Star Name Database

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Table of Contents

1.0 The Initiative

Since the dawn of recorded history with Adam and Eve, man has looked to the heavens to marvel at the glory of God and His creation. When God created the heavens, He assigned names to the visible stars and the visible constellations. Adam and Eve started off with a good understanding of these names and constellations. Over the centuries, the names of those stars have been handed down through various cultures and languages. Our research is an attempt to determine the original Biblical names for the stars and their place in the various constellations. Once the names are learned, then we can attempt to determine what these names mean.

The recorded history we have of various star catalogues sine the time of Adam have provided us with many star names. Our star catalog is an attempt to bring together all the star names from all of the star catalogs. This listing of star names includes various references to the same physical star. With this, we can study what different cultures and languages have seen as the interpretation of the star names and the constellations.

For each star name in the catalog we have tried to assign a particular constellation for it and a particular physical star that is being referred to. Thus this star catalog is not an exhaustive listing of every visible star that is assigned to a particular constellation. In fact, our catalog has more records since some physical stars have been referred to with various different names. Not every culture referred to each star by the same name or with the same interpretation.

Only star names from Indo-European culture were considered for this list. That would include the Middle East, Arabic culture, Egyptian, Persian, Greek, Latin and European cultures. Star names from Chinese, aboriginal Australia, the Pacific islands and native American cultures were not included because their astronomy differs greatly from that of Middle Eastern heritage.

On or about September 12, 2018, we began a list of star names found in E. W. Bullinger's *The Witness of the Stars* (1895). We were pleased to find that Bullinger had identified many of the stars that he mentioned with a unique scientific identifier. This avoids confusion about the star that he is explaining. Unfortunately, we also found that about half of the stars named by Bullinger had no scientific identifier. This makes it hard to know the location of the star within the constellation. Common names of stars are often transliterated from other languages, such as Arabic, and not always spelled the same way in English.

In the preface of his book, Bullinger mentions the names of two of his acquaintances who had been doing similar research into the Biblical meanings of stars and constellations. First, there was Miss Frances Rolleston, of Keswick, who began her

research in the field of Egyptian mythology in 1811[1] and continued until her death at 82 years of age in 1864. In the sentence that follows, Bullinger mentions Dr. Joseph A. Seiss of Philadelphia, who published *The Gospel in the Stars* in 1882. Reading all three works, it becomes obvious that all the star names and interpretations of Seiss and Bullinger are those of Rolleston. Seiss and Bullinger simply added star maps and diagrams.

In finding copies of these three books, another name came up; that of Richard Hinckley Allen, who published *Star Names, their Lore and Legend* in 1899. We found that Allen's research had been thorough and he gave detailed etymologies and evolutions of star names from Classical Greek, several generations of Byzantine astronomers writing in Arabic, and into European astronomy of the Renaissance period. Allen filled in nearly every gap left by Rolleston, Seiss and Bullinger.

The naming of stars did not, however, end in 1899. More stars were named in the 20th Century and cited by writers basing their work on Rolleston.[2] Most star names that originated in the 20th and 21st Centuries have been included. There are also obscure names of some stars that only circulate among practitioners of celestial divination. A few of Rolleston's unidentified names were only to be found at a web resource named "AstrologyKing.com". Latin names were mostly found in the writings of Al Achsasi al Mouakket, who wrote in both Arabic and Latin[3] in the 17th Century.

All proper names for stars mentioned by Rolleston, Seiss, Bullinger and others have been identified unmistakably to specific objects that people can see in the night sky. 53 of Rolleston's unidentified names turned out to be alternate names of entire constellations in different languages. For example, the Greeks named one conspicuous constellation was named Orion by the Greeks, not knowing that Arabic people had been calling it Al Jauzah for many centuries prior. Alternate names of entire constellations were set aside in another list.

1.1 The Method

The method used to build this list was to merge together as many different lists of star names having a unique scientific identifier as could be found. The first list came from the IAU Working Group on Star Names (WGSN). The list of named stars published by

[1] Poole, Jane S. (2017). *Frances Rolleston, British Lady, Scholar and Writer of "Mazzaroth".* self-published. P. 55

[2] Banks, William D. (1985, 2013). *The Heavens Declare*. Impact Christian Books, Inc., 332 Leffingwell Ave., Suite 101, Kirkwood, MO 63122. p. 43 (Proxima Centauri was not discovered until 1915, by Robert Innes in South Africa, using a powerful telescope.)

[3] Knobel, Edward B. (1895). "Al Achsasi Al Mouakket, on a catalogue of stars in the Calendarium of". Monthly Notices of the Royal Astronomical Society. 55 (8): 429–38. Bibcode:1895MNRAS..55..429K. doi:10.1093/mnras/55.8.429.

the International Crescent Observation Project (ICOP) was appended to that. To this, was added *A Reduced Star Catalog Containing 537 Named Stars*, published by NASA in 1971. To this, was added every star name mention in the 88 Wikipedia articles having titles like, "List of Stars in Andromeda". There were 88 such web pages because there are 88 constellations currently recognized. A few other lists of named stars were found at more obscure web sites, and these were appended until the complete list had 3,201 names with positive identification.

The list of 3,201 star names was then checked for validity against *Star Names and their Meanings*, written by Richard Hinckley Allen in 1899, and against *Monthly Notices of the Royal Astronomical Society* from 1895 onward. A few of the most obscure star names required exhaustive Google searches that took many days. Duplicate names were consolidated into single entries. Names that turned out to be alternate names of entire constellations, or parts thereof, were set aside into a separate list. This reduced the list to 1,450 proper names of stars with positive identification.

2.0 Key Fields

Each row of this table has 13 fields. Two of the fields have primary key values for another database located in France. The **S**et of **I**dentifications, **M**easurements and **B**ibliography for **A**stronomical **D**ata (SIMBAD) is the database where all scientists doing physical research on stars, galaxies and planets, have agreed to store their findings. It is located at the Strasbourg Observatory, and contains 24,529,080 different names for 9,099,070 objects, together with all known data about those objects. Only a few of those objects have proper names.

The key field for linking to SIMBAD has two strings of (usually) 3 characters, separated by a single space. SIMBAD is sometimes forgiving about upper and lower case, but not always, so upper and lower case are important. The second string identifies the constellation. The first string identifies the star within that constellation. Table 1 lists the codes used to identify constellations.

Table 1 – IAU Constellation Abbreviations

Code	Constellation	Code	Constellation
And	Andromeda	Ant	Antlia
Aps	Apus	Aqr	Aquarius
Aql	Aquila	Ara	Ara
Ari	Aries	Aur	Auriga
Boo	Boötes	Cae	Caelum
Cam	Camelopardalis	Cnc	Cancer
CVn	Canes Venatici	CMa	Canis Major
CMi	Canis Minor	Cap	Capricorn
Car	Carina	Cas	Cassiopeia
Cen	Centaurus	Cep	Cepheus
Cet	Cetus	Cha	Chamaeleon
Cir	Circinus	Col	Columba
Com	Coma Berenices	CrA	Corona Australis
CrB	Corona Borealis	Crv	Corvus
Crt	Crater	Cru	Crux
Cyg	Cygnus	Del	Delphinus
Dor	Dorado	Dra	Draco
Equ	Equuleus	Eri	Eridanus
For	Fornax	Gem	Gemini
Gru	Grus	Her	Hercules
Hor	Horologium	Hya	Hydra
Hyi	Hydrus	Ind	Indus
Lac	Lacerta	Leo	Leo
LMi	Leo Minor	Lep	Lepus
Lib	Libra	Lup	Lupus
Lyn	Lynx	Lyr	Lyra
Men	Mensa	Mic	Microscopium
Mon	Monoceros	Mus	Musca
Nor	Norma	Oct	Octans
Oph	Ophiuchus	Ori	Orion
Pav	Pavo	Peg	Pegasus
Per	Perseus	Phe	Phoenix
Pic	Pictor	Psc	Pisces
PsA	Piscis Austrinus	Pup	Puppis
Pyx	Pyxis	Ret	Reticulum
Sge	Sagitta	Sgr	Sagittarius
Sco	Scorpius	Scl	Sculptor
Sct	Scutum	Ser	Serpens
Sex	Sextans	Tau	Taurus
Tel	Telescopium	Tri	Triangulum
TrA	Triangulum Australe	Tuc	Tucana

UMa	Ursa Major	UMi	Ursa Minor
Vel	Vela	Vir	Virgo
Vol	Volans	Vul	Vulpecula

The names of the constellations are in the Latin language. Astronomers in places like France, Germany, Italy and England could not agree on a language, so they all agreed on Latin, which nobody spoke in the 17th Century. The last of the great Byzantine astronomers, al Mouakket, also wrote in Latin as well as Arabic.

The numbering of the stars within a constellation is mostly done using letters of the Greek alphabet. When it was discovered that a star was a double star, they would suffix the letter with a number such as "01", "02", &c. Sometimes there were more than 24 stars in a constellation. When they ran out of Greek letters, they started using lower and upper case letters of the Latin alphabet. Some stars only have a number because astronomers had given up on Greek and Latin letters. John Flamsteed was the first to just use numbers around 1675. Table 2 lists the names of Greek letters recognized by SIMBAD.

Table 2 – The Greek Alphabet

Name	Abbreviation	Greek	Sound	Example
Alpha	alf	A, α	short A	as in c**A**t
Beta	bet	B, β	B	as in **B**ull
Gamma	gam	Γ, γ	hard G	as in **G**od
Delta	del	Δ, δ	D	as in **D**og
Epsilon	eps	E, ε	short E	as in **E**nter
Zeta	zet	Z, ζ	Z	as in **Z**oo
Eta	eta	H, η	H	as in **H**elp
Theta	tet	Θ, θ	soft TH	as in wi**TH**
Iota	iot	I, ι	long I	as in f**I**ne
Kappa	kap	K, κ	K	as in **K**iss
Lambda	lam	Λ, λ	L	as in **L**ove
Mu	mu	M, μ	M	as in **M**ilk
Nu	nu	N, ν	N	as in **N**ow
Xi	ksi	Ξ, ξ	X	as in a**X**e
Omicron	omi	O, ο	long O	asin sl**O**w
Pi	pi	Π, π	P	as in **P**ie
Rho	rho	P, ρ	R	as in **R**ubber
Sigma	sig	Σ, σ	S	as in **S**imple
Tau	tau	T, τ	T	as in **T**op
Upsilon	ups	Y, υ	short Y	as in Cal**Y**pso
Phi	phi	Φ, φ	F	as in **F**ree
Chi	chi	X, χ	Q	as in pla**Q**ue
Psi	psi	Ψ, ψ	PS	as in **PS**alm
Omega	ome	Ω, ω	oo	as in f**OO**d

Initially, the stars within a constellation were numbered from brightest to dimmest. For example, a star named “alf Cen” would be brighter than a star named “bet Cen”. Eventually, it was discovered that some stars had variable brightness. About the time that it was discovered that “bet Gem” (Pollux) was brighter than “alf Gem” (Castor), the brightness criteria was abandoned so that the stars would keep their unique identifiers.

The two key fields that link this table with SIMBAD records, “Constellation” and “Identifier” have been carefully checked for upper and lower case. The “Identifier” field was used in an automated procedure to obtain the “SIMBAD_Name”, “Right_Ascension”, “Declination”, “Magnitude” and “Color” for each star, proving that all identifiers matched some unique object in the sky.

3.0 Data Fields

3.1 Common_Name (Column A)

This field contains the name by which the star is known in literature, particularly that of Rolleston and works derivative of hers. Common names for stars are not unique. For instance, "Minilar" is the Arabic word for "nose", and "deneb" is the Arabic word for "tail". Both Leo (the lion) and Corvus (the crow) both have a nose and a tail. Many constellations have noses, tails, legs, feet and heads. The convention for naming stars for Greek and Byzantine astronomers, was to write an entire phrase. For example, the Arabic phrase "Al Deneb al Asad", word-for-word, translates to "The Tail of the Lion". Through the years, Europeans have slurred this phrase so that the common name for that star is now Denebola.

Conversely, many stars have more than one common name. Sirius (alf CMa) is a great example of this. It is the brightest star in the sky, so nearly every culture on Earth gave it a name before they learned to speak with each other. Some other common names for "alf CMa" are: "Dog Star", "Cahen Sihor" (Egyptian), "Canicula" (Latin), "Gabbar", "Ecber", "Habor", and many others. We have only included those of Middle-Eastern (Egypt to Persia and northern India) or European origin. The astronomy of the indigenous people of Australia and China was very different. People indigenous to America also had their own cosmology, but little written language until the past century.

Star names from Hebrew exist, but their last great astronomer, Daniel, spent nearly his entire life in Babylon, so most likely wrote cuneiform. The last few years of Daniel's life were spent in Persia, where his knowledge would have been inherited by the Persians. However, early Greek history records that the Greeks sent a contingent, headed by Pythagoras, to Egypt and Babylon during the reign of Nebuchadnezzar to learn astronomy and geometry[4] but the Greeks had a religious system that could not have been more different from the Hebrews.

3.2 Full_Name (Column B)

This field has the full phrase, usually in transliterated Arabic, that names the star. A phrase such as "the knee of the archer" (Al Rukbat al Rami) would uniquely identify a star in Byzantine astronomy. Sometimes this field contains an alternative spelling of a name. For example, one European astronomer might have transliterated the Arabic for "the crow" as "Al Gorab", while another said, "Al Goreb". Database searches are typically unforgiving; if someone asks for "Al Goreb", then the database will not find "Al Gorab".

[4] Ferguson, Kitty ((2010). *Pythagoras, his Lives and the Legacy of a Rational Universe.* Icon Books, Ltd., London. Chapter 6

3.3 Language (Column C)

In the "Language" field, the first word will usually be "Arabic", but sometimes "Greek", "Latin", "Persian" or even "American". It helps to know which language in which the star name was coined. A bi-lingual dictionary can then discern its meaning.

After the language name, there may be some additional information in parentheses. Languages change over time. If we wrote, "A gentle knight was pricking on the plain"[5], few people in America today would understand what that means, even though it was plain English to Edmund Spenser in 1590. Arabic (Byzantine) astronomy began in the 8th Century and climaxed in the 17th Century. 900 years is far more than from Spenser to the present. Languages also change with local dialect, so, when available, we also included the name of the astronomer that coined the name.

3.4 Translation (Column D)

In the fourth field, we spell out a word-for-word translation of the original star name to modern English. In some cases, a descriptive phrase is offered. Some might not know that a caracal is a small, predatory desert animal, for instance. In some cases, the explanation deserves more, as in the case of how the stars "Navi", "Dnoces" and "Regor" were named after the three American astronauts who lost their lives in the Apollo 1 space mission.

3.5 Reference (Column E)

The "Reference" field is used to cite one reliable source of our information. In all cases there were several that all agreed, but having only one field, we tried to pick the one that is easiest to locate. In most cases, this is Richard Hinckley Allen's book, *Star Names; their Lore and Meaning*. Allen cites more than 550 career astronomers in his bibliography, and is very specific about who named what, when and why. The second most widely cited is Dr. Edward Ball Knobel's article that appeared in the June, 1895 issue of the *Monthly Notices of the Royal Astronomical Society*". In this article, Knobel publishes the entire catalog of stars from Al Achsasi al Mouakket, 1650, in both transliterated Arabic and Latin. In some cases, the information was so recent, or so obscure, that the easiest document to access was a link to a web page. Stars named in the IAU public opinion poll of 2015 are not yet widely available in a printed book in any library. Some notable books, such as Atlas Coeli by Becvar (1950) are available for about $500 - $1,000. Some older manuscripts can only be seen in museums, though photocopies of their pages can readily be found via the Internet.

[5] Spenser, Edmund (1590). *The Faerie Queene.* Canto 1, verse 1

3.6 Rolleston_Interpretation (Column F)

In the sixth field, we place an exact quote from Frances Rolleston's *Mazzaroth* (1864) where she interprets a spiritual meaning for the star. The exact same phrases appear for the same star names in the work of Seiss, Bullinger and countless others. The list of authors who used Rolleston's exact words, with and without credit is nearly endless. Here are just a few titles:

- The Complete System of Thelemic Magick - The Archidoxical Order of ...
- Leo Constellation Stars – Astrology King
- The Secret Astrology of the Bible
- Stellar New Year - International Star Bible Society
- The Witness of the Stars
- The Heavens Proclaim the Glory of God: Leo - The King Rending
- Celestial Report 2010 by Steve Santini
- What the Stellar New Year Reveals About Jesus — Charisma Magazine
- God's picture book, "THE WAY," written in the stars
- the stars - Creation Instruction Association
- THE PLANISPHERE OF THE HEAVENS - Revelation in Focus
- "glory of God". - Christian Identity Forum
- Salvation in the Stars – Christian Training Online
- Jacob's Dying Words Prophesy the Celestial Sign of the Lord's Return ...
- The Bible as Astrology | Page 3 | Interfaith forums

This list could go on indefinitely. The words are always the same and none have any clue where to look in the sky many of the stars that they mention. Some of Rolleston's interpretations make perfect sense. For others, it seems hard to make the connection. Nevertheless, they are quite popular.

3.7 Constellation (Column G)

The seventh field, "Constellation" gives the three-letter IAU code for the constellation where the named star was found. This is a key field for SIMBAD database searches, so upper and lower case matter.

3.8 Identifier (Column H)

The eighth field, "Identifier" has a unique key that can be used to retrieve physical data about that star from the SIMBAD database. The key must be exact. Upper and lower case are important. All of the stars that Rolleston and her successors could not identify have been identified by at least three astronomers living during different centuries.

3.9 SIMBAD_Name (Column I)

The International Astronomical Union (IAU) has a group of astute, international scholars working on finding specific proper names for all the visible stars. This group is called the Working Group on Star Names (WGSN). When a star has more than one proper name, they try to decide which is the most widely used. They enter that name into the SIMBAD database. A press release from 2017, copied directly from their web site, says, "Traditionally, most star names used by astronomers have come from Arabic, Greek, or Latin origins. Now, the International Astronomical Union (IAU) Division C Working Group on Star Names (WGSN) has formally approved 86 new names for stars drawn from those used by other cultures, namely Australian Aboriginal, Chinese, Coptic, Hindu, Mayan, Polynesian, and South African." They have officially recognized 313 star names as of this date. However, some of these names come from cultures far removed from Indo-European.

3.10 Right_Ascension (Column J)

Stars, like the Sun, Moon and planets, rise in the east and set in the west every day. According to the Encyclopedia Britannica, right ascension is: "Right ascension, in astronomy, the east–west coordinate by which the position of a celestial body is ordinarily measured; more precisely, it is the angular distance of a body's hour circle east of the vernal equinox, measured along the celestial equator. It is often expressed in units of time rather than degrees of arc." We list them in degrees of arc. This measurement is analogous to longitude on the celestial sphere.

Another way of looking at right ascension, is the number of degrees, or the number of hours, minutes and seconds the Earth has rotated since the moment of the spring equinox.

3.11 Declination (Column K)

Declination is the number of degrees a star is north or south of the celestial equator. On the celestial sphere, this measurement is analogous to latitude. Together, right ascension and declination pinpoint the location of a star in the sky. With a good telescope, every star has a unique location using these two coordinates.

3.12 Magnitude (Column L)

The visual magnitude of a star is a measure of its brightness. A star of the first magnitude is twice as 2.512 ($\sqrt[5]{100}$) times as bright as a star of the second magnitude. The crazy number comes from the subjective perception of a dead Greek astronomer named Hipparchus of Nicaea, who lived from 190 BC to 120 BC. Hipparchus classified all the stars that he could see into six magnitudes. More modern photodetectors measure visual magnitude to about three decimal places. Hipparchus' standard for a visual magnitude 1.0 was the star named Vega. Historically, the bright stars were named, but the dimmer stars still counted for defining constellations.

3.13 Color (Column M)

All stars are, more or less, white. Closer examination, using a telescope for instance, reveals that some stars are more reddish, some more bluish. Some stars appear more yellow. Colors of stars may have some significance to their placements in the constellations. If we were to say, the vesture of Orion is dipped in blood, and looked at the skirt of his tunic, we would see a huge, red nebula. Other stars fade in and out over decades, such as the one named Algol ("The Ghost" in Arabic). Some stars appear to sparkle like precious gems. This is because they are actually two or more stars of different colors circling about each other. Some constellations have only dim, dull or boring stars; others sparkle like diamonds.

Astronomers recognize seven different classifications of stars. These are listed in Table 3.

Table 3 – Stellar Classifications

Classification	Description	Examples
O	blue giant and blue supergiant, into ultraviolet; extremely rare	S Mon, 10 Lac
B	blue giant	Rigel, Alnilam
A	white to bluish	Vega, Fomalhaut
F	white	zet Leo, alf Lep
G	yellow	our Sun, eps Vir
K	orangish	Pollux, gam Dra
M	red dwarf, red giant, red supergiant	Betelgeuse, mu Cep

The first letter of this field identifies the fundamental color of the star. Letters and numbers that follow give astronomers further details. There are also "flare stars" that undergo dramatic increases in brightness for a few minutes unpredictably. Proxima Centauri, the closest star to our Sun, is one of these. Barnard's Star, the second closest to our Sun is also one of these. A few stars are Wolf Rayet stars that are even hotter than classification O. They emit light across a broad spectrum from radio waves to beyond ultraviolet. Regor (del Vel), formerly known as Suhail al Muhlif, is one of these.

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Caveat Emptor: The last two of these references promote celestial divination, which we do not endorse. A few of the very most obscure star names of Rolleston, only used in celestial divination could only be identified at such web sites.