though she has no visible male genitalia).
2. **Pegasus / Equus** flies to the right out of some kind of aureole.
3. **Aries** is similar to those found in *De signis caeli I* family, but the image is reversed so that the Ram walks towards the left.
4. The **Perseus** in Durham Hunter 100 faces in the same direction and carries similar attributes

in each hand to those found in the *De signis caeli I* family, but he is depicted rushing to the left, has no wings on his feet and wears a peculiar cap on his head.

5. The image of **Lyra** is unique. It is an elongated oval that is oddly divided and compartmentalised, perhaps reflecting a misunderstanding of the picture of a tortoiseshell.
6. **Aquarius** holds his urn in a manner not terribly dissimilar from Dijon 448, but his body posture is much more highly agitated and he is dressed in a short tunic and short cape and looks sharply over his shoulder to the left.
7. The figure of **Capricorn** is generically similar to the one found in Oxford Laud 644 and Dijon 448, save that the one in Durham Hunter 100 has a beard.
8. **Sagittarius** wears a strange hat and gestures to his head with his right hand.
9. **Aquila** has no arrow in his claws.
10. **Delphinus** is depicted as a plain fish.
11. **Orion** walks to the left, with his cloak completely covering his right hand and arm, which is stretched out in front of him.
12. **Canis maior's** head is not turned back and he wears a collar.
13. The **Navis** of Durham Hunter 100 does share a feature found in Venice VIII, 22: namely, an animal-head placed at the bow (?) of the ship on the right side of the image.
14. **Cetus** is depicted as a large fish.
15. **Eridanus / Eurus** is a seated nude, with a cloak covering his right shoulder. He holds the urn on his right knee and gestures across his body with his left hand.
16. **Ara / sacrarium** is a multi-storey structure with a domed top from which a flame erupts.
17. **Centaurus** runs to the left. On his outstretched left arm, there is a dead animal lying on its

back and he holds a flag under his left arm.

18. **Hydra** does not have a **Crater** on his back and **Corvus** faces towards the front.
19. **Canis minor** rushes to the left and wears a collar.

c. Montecassino 3

The Montecassino manuscript is particularly interesting as its constellation illustrations seem to vacillate between those that appear in the *De signis caeli II* group (Paris BN 5543, Paris BN 5239, Vat lat 643, Zwettl 296 and Klosterneuberg 685) and those found accompanying the text of the *Revised Aratus latinus*.

The features it shares with the *De signis caeli II* group are:

1. **Ursa minor** and **Ursa maior** are depicted twice: once as separate bears and once as part of the *draco inter arctos* grouping.
2. **Hercules** is set in the Garden of Hesperides with the snake
3. **Ophiuchus** is depicted standing on **Scorpio** and this image is followed by a second, individual depiction of **Scorpio**
4. **Virgo** has two attributes: a branch and the balance
5. The **Gemini** hold spears in their outer hands.
6. **Leo** rushes to the left.
7. **Auriga / Agitator** kneels to the right, with the Kids on his outstretched left arm and **Capra** standing in front of him, facing him.

Its differences from the *De signis caeli* II family include the following details. Where these differences seem to co-incide with the images found in manuscripts of the *Revised Aratus latinus*, they have been marked with a \*\*.

1. Both **Ursa maior** and **Ursa minor** are depicted standing to the left. Also, Ursa minor has a short tail.
2. In the depiction of *draco inter arctos*, **Draco**'s tail is slightly longer in Montecassino 3 than in the *De signis caeli* II manuscripts, so that his body actually has 4, rather than 3 bends. Also, Ursa minor again has a short tail.

\*\* These details are particularly close to the depiction of *draco inter arctos* in *Revised Aratus latinus* manuscript, St Gall 250.

3. In terms of details, the Montecassino manuscript differs slightly from the *De signis caeli* II manuscripts in that **Hercules** is shown with his left, rather than his right leg advanced, he is not bearded, the lion's skin is shown with the back, hind legs and tail visible and the tail of the snake does not extend in the hero's direction so that he stands (or nearly) on its tip.
4. The **Corona** in Montecassino is quite odd, being composed of 9 ovals placed to form a D-shape.

\*\* The odd D-shaped corona also appears in *Revised Aratus latinus* manuscripts, St Gall 250. The blob-like stars can also be found in Paris BN 12957

5. **Bootes** (Arcas/ 'Boites' (*sic*)) holds a lion's pelt in his right hand and a curved stick in his left.

\*\* Bootes holds a lion's skin in the *Revised Aratus latinus* manuscripts, St Gall 250 and St Gall 902.

6. The **Gemini** are posed in a mirror image, holding spears in their outer hands, but using their inner hands to gesticulate towards those spears.

\*\* This feature of the Gemini pointing or gesturing appears in the *Revised Aratus latinus* manuscripts: Dresden DC 183, Paris BN 12957, Paris BN n.a. 1614, St Gall 205 and 902 and

even in Vat Reg lat 1324.

7. **Ophiuchus** holds his snake so that it runs straight across the front of his body at hip height.

\*\* The position of the serpent is close to that found in the *Revised Aratus latinus* manuscripts St Gall 205 and St Gall 902, though in both of these manuscripts, Ophiuchus is seen from the front and in Montecassino, his back is towards the viewer.

8. **Cepheus** has no attributes and has no tassels streaming from his hat.

\*\* The overall configuration of Cepheus is very close to those found in the *Revised Aratus latinus* manuscripts Paris, BN 12957, St Gall 250 and in the Dresden manuscript.

9. **Cassiopeia's** throne has no back to it

\*\* There is no back to the throne of Cassiopeia in Dresden DC 183, Paris BN n.a. 1614, St Gall 250 and Vat Reg lat 1324.

10. **Andromeda** has the same kind of tube-like sleeves hanging over her arms, but her rocks are not covered by her toilet articles and she has no sea monster at her feet.

\*\* The depiction of Andromeda is exceptionally close to that found in St Gall 902, including the odd trefoil ornament she wears in her hair. It is also close to the depictions found in Dresden DC 183, Paris BN n.a. 12957, St Gall 250 and Prague IX. C. 6.

11. **Pegasus's** head is not placed in front of his wing.

\*\* Pegasus is particularly close to St Gall 902 (note the shape of the ears), but also similar to the horses found in Dresden DC 183, Siena L. IV. 25 and St Gall 250.

12. **Aries** stands rather than leaps.

13. The backs of the **Pisces** both face upwards.

- \*\* This is a common feature of all the *Revised Aratus latinus* manuscripts, except for Paris BN, n.a. 1614.
14. **Perseus** does not have wings on his feet and he carries a club in his right hand. Furthermore he faces the viewer.
- \*\* The figure of Perseus is particularly close to those found in St Gall 250 and St Gall 902, even preserving the detail of the stripes on his cloak.
15. **Cygnus** does not bite its breast.
16. **Aquarius** standing to the right and there is no stream pouring from his urn.
- \*\* Although generically similar to most of the *Revised Aratus latinus* illustrations, the figure of Aquarius is particularly close to the one found in Paris BN n.a. 12957 in his garments.
17. **Aquila** does not stand on an arrow.
- \*\* Stylistically, the bird is closest to those found in St Gall 250 and St Gall 902, especially in the way in which the curve of its breast has been drawn.
- \*\* The dog-faced **Delphinus** can also be found in the *Revised Aratus latinus* manuscripts, St Gall 250 and St Gall 902.
18. **Orion** does not have a scabbard at his waist.
- \*\* The depiction of a small building on the deck of **Argo** also appears in the *Revised Aratus latinus* manuscripts, Dresden DC 183, Paris BN 12957, Prague IX, C. 6, St Gall 250, St Gall 902 and Vat Reg lat 902
19. **Cetus** has a dog's head.
- \*\* Cetus has a dog's head in Dresden DC 183, St Gall 250, St Gall 902 and Vat. Reg lat 1324.
20. **Eridanus / Eurus** is depicted as a disembodied head of a wild-haired man and a hand making

a gesture of benediction. He does not have his rectangular box beneath him.

\*\* The depiction is closely related to those found in Dresden DC 183, St Gall 250 and St Gall 902.

21. **Centaurus** does not have a cape or a skin flying from his shoulder. He carries a rabbit and a purse in his outstretched right hand and a stick with a dead animal tied to it rests on his left shoulder.

\*\* The attribute of the dead animal hanging from a stick reappears in all of the *Revised Aratus latinus* manuscripts (except for Vat Reg lat 1324), but none of these have the addition of the purse - a detail which does appear as a bucket in the Zwettl and Klosterneuberg manuscripts and in some of the 15th-century Hyginus manuscripts (see below).

d. Freiburg-im-Breisgau 35

As with Montecassino 3, this manuscript exhibits a number of borrowings from other pictorial traditions, sharing features not only with the *De signis caeli* and the *Revised Aratus latinus* families; but, most notably, with the illustrations found in the *De ordine ac positione stellarum* manuscripts.

For example, it shares the following details with the *De signis caeli I* family:

1. **Ursa minor** has the peculiar hunched posture.
2. The bears are shown individually, but also as part of the *draco inter arctos* grouping.
3. **Hercules** is shown in the Garden of Hesperides.
4. **Leo** runs to the left in Oxford, Laud misc 644, Padua 27 and Paris BN 5543, but it is also a feature that appears in the *Revised Aratus latinus* manuscripts and the *De ordine ac positione stellarum* manuscripts (see below).
5. Although **Auriga / Agitator** appears in a biga in Paris BN, n.a. 1614, the closest similarities

parallel pictures from the *De ordine ac postione stellarum* corpus (see below).

6. The full **Taurus**, shown with his tail curled between his hind legs, can also be found in Rouen292 and in a number of the *De ordine ac positione* manuscripts (see below) and *De signis caeli* manuscripts (such as Munich 210, Madrid 3307, Vienna 12600, St Petersburg and Paris BN 8663).
7. The depiction of **Aquila** shares its stance with the *De signis caeli* manuscripts, especially Montecassino 3 and the Paris manuscripts, though the Freiburg Aquila does not stand on an arrow.

Features shared with the *Revised Aratus latinus* families, include:

1. As the page has been cut-off at the bottom, it is impossible to tell if **Ophiuchus** was originally shown with **Scorpio** beneath his feet, but the position of the snake and the man's body is closest to Montecassino 3 and the related *Revised aratus latinus* manuscripts.
2. The running **Leo** is very close to Montecassino 3 and the *Revised Aratus latinus* manuscripts, St Gall 250 and St Gall 902.
3. **Pegasus / Equus** has the peculiar, curled-under tail appears in Munich 560 and probably relates to the kind of termination one sees in Paris BN n.a. 1614, but its closest similarities are found in the *De ordine ac positione* manuscripts (see below).
4. The frontal **Cygnus** also appears in Prague IX. C. 6, but the feature is really derived from the *De ordine ac positione* manuscripts (see below).
5. The Freiburg **Sagittarius** is a satyr very close to Madrid 560, but also relates to the figures found in the *De ordine ac positione* manuscripts (see below).

With the *De ordine ac positione stellarum* manuscripts, it shares the following features:

1. **Corona** is a leafy wreath, such as the one in Berlin lat 130, Madrid 3307, Monza and Vienna 12600.
2. **Bootes / Arcasis** unlike any of the other *De signis caeli* manuscripts and is closest to the *De ordine ac positione* illustrations found in Paris BN 12117 and Vat Reg lat 309, which are themselves very close to the Germanicus illustrations found in Bern 88, Leiden 4<sup>o</sup> 79 and Madrid 19.
3. Similarly, **Virgo** is unlike any of the other *De signis caeli* manuscripts -- with only a single attribute of a baton and making a benediction-gesture with her right hand. Her wings are raised. Similar attributes and posture appears in Berlin lat 130, the Monza manuscript.
4. The image of **Gemini** with the left twin holding the lyre also is related the *De ordine ac positione* manuscripts, especially Berlin lat 130, Madrid 3307, and Vat lat 645.
5. The running **Leo** mentioned above can be found not only in the *De ordine ac positione* manuscripts, Berlin lat 130. Madrid 3307 and Vat lat 645.
6. **Agitator/ Auriga** driving a *biga* and holding a two-thong flail and without the Kids is very close to the depiction found in Vat lat 645 and Vat Reg lat 309.
7. The full **Taurus**, shown with his tail curled between his hind legs, can also be found in Munich 210, Madrid 3307, Paris BN 8663, St Petersburg and Vienna 12600.
8. A fully-dressed **Andromeda**, set between rocks without her toilet articles and without any tube-like structures falling from her elbows, features in Berlin lat 130, Madrid 3307, Monza, Munich 210, Paris BN 12117 and Vat Reg lat 309.
9. The closest similarities to the peculiar, curled-under tail of **Pegasus / Equus** appears in Paris BN 12117, Vat Reg last 309 and Vienna 12600.
10. The orientation and posture of **Perseus** recalls the type found Madrid 3307, Monza, Vat lat 645, but all of these figures lack a cloak. In Paris 12117 and Vat Reg lat 309, the figures faces away from the viewer (Freiburg faces towards the viewer), but the posture and the cloak is retained.

11. **Cygnus** is very close to those that appear in the Berlin lat 130, Madrid 3307, Monza and Paris 8863.
12. **Aquarius** is very close to those that appear in the Berlin lat 130, Madrid 3307, and Monza, except the Freiburg Aquarius also has a spear.
13. The Freiburg **Sagittarius** is a satyr is very close to the *Revised Aratus latinus* manuscript, Munich 560, but it is similar to those found in Berlin lat 130, Madrid 3307, Monza, Paris BN 8663, Vat lat 645 and Vienna 12600.

It is also worth noting that the depictions of **Argo** and **Cetus** are unlike anything found in any of the related manuscripts. The set of illustrations terminates with the depiction of Cetus, though the text continues to the end (see catalogue).

Intriguingly, then, the Freiburg manuscript is another one of those manuscripts where one can clearly track the choices that the scribe has made between two or more sets of constellation illustrations when he was compiling his cycle. The fact that such an early manuscript shows such a wide range of sources underscores the notion that there were multiple illustrated versions of these texts - the pseudo-Bedan, *De signis caeli*, the *Revised Aratus latinus* and the *De ordine ac positione stellarum in signis* - circulating throughout the scriptoria of northern continental Europe during the 9th century.