

## CHAPTER 2

Since 1922, there are currently eighty-eight constellations recognized by the *International Astronomical Union*, grown from forty-eight groups of stars scheduled by Ptolemy's *Almagest*, a mathematical and astronomical treatise from the 2nd century. Claudius Ptolemy lived in Egypt (most probably Alexandria) under Roman rule and, according to him, the geometrical models presented in his work were resulting from astronomical observations made by his ancestors. In the Middle Ages, *Almagest* was considered a trustworthy text, having his geocentric representation being generally accepted until the time of the "scientific revolution", when heliocentric models started to (re)appear.

Before Ptolemy, Gaius Plinius Secundus, better known as Pliny the Elder, provided a helpful record on the ancient stellar outlook in his *Naturalis Historiæ* (Natural History). There, in the second of thirty-seven books, Pliny mentions that "*heaven's vastness, being divided at an enormous height into 72 signs, that is, shapes of things or of animals into which the learned have mapped out the*

# The Seventy-Two Fold Key

Schema huius præmissæ diuisionis Sphærarum.



## LeMULgeton

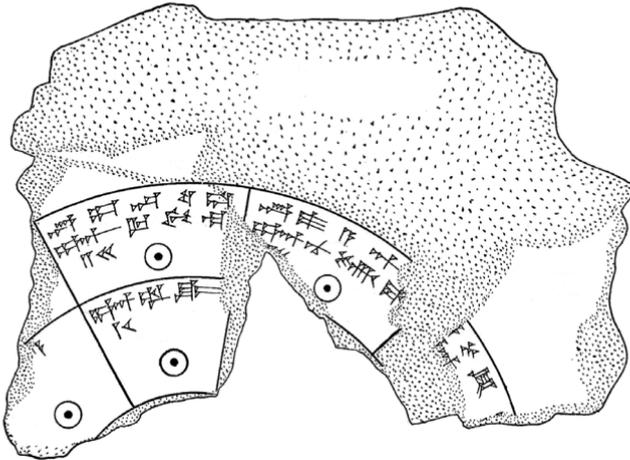
sky. In them they have indeed noted 1600 stars as being specially remarkable for their influence or their appearance, for instance the seven which they have named the Pleiades in the tail of the Bull and the Little Pigs in his forehead, and Bootes the star that follows the Seven Plough-oxen". Unfortunately, he doesn't delve into further detail, nor he offers a list of such constellations. However, it sufficiently proves that it was commonly accepted that there were seventy-two constellations.

Both Pliny and Ptolemy were obviously influenced by Egyptian and Middle Eastern sources. In Egypt, one of the most important works in the subject is the controversial Dendera Zodiac. Before Louis Charles Antoine Desaix decided to vandalize the temple complex in 1821 to bring the *bas-relief* to France, it used to figure in the ceiling of a chapel dedicated to Osiris, inside the Hathor temple at Dendera. This magnificent astrolabe allegedly shows each of the classical twelve constellations originating thirty-six decans (*bak-iiu*), groups of stars that successively rise on the horizon throughout Earth's rotation. The overall scheme then would sum up to forty-eight, the very number of star-groups listed in *Almagest*. We would have to attribute quinances (five degrees each) instead of decans to the zodiac in order to fit the Goetia there – and this is what it was done in *Lemegeton*. However, it seems an artificial rather than a traditional attribution.

It is interesting that Alexandre N. Isis reveals in his book *Les Voleurs d'Etoiles ou Le Secret du Zodiaque de Denderah* that ancient Egypt already knew seventy-two of the eighty-eight constellations. This is also our impression, and the seventy-two fold sky was probably absorbed into the Jewish *Mazzaroth* (zodiac) when the two nations were in contact during the enslavement before Exodus. We must not forget that Moses was raised in royal quarters, where he

## The Seventy-Two Fold Key

was probably given astronomical knowledge among other sciences. According to N.Isis, “of the 36 characters in the circle indicating the Zodiac, there are three constellations, namely Ara (Altar), Eridanus (River) and Cetus (Whale / Satan), which are actually in the “outer circle”. In fact there are only 33 characters”. This is consistent with the thirty-three northern stars on the path of Enlil in *Mul.Apin*, the Babylonian record from 1000 BC which deals with many aspects of astronomy and astrology. It is named after the first constellation of the calendar’s year, MUL.APIN “The Plough”, identified with *Triangulum* and *Gamma Andromedae*. It is very probable that the Egyptians had inherited their astronomical knowledge, or at least enhanced it, from Sumerian, Assyrian and Babylonian sources.



## LeMULgeton

The first tablet of *Mul.Apin* shows us seventy-one stars and constellations in three paths (Anu in the center, Enlil in the North and Ea in the South), following the *Three Stars Each* Babylonian tradition. The Sumero-Babylonian glyph “MUL” (*kakkabu* in Akkadian) stands for both star and constellation, indistinguishably, and often includes planets. It seems that the classical Sumerian constellations, the signs in *The Path of the Moon*, consisted of eighteen star-groups, as follows.

1. The Stars (*Pleiades*)
2. The Bull of Heaven (*Taurus*)
3. The True Shepherd of Anu (*Orion*)
4. The Old Man (*Perseus*)
5. The Crook (*Auriga*)
6. The Great Twins (*Gemini*)
7. The Crab (*Cancer*)
8. The Lion (*Leo*)
9. The Furrow (*Virgo*)
10. The Scales (*Libra*)
11. The Scorpion (*Scorpio*)
12. Pabilsag (*Sagittarius*)
13. The Goat-Fish (*Capricorn*)
14. The Great One (*Aquarius*)
15. The Tails (*Pisces*)
16. The Swallow (*Pisces and Epsilon Pegasi*)
17. Anunitu (*Andromeda*)
18. The Hired Man (*Aries*)

Not only the names have changed successively since Babylonian times, but also the quantity of star groups, depending on the way they were arranged. John Hill, Emperor Hadrian, Petrus Plancius,

## The Seventy-Two Fold Key

Johannes Hevelius, Jérôme Lalande, Johann Elert Bode, Pierre Charles Lemonnier, and others, all created arrangements that were accepted as constellations for a time but are no longer accepted by the *International Astronomical Union*. However, this does not mean that the stars that were referred by different names and assemblages do not exist anymore – it only means that they were rearranged conveniently to the current set and number. These consecutive changes in name and distribution – as much as many sequential translations did to the original *Lemegeton* – make it difficult to reorganize the bits and pieces in order to identify who is who, but the connections are still evident.

In the translation below, provided by Hunger & Pingree, from *MUL.APIN: An Astronomical Compendium in Cuneiform*, the similarity between the Babylonian depictions of the constellations and the depiction of the Goetic Demons can be enjoyed – lions, crows, bulls, stag (hart), horse, dog, snake (serpent) and so on. All the imagery used in one can be related to the other.

*The Plow, Enlil, who goes at the front of the stars of Enlil.*

*The Wolf, the seeder of the Plow.*

*The Old Man, Enmešarra.*

*The Crook, Gamlum.*

*The Great Twins, Lugalgirra and Meslamtaea.*

*The Little Twins, Alammuš and Nin-EZENxGUD (Gublaga).*

*The Crab, the seat of Anu.*

*The Lion, Latarak.*

*The star which stands in the breast of the Lion: the King.*

*The dusky stars which stand in the tail of the Lion:*

*The Frond (of the date palm) of Eru, Zarpanitu.*

*ŠU.PA, Enlil who decrees the fate of the land.*

## LeMULgeton

*The star which stands in front of it: the Abundant One, the messenger of Ninlil.*

*The star which stands behind it: the Star of Dignity, the messenger of Tišpak.*

*The Wagon, Ninlil.*

*The star which stands in the cart-pole of the Wagon:*

*The Fox, Erra, the strong one among the gods.*

*The star which stands in front of the Wagon: the Ewe, Aya.*

*The Hitched Yoke, the great Anu of Heaven.*

*The Wagon of Heaven, Damkianna.*

*The star which stands in its rope: the Heir of the Sublime Temple, the first-ranking son of Anu.*

*The Standing Gods of Ekur, the Sitting Gods of Ekur.*

*The She-Goat, Gula.*

*The star which stands in front of the She-Goat: the Dog.*

*The bright star of the She-Goat: Lamma, the messenger of Baba.*

*The two stars which stand behind it: Nin-SAR and Erragal.*

*The Panther: Nergal.*

*The star which stands at its right side: the Pig, Damu.*

*The star which stands at its left side: the Horse.*

*The star which stands behind it: the Stag, the messenger of the Stars.*

*The dusky stars which stand in the breast of the Stag:*

*Harriru, the Rainbow.*

*The bright red star which stands in the kidney of the Stag: The Deleter.*

*When the stars of Enlil have been finished, one big star—(although) its light is dim—divides the sky in half and stands there: (that is) the star of Marduk, the Ford, Jupiter, (it) keeps changing its position and crosses the sky.*

33 stars of Enlil

## The Seventy-Two Fold Key

*The Field, the seat of Ea, which goes at the front of the stars of Anu.*

*The star which stands opposite the Field: the Swallow.*

*The star which stands behind the Field, Anunitu.*

*The star which stands behind it: the hired Man, Dumuzi.*

*The Stars, the seven gods, the great gods.*

*The Bull of Heaven, the Jaw of the Bull, the crown of Anu.*

*The True Shepherd of Anu, Papsukal, the messenger of Anu and Ištar.*

*The twin stars which stand opposite the True Shepherd of Anu:*

*Lulal and Latarak.*

*The star which stands behind it: the Rooster.*

*The Arrow, the arrow of the great warrior Ninurta.*

*The Bow, the Elamite Ištar, the daughter of Enlil.*

*The Snake, Ningizzida, lord of the Netherworld.*

*The Raven, the star of Adad.*

*The Furrow, Šala, the ear of corn.*

*The Scales, the horn of the Scorpion.*

*The star of Zababa, the Eagle, and the Dead Man.*

*Venus keeps changing its position and crosses the sky.*

*Mars keeps changing its position and crosses the sky.*

*Saturn keeps changing its position and crosses the sky.*

*Mercury, whose name is Ninurta, rises or sets in the east or in the west within a month.*

*23 stars of Anu.*

*The Fish, Ea, who goes at the front of the stars of Ea.*

*The Great One, Ea; the star of Eridu, Ea.*

*The star which stands at its right: Ninmah.*

*EN.TE.NA.BAR.HUM, Ningirsu.*

*The star which stands at its side: The Harrow, the weapon of Mar-biti,*

## LeMULgeton

*inside of which one sees the subterranean waters.*

*The two stars which stand behind it: Šullat and Haniš, Šamaš and Adad.*

*The star which stands behind them rises like Ea and sets like Ea: Numušda, Adad.*

*The star which stands at the left side of the Scorpion: the Mad Dog, Kusu.*

*The Scorpion, Išhara, goddess of all inhabited regions.*

*The Breast of the Scorpion: Lisi, Nabû.*

*The two stars which stand in the sting of the Scorpion: Šarur and Šargaz.*

*The star which stands behind them: Pabilsag.*

*The Bark and the Goat*

*15 stars of Ea.*

It is intriguing, however, why the *Mul.Apin* would be arranged in seventy-one and not seventy-two asterisms. Like the Precession phenomenon (71.6 years) was rounded up to seventy-two, it would make much more sense in the Sumerian sexagesimal system to point out seventy-two celestial bodies – or divisions. The main asterisms concerned by the so-called *Three Stars Each* Babylonian calendars and astrolabes are usually dispersed among twelve divisions in a circle which represents the ideal year cycle and the celestial vault, resulting in thirty-six stars (half of seventy-two). This tradition is reflected in the *Goetia*, having thirty-six Goetics attributed to daytime and thirty-six to nighttime, and suggests that *Lemegeton* is a star-map which should be read circularly, not in a line. To better examine it and avoid confusions, it was our opinion that the first thing to be done should be substitute *Lemegeton's* zodiac attributions (divisions) by Babylo-

## The Seventy-Two Fold Key

nian months, much in the same way the astrolabes do. Therefore, Bael, Agares, Vassago, Phenex, Halphas and Malphas should be all assigned to *Nisan* instead of Aries.

On the other hand, this does not solve the problem of correspondences, because obvious symbolisms like the Lion, the Bull, the Scales, the Scorpion, the Crab and others do not automatically fit their *Enūma Anu Enlil* counterparts in a regular order. Additionally, the problem of seventy-one to seventy-two still remains – why would Sumerians feel comfortable with distributing seventy-one asterisms among twelve divisions instead of seventy-two? Can it be that the *Mul.Apin* text was mistranslated? Well, the last information from *Mul.Apin*'s path of Enlil is very suggestive. According to Hunger & Pingree translation,

*When the stars of Enlil have been finished, one big star— (although) its light is dim—divides the sky in half and stands there: (that is) **the star of Marduk, the Ford, Jupiter**, (it) keeps changing its position and crosses the sky.*

In the original wording,

*When the stars of Enlil have been finished, one big star – although its light is dim – divides the sky in half and stands there: (that is) the star of Marduk (<sup>MUL</sup>dAMAR.UD), **Nibiru (né-bé-ru); Jupiter (<sup>MUL</sup>SAG. ME.GAR)** keeps changing its position and crosses the sky.*

Despite the fact that the *star of Marduk* and *Jupiter* are counted as one and the same in Hunger & Pingree's translation, we have a couple of reasons to think that they actually stand for two different bodies. Firstly because *Nibiru*, the star of Marduk, is identified as

## LeMULgeton

the Ford, while Jupiter is designated by another term, *Sag.Me.Gar*; secondly because we know from the work of Zecharia Sitchin and other authors that *Nibiru* was often confused with Jupiter in many texts and translations – because both were related to Marduk. But it was not always like that; before the Wars of The Gods and Marduk's many attempts to usurp Enlil's rulership position over the Gods and mankind, *Nibiru* was associated with Enlil. The distinction between Nibiru (Naberius) and Jupiter (Samigina) can also be witnessed in *Lemegeton*. This interpretation not only explains why seventy-two, and how old the *Lemegeton* tradition is, but also accounts for the way we still look at the skies. In modern planispheres (astrolabes), one of the two major methods used to illustrate the vault is the polar azimuthal equidistant projection, which means that in such model the skies are charted with its center on a celestial pole while rings of equal declination (of 60°, 30°, 0°, -30°, and -60°) lie equidistant from each other and from the poles. The shapes of the constellations are proportionally correct in a straight line from the centre outwards. Through this representation, seventy-two quadrants are attained and, consequently, as the determinative (*Kakkabu, Mul*) did not distinguish between star and constellation, it can also refer to the quadrants, houses – or *mansions of the stars*, to use *Lemegeton* terminology. In such representation, the *Path of Anu* stands for the projection comprised between +30° and -30°, the way where the Zodiac's classical constellations can be found. The twelve signs were inspired by – or, instead, inspired – the twelve Olympians' pantheon.

According to Sitchin, the Sumerian “Olympians” were Anu, Antu (his sister, mother of Enlil), Enlil, Ninlil (Enlil's wife), Enki (Ea), Ninki (Damkina, Ea's consort), Nannar (Sin, son of Enlil), Ningal (Nannar's wife), Utu (Shamash), Inanna (Ishtar), Ishkur and Ninhursag (Ninmah). Here, they were presented in accordance with

## The Seventy-Two Fold Key

the succession rules. All of them have been somehow represented in the Sumerian skies and if we assume that it was preserved in the *Lemegeton* star chart, sixty characters will remain – the very base of the sexagesimal numeral system.

However, relating *Lemegeton* with *Mul.Apin* is absolutely not an easy task. Firstly because while *Mul.Apin* speaks in latitudinal terms (Paths of Anu, Enlil and Ea), *Lemegeton's* table clearly shows longitudinal attributions (Decans and Quinances). Besides it, the *Pantheon of Twelve* has changed many times over the millennia, and worse; the stars dance, and *Mul.Apin* is a three-thousand old picture of the skies.

