

2021

## Who Maketh Morwinyon, and Menelmacar, and Remmirath, and the Inner Parts of the South (Where the Stars are Strange): Tolkien's Astronomical Choices and the Books of Job and Amos

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### Recommended Citation

Larsen, Kristine (2021) "Who Maketh Morwinyon, and Menelmacar, and Remmirath, and the Inner Parts of the South (Where the Stars are Strange): Tolkien's Astronomical Choices and the Books of Job and Amos," *Journal of Tolkien Research*: Vol. 13 : Iss. 2 , Article 2.

Available at: <https://scholar.valpo.edu/journaloftolkienresearch/vol13/iss2/2>

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## Who Maketh Morwinyon, and Menelmacar, and Remmirath, and the Inner Parts of the South (Where the Stars are Strange): Tolkien's Astronomical Choices and the Books of Job and Amos

This paper was presented at the Tolkien Seminar in Kalamazoo, MI, on May 8, 2019.

Tolkien's use of specific stars and constellations within the legendarium can be divided into four phases. Initially his cosmology (for example, as described in "The Cottage of Lost Play" and the 1915 poem "Kortirion Among the Trees") included references to the bright stars Arcturus (Morwinyon) and Sirius (Nielluin), and the constellations Orion (Telimektar) and the Big Dipper, the Silver Bear or Silver Wain<sup>1</sup> (e.g., *BoLT I*, 288; 293; 282). The star cluster the Pleiades or Seven Sisters also appears in the aforementioned poem by name (*BoLT I*, 35), and Eärendel first assumes his role as the Evening/Morning Star, although without the Silmaril (*BOLT II*, 259). In the second iteration (the writing of the "Lay of Leithian" and "The Quenta," circa 1925-31), the only named grouping is the Big Dipper, called the "crown of Seven mighty Stars" made by Varda (*SoME*, 84) as well as the "Burning Briar" (e.g., *LoB*, 167; *SoME*, 84) and the "Sickle of the Gods" (e.g., *LoB*, 266; *SoME*, 84). Eärendel receives his Silmaril at this time (*SoME* 197). The Big Dipper and Eärendil appear in *The Lord of the Rings*, the latter referenced in relation to the phial of Galadrial, while the former is viewed by Frodo from the Prancy Pony in Bree (*LotR*, 367; 171). Orion and the Pleiades make an appearance in the woods outside the Shire, where the Hobbits see that

Away high in the East swung Remmirath, the Netted Stars, and slowly above the mists red Borgil rose, glowing like a jewel of fire. Then by some shifts of airs all the mist was drawn away like a veil, and there leaned up, as he climbed over the rim of the world, the Swordsman of the Sky, Menelvagor with his shining belt. (*LotR*, 80)

This passage accurately reflects the night sky as seen around midnight in late September in Oxford, and Tolkien himself may have witnessed the rising of Orion on many a night. Menelvagor (Sindarin; *Menelmacar* in Quenya [*LotR*, 1087]) is clearly Orion, while Remmirath, the Netted Stars, is the Pleiades or Seven Sisters

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<sup>1</sup> Technically the Big Dipper is not a constellation, but an asterism, a commonly identified piece of a larger group of stars, Ursa Major, the Great Bear. Here we will use Big Dipper and Ursa Major synonymously, as the Big Dipper represents the brightest and most easily seen portion of this constellation.

(consistent with the cluster's description in "Kortirion Among the Trees" as being "entwine[d] in cloudy lace" [*BoLT I*, 35]). Various authors have argued between Betelgeuse, the lower shoulder of Orion, and Aldebaran, the eye of Taurus the Bull, as the red star Borgil, with Mars offered as a third possibility. As I have argued elsewhere (Larsen, "A Definitive," 164-7), Aldebaran seems to me the most logical astronomical identification. There is also the issue of the crown of stars that Durin saw around his head when he looked into the Mirrormere outside Moria. As I described elsewhere, I have come to agree that the Big Dipper is the most likely explanation, but in a significantly different form than we are used to seeing it (Larsen, "Crowns"). Finally, at the Council of Elrond, Aragorn reports that he had "crossed many mountains and many rivers, and trodden many plains, even into the far countries of Rhûn and Harad where the stars are strange" (*LotR*, 242). Rhûn is in the far east of Middle-earth, and the stars would appear exactly the same as in Lorien (assuming they lie at the same latitude, as they appear on the map), while Harad is in the south of Middle-earth and would indeed have "strange" (unfamiliar) stars visible in its night sky.

The final period (the so-called Post *LotR* texts) finds the cosmology of Middle-earth not only under threat from ultimately rejected revisions detailed in *Morgoth's Ring* (such as the possibility of the world always having been round), but expansions in the stellar retinue that Christopher Tolkien incorporated in the published version of *The Silmarillion*. "The Annals of Aman" (circa 1950-1) says of Varda's star creation that the "greatest of these was Menelmacar, the Swordsman of the Sky," while "Last of all Varda made the sign of brightest stars that is called the Valakirka, the Sickle of the Gods," both said to be signs of Morgoth's eventual downfall (*MR*, 71). The "Later Quenta Silmarillion" (dated by Christopher Tolkien to 1951) contains the most expansive list of stars and constellations, with one version seen in a draft page housed in the Marquette collection specifically reflecting what Christopher Tolkien calls "the act of devising the names of the constellations" (*MR*, 434). Here Tolkien attempts to tentatively align some of the new stars with the planets other than Venus, although Christopher argues that only two of the identifications were ultimately accepted by his father, Karnil as Mars and Alkarinque as Jupiter (*MR*, 435).

The published *Silmarillion* ultimately recounts how before the awakening of the Elves,

Varda took the silver dew from the vats of Telperion, and therewith she made new stars and brighter against the coming of the First-born.... Karnil and Luinil, Nénar and Lumbar, Alkarinquë and Elemmíre she wrought in that time, and other of her works of old she gathered together and set as signs in Heaven that the gods may read: Wilwarin, Telumendil, Soronúmë, and Anarríma; and Menelmakar with his shining belt that forebodes the Last Battle that shall be. And high in the north as a challenge unto Melkor she

set the crown of seven mighty stars to swing, Valakirka, the Sickle of the Gods and sign of doom. Many names have these stars been given; but in the North in the Elder Days Men called the Burning Briar.... It is told that even as Varda ended her labours, and they were long, when first Menelmakar strode up the sky and the blue fire of Helluin flickered in the mists above the borders of the world, in that hour the Children of the Earth awoke, the First-born of Ilúvatar. (*Sil*, 48)

Are these great stars and groupings figments of Tolkien's fertile imagination, or can we unambiguously identify them with objects in the real night sky? Menelmakar is clearly Orion the Hunter, and Christopher Tolkien identifies the star Helluin as Sirius (*Sil*, 335), the brilliant star that follows close behind Orion in the sky (elsewhere called Nielluin). Christopher also identifies Wilwarin (Quenya for 'butterfly') as "perhaps Cassiopeia," a quite reasonable interpretation given the shape of the constellation (*Sil*, 354). The remaining stars and constellations lack unambiguous identification, although myself and others have offered possible interpretations (Getty; Larsen, "Myth"; Manning; Quiñonez; Quiñonez and Raggett; Wilson and Poxon). There remain two related questions to be tackled: firstly, why did Tolkien use these specific real-world stars and constellations, and what was behind the seemingly sudden expansion of the celestial population in the legendarium in 1951?

As noted by solar astronomer Edward Walter Maunder in 1908, "The constellations are not all equally attractive. A few have drawn the attention of all men, however otherwise inattentive" (214). The three examples he gives are Orion, the Big Dipper, and the Pleiades, and quotes from the fifth book of the *Odyssey* as an example; here Odysseus "view'd the Pleiads, and the Northern Team/ And Great Orion's more refulgent beam,/To which, around the axle of the sky,/The bear, revolving, points his golden eye" (Maunder, 214). Among the other bright stars and constellations that appear by name in Classical Greek literature (e.g., works by Homer and Hesiod) include Sirius, Arcturus and its host constellation Boötes,<sup>2</sup> the Hyades<sup>3</sup> (another bright star cluster [Figure 1] visible to the unaided eye in Taurus), and the "Evening Star," the planet Venus (Lorimer, 88-96). Maunder argues that "the most striking, or at all events the most universally recognized" stars and star groups would also be "those mentioned in the Bible" (Maunder, 214). Indeed, a number of such celestial signposts are mentioned in the Old Testament, specifically

<sup>2</sup> Arcturus is the most prominent star in Boötes the Herdsman or Wagoner, both names referring to the constellation's location behind the Big Dipper (itself pictured as the Bear or Wagon). In Classical and Medieval literature the names of the star and constellation are sometimes used interchangeably, leading to significant confusion. See Larsen, "Myth" for more information.

<sup>3</sup> The Hyades are generally the stars that make up the face of Taurus with the exception of the bright red star Aldebaran.

in four verses: Amos 5:8, Job 9:9, Job 38:31, and Job 38:32 (Table 1). One might initially think it trivial to identify the stars and constellations referenced in Biblical verse, especially if Maunder is correct in assuming that they are the brightest and “most striking.” However, one must remember that the Old Testament was read in a number of different editions in the 20<sup>th</sup> century, at least four of which Tolkien would have been familiar with: the Protestant King James version (KJV), the Catholic Douay-Rheims Version (DRV), the Latin Vulgate (LV) and the Jerusalem Bible Edition (JB) that he played a small but not insignificant role in helping to produce. But the Biblical star and constellation names ultimately derive from the original Hebrew, and the names must be translated through transliteration: 'Ash, Kesīl, Kīmāh, Mazzaroth, and 'Ayish. As seen in Table 1, these four Biblical versions do not agree on their identifications of these Hebrew stars and star groupings.

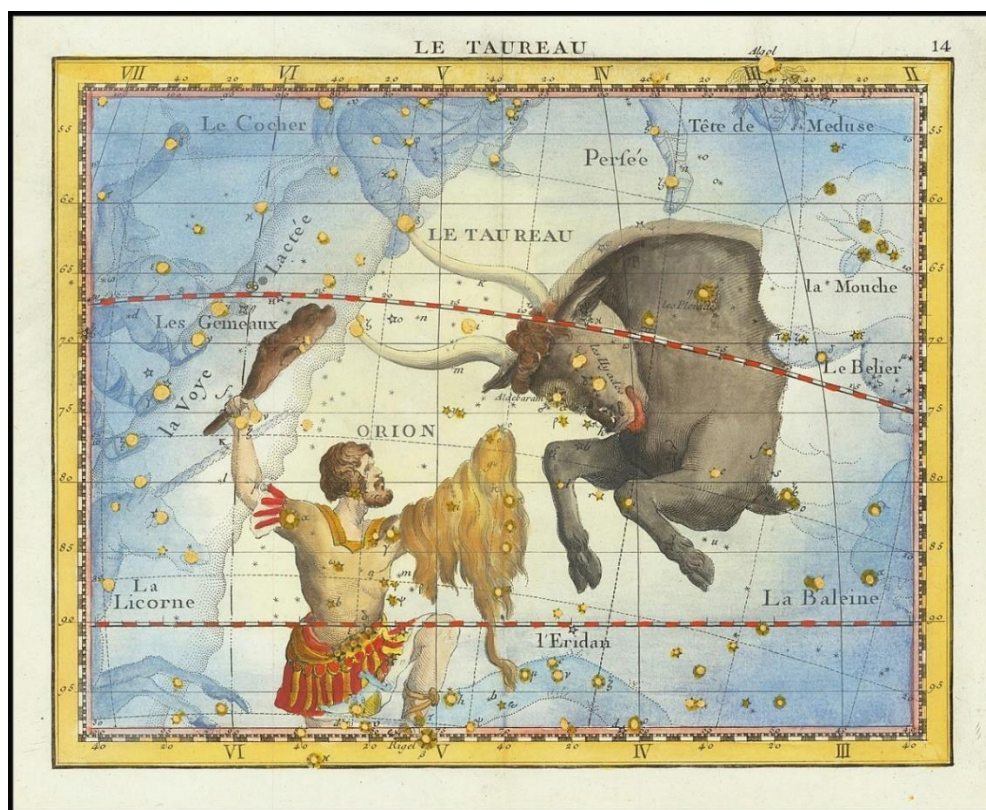


Figure 1: Taurus and Orion, John Flamsteed (1776). The Hyades are all the stars that comprise the Bull’s face, with the exception of Aldebaran (his lower eye). The Pleiades star cluster is seen on the Bull’s back. Public Domain.

Verse & Hebrew Name	Vulgate (Latin)	King James	Douay-Rheims	Jerusalem
Amos 5:8 Kīmah, Kesīl	facientem Arcturum et Orionem et convertentem in mane tenebras et diem nocte mutantem	Seek him that maketh the seven stars and Orion, and turneth the shadow of death into the morning, and maketh the day dark with night:	Amos 5:8. Seek him that maketh Arcturus, and Orion, and that turneth darkness into morning, and that changeth day into night. <i>Commentary: Arcturus and Orion... Arcturus is a bright star in the north: Orion a beautiful constellation in the south.</i>	It is he who made the Pleiades and Orion Who turns the dusk to dawn and day to darkest night.
Job 9:9 'Ash, Kesīl, Kīmah	qui facit Arcturum et Oriona et Hyadas et interiora austri	Which maketh Arcturus, Orion, and Pleiades, and the chambers of the south.	Who maketh Arcturus, and Orion, and Hyades, and the inner parts of the south. <i>Commentary: Arcturus, etc... These are names of stars or constellations. In Hebrew, Ash, Cesil, and Cimah.</i>	The Bear, Orion too, are of his making, the Pleiades and the Mansions of the South. <i>Commentary: Greek 'he who made the Pleiades and Venus and Arcturus and the Mansions of the South'; Vulg. 'Arcturus and Orion and the Hyades and the Mansions of the South.' That these are the constellations referred to is not certain.</i>
Job 38:31 Kīmah, Kesīl	numquid coniungere valebis micantes stellas Pliadis aut gyrum Arcturi poteris dissipare	Canst thou bind the sweet influences of Pleiades, or loose the bands of Orion?	38:31. Shalt thou be able to join together the shining stars the Pleiades, or canst thou stop the turning about of Arcturus? <i>Commentary: Pleiades... Hebrew, Cimāh. A cluster of seven stars in the constellation Taurus or the Bull. Arcturus, a bright star in the</i>	Can you fasten the harness of the Pleiades, or untie Orion's bands?

			<i>constellation Bootes. The Hebrew name Cesil, is variously interpreted; by some, Orion; by others, the Great Bear is understood.</i>	
Job 38:32  Mazzaroth, 'Ayish	numquid producis luciferum in tempore suo et vesperum super filios terrae consurgere facis	Canst thou bring forth Mazzaroth in his season? or canst thou guide Arcturus with his sons?	38:32. Canst thou bring forth the day star in its time, and make the evening star to rise upon the children of the earth?	Can you guide the morning star season by season and show the Bear and its cubs which way to go?  <i>Commentary: 'the morning star', translation conj. (Vulgate 'Lucifer'). Those constellations mentioned are thought to affect the seasons, v. 33, and produce the storm rains (vv. 34-35)</i>

Table 1: Stars and Constellations listed in four editions of the Bible (and included marginal commentary)

The resulting problems inherent in identifying Biblical star references were noted by famed Biblical commentator Adam Clarke in the early 19<sup>th</sup> century. For example, he notes that “ash has been generally understood to signify the Great Bear; Kesīl, Orion; and Kīmah, the Pleiades... but that they do signify these constellations is perfectly uncertain. We have only conjectures concerning their meaning; and on such conjectures no system can be built” (Clarke, *Commentary*, Job 38:35, n.p.). For example, he notes that other authors interpret these last two groups of stars as Scorpius and the entire constellation of Taurus. Clarke has to admit that “As to the Hebrew words, they might as well have been applied to any of the other constellations of heaven: indeed, it does not appear that constellations are at all meant” (Clarke, *Commentary*, Job 9:9, n.p.). In what is a gross understatement, science popularizer Mary Orr wrote of this problem in 1904, “A few stars and constellations are mentioned in the Old Testament, but it is sometimes difficult to know which are meant” (234). Of course, this did not prevent numerous authors from trying to make definitive identifications. But we can also look at this from a Secondary rather than Primary World point of view. As both a philologist



and a widely read Christian polymath, Tolkien would have been deeply aware of the issues surrounding Biblical translation, even before his own role in the Jerusalem Edition. Given his well-demonstrated interest in and knowledge of astronomy, Biblical passages that describe the heavens may have piqued his interest and may have influenced his choices of astronomical references in creating Middle-earth. Popularized works published during Tolkien's youth on the astronomy of the Old Testament may have also played a role in shaping his opinion of these constellations and star groupings.

One of the most famous explorations of these Biblical star references is *Astronomy in the Old Testament* by Giovanni Schiaparelli, then retired Director of the Brera Observatory in Milan, well-known in astronomical circles today for his infamous observations of “canals” on Mars. An authorized and corrected English translation (translator unidentified) was issued by Oxford's Clarendon Press in 1905, six years before Tolkien began his studies at Oxford. The commercial success of the book was due in no small part to its ability to interest readers who “are equally interested in the present progress and relation of scientific and religious thought in some of their prominent phases which this book discusses apparently in a strong and an independent way” (“Schiaparelli on the Astronomy,” 172). Although Schiaparelli intended for his work to be read by “ordinary readers” (vi), the astronomer was anything but an ordinary scientist. He was not only well-respected and well-versed in his chosen field, but was known to be a scholar in both ancient languages and history, and could read Greek, Latin, Hebrew, and Akkadian (Antonello, 280). As a modern biographer noted, he was considered by his peers to be a “profound theological scholar. He knew all the sacred books of the principal religions, and made a deep study of the foundation and historical development of Christianity” (Antonello, 284).

In his chapter on stars and constellations in the Old Testament, Schiaparelli makes clear that in the translation from ancient Hebrew to Greek, the names of stars and star groups were left in the original Hebrew in some verses, while in others often inconsistent identifications were made. Therefore, he surmised, “Under these circumstances, it is not surprising that some scholars... regard the interpretations hitherto given to the names of the Biblical constellations as subject to complete doubt” (54). In response, Schiaparelli lays out his own careful, detailed case for his identification while debating those of other authors, relying on astronomy, theology, etymology, philology, and cultural references. For example, he lays out a convincing case for identifying Kesil with Orion, in agreement with most sources (60-1). Similarly, Schiaparelli agrees with either identifying 'Ash and 'Ayish as the same object, or as a pair of related objects, for example as Aldebaran and either the Hyades or Pleiades in Taurus (57-9) or Arcturus and the Big Dipper (55-6). Concerning Kīmah, Schiaparelli notes that although there is some disagreement between various sources, an identification



with the Pleiades appears to make the most sense (62). Similarly, he opines that Mazzaroth appears to be Venus, the Evening/Morning Star (74). A final stellar reference is found in Job 9:9, to the “interiora austri” in the Latin Vulgate or “the chambers of the south” in the King James Version. Schiaparelli agrees with other authors in explaining this as describing southerly stars not visible in Jerusalem, although the precise identity of such stars depends on the exact time of the writing down of the Book of Job (65-7). This is due to the slow wobble of the earth’s axis called precession, which shifts the apparent location of the earth’s north and south poles relative to the stars, and changes both which star(s) serve as the North Star and which stars lie below the southern horizon of a given latitude. Compare this reference to the aforementioned description by Aragorn at the Council of Elrond that he had travelled to “where the stars are strange” (*LotR*, 242).

While Schiaparelli certainly does due diligence in his arguments concerning all these stars, he makes the added effort to write an entire appendix devoted to analyzing an alternate set of identifications by mathematics professor M.A. Stern of the University of Göttingen (from an 1864-5 article) that came to his attention during the typesetting of his book. Of note is Stern’s identification of Kīmah with Sirius, the brightest star, Orion’s faithful hunting dog and Tolkien’s Nielluin/Helluin (Schiaparelli, 166).

Solar astronomer at the Royal Greenwich Observatory and expert on the sunspot cycle Edward Walter Maunder published a broader exploration of the topic in *The Astronomy of the Bible* in 1908, openly drawing upon and challenging Schiaparelli’s identifications. The popular level of his book, and its commercial success (“The Astronomy of the Bible,” 255) speak to the wide interest in such works, and increase the likelihood that Tolkien might have been familiar with Maunder’s or Schiaparelli’s (or both), despite the fact that neither is listed in Oronzo Cilli’s *Tolkien’s Library*. For example, Rev. George V. Leahy opined in 1910 that “To the Catholic versed in astronomy there could scarcely be proposed a more inviting subject of inquiry than the relations between that science and the Holy Bible” (117). Leahy calls Maunder’s and Schiaparelli’s volumes “excellent books” and notes that the “appearance of such works from the pens of expert scientists is itself a tribute to the interest of our subject [the Bible and astronomy]” (117-8).

Schiaparelli’s and Maunder’s use of etymology, astronomy, theology, and cultural mythology to reconstruct the identity of the Biblical constellations would have aligned with Tolkien’s interests as a student and fledgling subcreator in the 1910’s, as well as greatly appealed to this self-described “scientific philologist” (*Letters* 345) years later while he was revising and expanding his subcreation. He would have understood that, while there was no way to unambiguously identify some of these references in the end, that limitation in and of itself does not lessen the impact of the Biblical passages in conveying the might and benevolence of God.

I raise the possibility that an early reading of these books (or similar derivative works) could have influenced Tolkien’s specific choice of constellations in the early cosmology of Middle-earth, explaining the similarities seen in Table 2 between the standard Biblical stars (bolstered by choices seen in Classical Greek literature) and those that appear (and can be identified) in the legendarium (especially the first three iterations).

Biblical Stars (Common proposals)	Homer and Hesiod Stars (Standard opinion)	Tolkien Stars Iteration 1 [1915-1920] ( <i>BOLT</i> : “Kortirion Among the Trees” and <i>The Cottage of Lost Play</i> )	Tolkien Stars Iteration 2 [1925-1931]) (“Lay of Leithian”; <i>The Quenta</i> )	Tolkien Stars Iteration 3 [1940s] ( <i>LOTR</i> )	Tolkien Stars Iteration 4 [1951] ( <i>Post LOTR: Later QS</i> )
Big Dipper Orion Sirius Arcturus/ Boötes Pleiades Hyades Venus Stars of the south	Big Dipper Orion Sirius Arcturus/ Boötes Pleiades Hyades Venus	Big Dipper [Silver Sickle, Silver Bear] Orion [Telimektar] Sirius [Nielluin] Arcturus [Morwinyon] Pleiades Venus (Eärendel)	Big Dipper [Burning Briar, Sickle of the Gods] Venus [Eärendel]	Big Dipper [The Sickle; Durin’s Crown (?)] Orion [Menelvagor] Pleiades [Remmirath] Aldebaran? [Borgil] Stars of the south [generically] Venus [Eärendil]	Big Dipper [Valakirka] Orion [Menemakar] Sirius [Helluin] Venus [Eärendil] Mars (?) [Karnil] Jupiter (?) [Alkarinque] Cassiopeia (?) [Wilwarin]

Table 2: Stars and Constellations identified in Biblical and Classical Greek texts (Homer and Hesiod) compared with the legendarium.

In the last iteration, beginning in 1951, Tolkien generates the laundry list of stars and constellations created by Varda to light the awakening of the Elves, as published in *The Silmarillion*. Many of these celestial objects have never been satisfactorily identified by Christopher Tolkien or subsequent Tolkien scholars. Perhaps many of them were just etymological experiments, and no identifications with specific stars or constellations in our Primary World were implied. Recall Adam Clarke’s commentary to Job 9:9 to the effect that the Hebrew words normally translated as specific stars and constellations might not actually refer to such objects. Such an experiment would not be out of character for the “scientific philologist” – however, why was this apparently philology-driven expansion in his

astronomical taxonomy with potentially Biblical connections sparked during this particular time frame? I posit that it may have been related to the Jerusalem Bible.

In his September 30, 1943 Encyclical Letter on the Promotion of Biblical Studies, Pope Pius XII noted that since the then current knowledge of ancient Hebrew and Greek was greatly superior to that of medieval times, scholarly interpretation of the Bible (especially the Old Testament) should now take advantage of “the aids which all branches of philology supply” (Pius XII, n.p.). Scholars associated with the École Biblique (the École Biblique et Archéologique Française de Jérusalem) published their new translations of individual books of the Bible in pamphlets between 1945-55, with a completed volume issued in 1956. The English version, called *The Jerusalem Bible*, was published in 1966, with the translations of some books relying more closely on the French while others went back to the Hebrew and Greek texts. In March 1957 Tolkien completed a draft of the Book of Jonah for this project, with revisions in 1961 (Scull and Hammond, 585-6). Tolkien also provided editorial help on the project, including offering his review on the translation of the Book of Job, which, as we have seen, contains the bulk of the constellation references. Tolkien evidently had strong opinions on this work, according to Larry Swain holding up Andrew Kenney’s translation of Job “because he [Kenney] was unable to complete his revisions in part due to other work, in part to Tolkien’s perfectionism” (315). Jessica Kembell-Cook (12) recounted in 1977 a letter from the publisher of *The Jerusalem Bible* stating that Tolkien provided the “initial draft” for the Book of Job, although Scull and Hammond (586) cannot “verify this from archival sources.”

Regardless, it is clear that Tolkien was considered (and apparently considered himself) well-versed in the Book of Job. In addition, the French version of the Book of Job was published as an independent pamphlet by the École Biblique at least as early as January 1, 1950, based on bookseller websites. Did Tolkien read this pamphlet before writing his definitive list of Elvish star and constellation names? Was he basing his celestial etymology strictly on his own philological talents, or in reference to Biblical precedence? If the latter, was it based on his lived experience reading Scripture, or was he motivated, in least in part, by his reading list? I appreciate the rather speculative nature of my argument in this paper, but I hope that I have piqued your interest in the philology, and mythology, of the constellations, both those in our Primary World and those kindled by Varda.

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