Mathematical Bias and the Biblical Calendar

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE OF CONTENTS</td>
<td>i</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>GOD'S ORDAINED SIGNS</td>
<td>5</td>
</tr>
<tr>
<td>BIBLICAL DAYS</td>
<td>10</td>
</tr>
<tr>
<td>BIBLICAL MONTHS</td>
<td>16</td>
</tr>
<tr>
<td>Trumpets</td>
<td>19</td>
</tr>
<tr>
<td>Psalm 81</td>
<td>23</td>
</tr>
<tr>
<td>Jerusalem Time</td>
<td>24</td>
</tr>
<tr>
<td>New Moon Burnt Offerings</td>
<td>26</td>
</tr>
<tr>
<td>David's Example</td>
<td>27</td>
</tr>
<tr>
<td>Overcoming Our Bias</td>
<td>31</td>
</tr>
<tr>
<td>BIBLICAL YEARS</td>
<td>33</td>
</tr>
<tr>
<td>BIBLICAL WEEKS</td>
<td>41</td>
</tr>
<tr>
<td>TIMES AND SEASONS</td>
<td>45</td>
</tr>
<tr>
<td>HISTORICAL SANHEDRIN</td>
<td>49</td>
</tr>
<tr>
<td>CURRENT HEBREW CALENDAR</td>
<td>59</td>
</tr>
<tr>
<td>ACCURACY</td>
<td>68</td>
</tr>
<tr>
<td>AUTHORITY</td>
<td>71</td>
</tr>
<tr>
<td>WHAT WOULD JESUS DO?</td>
<td>80</td>
</tr>
<tr>
<td>TODAY'S OBSERVATIONAL CALENDARS</td>
<td>85</td>
</tr>
<tr>
<td>COMMON CONCERNS</td>
<td>89</td>
</tr>
<tr>
<td>CONCLUSION</td>
<td>92</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>97</td>
</tr>
<tr>
<td>APPENDIX</td>
<td>99</td>
</tr>
<tr>
<td>ADDITIONAL RESOURCES</td>
<td>99</td>
</tr>
</tbody>
</table>
INTRODUCTION

This paper was inspired by my own personal study and findings regarding the Biblical Calendar. It did not involve creating large, complex timelines, researching deep into layers of Biblical prophecy nor did I have a sudden revelation from the heavens. Rather, it was a desire to answer a very simple question. How can I determine when to keep the Sabbath and Annual Festivals that are commanded within the Torah (the first five books of the Bible)? These Festival days are directly commanded by God (Yehovah) Himself and spelled out at the time of Moses in Leviticus 23. Therein contains the list of days that Yehovah's followers were to observe from generation to generation. For example, verses 4-8\(^\text{[1]}\) describe the Passover and the Feast of Unleavened Bread:

"These are the feasts of the LORD, holy convocations which you shall proclaim at their appointed times. On the fourteenth day of the first month at twilight is the LORD's Passover. And on the fifteenth day of the same month is the Feast of Unleavened Bread to the LORD; seven days you must eat unleavened bread. On the first day you shall have a holy convocation; you shall do no customary work on it. But you shall offer an offering made by fire to the LORD for seven days. The seventh day shall be a holy convocation; you shall do no customary work on it."

\(^\text{[1]}\)Underlined emphasis added

A total of seven days a year are specified, in addition to the weekly Sabbath, as having a holy convocation. These days were to be considered as set apart (holy) from all others. A convocation, or "rehearsal" (miqra - Strong's 4744\(^\text{[2]}\)) is an assembly of followers that gather together as a means of practicing His laws (Torah) in order to understand what these days picture - the overall salvation of mankind. But what the days represent is a topic for another paper. However, these appointed days continued to be observed for thousands of years, even up through the generation of Jesus Christ (Yeshua the Messiah), where we are told that He and His apostles also observed these important dates. Furthermore, these festivals are specifically described as being kept by all nations throughout the world in the future coming Kingdom here on Earth. We are told this in Zechariah 14:16-19\(^\text{[1]}\):

"And it shall come to pass that everyone who is left of all the nations which came against Jerusalem shall go up from year to year to worship the King, the LORD of hosts, and to keep the Feast of Tabernacles. And it shall be that whichever of the families of the earth do not come up to Jerusalem to worship the King, the LORD of hosts, on them there will be no rain. If the family of Egypt will not come up and enter in, they shall have no rain; they shall receive the plague with which the LORD strikes the nations who do not come up to keep the Feast of Tabernacles. This shall be the punishment of Egypt and the punishment of all the nations that do not come up to keep the Feast of Tabernacles."

\(^\text{[1]}\)Underlined emphasis added

Today, many individuals continue to recognize these days with a few making the choice to do so not out of tradition, but by studying the Bible and living a life according to its principles and instructions. These days are a part of the Torah that Yeshua claimed would continue to be valid until heaven and earth pass away (in Matthew 5:17-19\(^\text{[1]}\)):

"Do not think that I came to destroy the Law (Torah) or the Prophets (Writings). I did not come to destroy but to fulfill. For assuredly, I say to you, till heaven and earth pass away, one jot or one title will by no means pass from the law till all is fulfilled. Whoever therefore breaks one of the least of these commandments, and teaches men so, shall be called least in the kingdom of
I have been keeping the Sabbath and Holy days for nearly 30 years in one form or another. In doing so, I know that I have been blessed simply by making these days a priority in my life. It's also important that we keep these days with other like-minded individuals. Matthew 18:20 tells us that where two or more are gathered together in His name, Yehovah is there with them (through His Holy Spirit). It is at these appointed dates that we are instructed to gather together in His name as a Body of Believers. Just as His people once gathered together to keep these days at the temple in Jerusalem, today it is His body of followers that serve as His temple (I Corinthians 6:19-20). The example each of us is given on how to live our lives was presented by the Messiah, Yeshua (a.k.a. Jesus), and He now serves as the temple's High Priest and our intercessor to the Heavenly Father.

For many years, though, I never questioned how to determine when to keep these specific Festivals. Instead of learning for myself what it really meant in the scriptures when it stated the Feast of Tabernacles began on the "fifteenth day of the seventh month" (as instructed in the above verse), I would instead pull out my wallet-sized pocket-calendar card published by my church organization. My card conveniently listed all of the Festival dates that corresponded to the Gregorian calendar (which most of us use today to organize our day-to-day lives - especially in the Western World). Usually, the card provided dates for the next 10 - 15 years from when it was published. It came in very handy whenever I would start making travel arrangements or began to ask for time off from school or work. I never gave it a second thought beyond the simple comprehension that the list was somehow derived from the Hebrew calendar used by the Jews. Even mainstream Gregorian calendars indicate Jewish festival names (Rosh Hashanah, Yom Kippur, etc.). It was for this reason that I never questioned why the Feast of Tabernacles, for example, always fell in either September or October.

It was only after several years of keeping these Feasts that it was pointed out to me that the moon had a correlation with the Holy days, as it was nearly always full when certain festivals began each year. But several more years would pass before the first realization hit me that something was amiss. It wasn't until I began searching the internet one day for a list of church organizations that observed the Biblical Festivals. It came as a surprise to me to learn that some organizations were observing these days differently than what showed on my pocket calendar. While a few were one or two days off, some were being held an entire month later. At first, I brushed this off believing these organizations must not have had a complete understanding of the Feast days themselves. After all, it was in my own experience that my family and I departed ways from a rather substantial, established organization called the Worldwide Church of God (WCG) who, just a few years earlier, began to loosely treat the weekly Sabbath and the Festivals as being irrelevant and old fashioned, changing the observation of Festival dates to a more convenient Weekend getaway rather than the full eight days (and more importantly ignoring the first and last days that were to be considered as High Sabbaths). Eventually the organization abandoned them all-together. Perhaps, I thought, these organizations were destined for that same path.

It wasn't until my wife and I learned that a good friend of ours, who also had a background in the WCG organization and continued to keep the Sabbath on her own, also kept the Festivals on different
dates. It was then I knew that I needed to learn why there was a difference of opinion. At first I was ready
to dive into scripture with the purpose of proving that what I had been practicing for years was correct.
Then it dawned on me - I, myself, did not have a clear answer from scripture as to why I kept the dates
that I did! I knew that keeping the Festivals was important, but I simply could not explain how my
pocket-calendar card was created.

At this point, I knew I had to take a step back and approach this subject with a completely open mind -
and I started with the Bible. I Thessalonians 5:21 tells us to "prove all things". It's important to always
search the scriptures to prove to ourselves why we believe what He has instructed, as demonstrated in
Acts 17:11 (here specifically, the Old Testament scriptures were used). We are told to diligently present
our beliefs as approved by Yehovah Himself (II Timothy 2:15). In other words we must use the Bible to
prove whether or not any doctrine or belief is of the Heavenly Father! Therefore, if a teaching or doctrine
is not found or supported within scripture (the Old Testament specifically), then it simply cannot be of
Yehovah!

As my research expanded, I quickly learned that this topic has sparked quite a few debates. What
surprised me the most, though, was how far back these debates began. While many arguments exist for
one or more calendar methodologies (good or bad), many church organizations tend to treat the topic as a
craze or fad that they hope will quickly pass away (if not forced out by shunning those asking questions).
You quickly learn that the topic of the calendar can become a thorn in the sides of many pastors and
teachers. As one minister in a WCG splinter group stated, "You don't want to open that can of worms!"
Many of them cannot answer these questions directly using scripture - some will claim that scripture
simply does not support any specific methodology and that the issue was left in the hands of the Jews (as
Romans 3:2 claims they hold the Oracles of God). Therefore, the traditional Hebrew calendar is chosen as
doctrine for the sake of unity, to please the masses and as recognition of the Jews as having an authority
on the subject. But my research found that even the Jews find fault in the Hebrew calendar and are split
into varying opinions on the subject. It is mostly the strict Orthodox Jews that follow the Hebrew
Calendar because of decrees set forth by their own rabbinical leaders to keep this specific tradition. But
they do not deny the fact that the traditions that make up the construct and foundation of the Hebrew
calendar are not all Biblical. Additionally, the Hebrew calendar itself did not exist, in its earliest
documented form, until the 4th century C.E. and eventually evolved into the modern format kept today as
late as the 12th century C.E. Yet the biggest surprise was when I began to take a deeper look and learned
that the modern format of the Hebrew calendar actually contradicts Biblical principles. It was at this point
that I knew I was going to need to make a change in how I determined time itself if I was to fully
understand when to properly keep the dates Yehovah ordained in scripture!

There are many that have come to this same realization. However, I have found that, in order to solve the
problem, several individuals will attempt to create their own calendar methodology using mathematical
formulas that are designed to fit with Biblical events. They rip apart scripture, make assumptions, and fill-
in holes with excuses and mathematical rules mixed with modern scientific astronomy and numbers that
can only be confirmed by NASA researchers. The ultimate result is always the same: find that magical
mathematical formula for everyone to use (similar to the Gregorian calendar we hang on our fridge
today). Most of these individuals have the right intentions and are simply encouraged to find that one
calendar that will bring everyone together as one mind and one accord. But their major flaw is that they
begin to lean on their own understanding or, worse, they look to other men to find the secrets of the
universe - and that is nearly always in the form of mathematics.

This is not to say that math is evil. However, it does tend to get in the way whenever one looks into this
topic. Most of us are ingrained to use math when it comes to day-to-day planning and scheduling when
using calendars. We are taught, at a young age, that the Gregorian calendar has 365 days in a year, except
every 4th year (leap year) where an extra day is added. We think of a calendar as having 12 months in a year (with February being that special month where the extra leap day is added). As the idiom goes, we tend to not look through rose-colored glasses, but math-colored ones. We have grown partial to the comforts and reliability math gives us when telling time and we have learned to rely on it heavily; even perceiving anyone averting away from math as being abnormal or primitive. The fact remains that math has become a strong bias when it comes to understanding scripture and unless we are told specifically to use math, we must be very careful to not assume it’s there.

It can be a challenge to overcome this bias, but if we can accept the challenge and open our minds to the context of the scriptures themselves, we may come to a completely different understanding of time itself. One that is not at all complicated. One that is attainable without requiring a degree in mathematics, physics, or a complete understanding of the universe. Scripture does give us all of the parameters we need to keep His Festivals each year whenever the time arrives. But to fully grasp the concept of time in the Bible, we must first put our mathematical bias aside and look to the scriptures using a pure and simple mind. We must accept an approach free of formulas and concepts that we have been fashioned to use. To best understand, we must do as the wise character Yoda stated in the film Star Wars: the Empire Strikes Back: "you must unlearn what you have learned."

In this paper, we will take a look at exactly what the Bible does instruct in determining when to keep Yehovah's Festivals using ordained, observable signs as reference for a calendar. We will look at specific examples that will provide witness to the method of observation. We will then research documented history to find how the ancients observed a calendar and we will contrast the concepts of scripture against the development of the current Hebrew calendar system, how it is currently constructed, why it was introduced in its current form and how today's Jews perceive it.

I encourage you to check all references in this paper - especially Biblical scriptures - and do not simply take my word for it. This subject is an important, foundational element to the Biblical Festivals and it should be a subject taught to all of Yehovah's children - even new-born babes of the truth! This can be accomplished, not by becoming a calendar expert or mathematician as some would have you believe but, by researching the Bible and asking for guidance through prayer. This paper is not intended to attack any individual or organization, but rather to bring attention to those looking for truth from a Biblical foundation rather than the words and ideas of men. I don't claim to be perfect and am always open to correction, but I do implore you to fully research this topic and not simply ignore it. I am aware that various conclusions have been made by many individuals on this subject (and I attempt to cover many of those within this paper), but I do welcome any difference of opinion (without contradicting scripture) that may alter any of my findings as, I believe, iron sharpens iron (Proverbs 27:17) and our understanding can only grow when we work together as a Body of Believers. But for those that are content with blindly following tradition, I do ask you this: should any topic of our faith be like a can of worms?
To begin our Biblical search, we don't have to go very far. In the very first chapter of the first book of the Bible, Genesis 1: 14-19, we find Yehovah Himself being quoted at the time of creation itself:

"Then God said, 'Let there be lights in the firmament of the heavens to divide the day from the night; and let them be for signs and seasons, and for days and years; and let them be for lights in the firmament of the heavens to give light on the earth'; and it was so. Then God made two great lights: the greater light to rule the day, and the lesser light to rule the night. He made the stars also. God set them in the firmament of the heavens to give light on the earth, and to rule over the day and over the night, and to divide the light from the darkness. And God saw that it was good. So the evening and the morning were the fourth day."

Notice what is being created here: signs and seasons, days and years - a calendar! This is the establishment and foundation from which we are told, directly from Yehovah Himself, that we can determine dates. Of these, the first that should be immediately obvious and distinct from the others is the fact that His calendar is based on the use of signs. More specifically, the lights in the firmament of the heavens are used as these signs! Firmament, being the Hebrew word raqia (Strong's 7548), also translates as "expanse"; whereas the word heavens, being shamayim (Strong's 8063) in Hebrew, more specifically is referencing the "sky" above us. Therefore, it is the lights in the expanse of the sky above us that serve as signs for us to know His seasons, days and years. These signs are described from an observer's perspective here on earth, not from some far off place floating out somewhere in the solar system. There is no scientific description given here, no mythical secrets, no complicated rules and no mathematical formulas. In order to understand time and the Biblical calendar, we simply need to look up to the sky!

Now many will simply brush over these verses and think that this is simply the day of creation where the sun, moon and stars were created. But these verses are taking place on Day Four of Creation, as is summarized in the last verse. The same phrasing, "the evening and the morning were the" first, second and third "day", were already stated in previous verses (and is the first, and only, mathematical concept introduced: counting). But consider this: if no sun existed, how can you have an evening and a morning? Perhaps Yehovah or the Messiah themselves provided the light source? Let's focus on verse 16 above where it states "God made two great lights." The Hebrew word here for made is 'asah (Strong's 6213) which means:

"accomplish, advance, appoint, apt, be at, become, bear, bestow"

This verse, then, is telling us that Yehovah appointed, or bestowed, the sun and the moon to serve as our signs in the expanse of the sky. In other words, this does not necessarily mean the sun or moon were being created here from scratch, but rather they were being placed into their proper alignment and being set into motion so as to provide lights as signs to those looking up at any time (day or night). The sun and the moon are simply being assigned a prominent role in how each one plays a part and the stars divided the day from the night. And it is these signs that you will soon find are referenced throughout the scriptures! It is at this point forward that sun and moon were ordained into their continuous cycles as we know them today (with an exception where Yehovah temporarily extended the day as we will see later). There is one other aspect introduced in the Creation Week here in Genesis and that is the first, and only, mathematical concept you will find in scripture related to the calendar: counting days.
Many contemporary Christians today infer from the word *sign* (or *omen*) in the Bible as being something miraculous. A sign given by Yehovah is generally perceived as extraordinarily different from the everyday observed events, where one may take notice of His work. Although the *sun* and *moon*, of themselves, are miraculous as Yehovah's overall creation, they are also to be used as *instruments* in our ordinary day-to-day lives. The Hebrew word for *signs* used in the above scriptures is *oth* (Strong's 226[^3]) which means:

> "226 A signal (literally or figuratively), as a flag, beacon, monument, omen, prodigy, evidence, etc; a mark, miracle, sign, token (in the sense of appearing)."

Therefore, these *signs* are the form of communication from Yehovah - a *flag* or *beacon* - that appears in the sky and is meant for us to take notice - or to *mark*! Just as a ship searches for land with the assistance of a lighthouse *beacon* in the midst of a storm, Yehovah created these *signs* for us to see (as a *monument* or *flag*) from where we can then determine, for ourselves, His *times and seasons*. We know, then, that the *sun* and *moon* serve as these *beacons* - the two great *lights* in the sky above us. Even the stars communicate to us in the form of signs to signal the night apart from the day.

His signs are not used as Pagan fortune teller's practice to predict future events, but to serve as a point of reference at any given time.

It's important to notice just what the purpose of the Fourth Day of Creation was all about. We can see the elements being laid out here for a calendar. But now let's take a closer look at the word *seasons*. If we were using our mathematical bias, our first impression of this word may force us to think of the *four celestial seasons* known to us as spring, summer, winter and fall. But remember, we need to look past our bias. This pre-defined concept is not being described here at all. The Hebrew word being used in this verse is *mow'ed* (Strong's 4150[^1]), which means:

> "appointed time, place, or meeting"

This is NOT a description of the celestial bodies and their movements at the time of the Spring Equinox or the Winter Solstice! Seasons, instead, refer specifically to Yehovah's *appointed times* of the year that He set aside - the Holy Day Festivals! The word *mow'ed* is used in Leviticus 23:2-5[^2], where Yehovah instructs Moses to:

> "'Speak to the children of Israel, and say to them: "The feasts (mow'ed) of the LORD, which you shall proclaim to be holy convocations, these are My feasts (mow'ed). Six days shall work be done, but the seventh day is a Sabbath of solemn rest, a holy convocation. You shall do no work on it; it is the Sabbath of the LORD in all your dwellings. These are the feasts (mow'ed) of the LORD, holy convocations which you shall proclaim at their appointed times (mow'ed). On the fourteenth day of the first month at twilight is the LORD's Passover.'"

And a list of specific appointed times continues to the end of this chapter. Here, the term *mow'ed* makes the connection that the ordained signs of the calendar are used not only to determine ordinary days and years, but also to fully understand when the Feasts of Yehovah and the times He appoints as being holy occur throughout the year. Exodus 13:10[^1] instructs us regarding these Feast days:
"You shall therefore keep this ordinance in its season (mow'ed) from year to year." {Underlined emphasis added}

The original King James more clearly states the above as "in His season", which would better read "in His appointed time." Yehovah appointed the Festival seasons and it is our job to proclaim them using the signs He gave us in the sky. Psalm 104:19\(^1\) clearly makes this connection, as well:

"He appointed the moon for seasons. The sun knows its going down." {Underlined emphasis added}

Jeremiah 31:35\(^1\) further clarifies that these signs are officially decreed by Yehovah Himself:

"Thus says the LORD; Who gives the sun for a light by day. The ordinances of the moon and the stars for a light by night." {Underlined emphasis added}

This is repeating the very information we have been given in Genesis. It is important to note, however, that observing any of these objects (sun, moon or stars) has nothing to do with astrology or the worship of the heavenly bodies themselves. In fact, this practice is strictly condemned by Yehovah. Deuteronomy 4:15-20\(^1\) clarifies this stating:

"Take careful heed to yourselves, for you saw no form when the LORD spoke to you at Horeb out of the midst of the fire, lest you act corruptly and make for yourselves a carved image in the form of any figure: the likeness of male or female, the likeness of any animal that is on the earth or the likeness of any winged bird that flies in the air, the likeness of anything that creeps on the ground or the likeness of any fish that is in the water beneath the earth. And take heed, lest you lift your eyes to heaven, and when you see the sun, the moon, and the stars, all the host of heaven, you feel driven to worship them and serve them, which the Lord your God has given to all the peoples under the whole heaven as a heritage. But the LORD has taken you and brought you out of the iron furnace, out of Egypt, to be His people, an inheritance, as you are this day." {Underlined emphasis added}

We see here that these signs were given to men as a heritage from generation to generation as a possession to use, but never worship! This warning is repeated in Isaiah 47:13-14:

"You are wearied in the multitude of your counsels; Let now the astrologers, the stargazers, and the monthly prognosticators stand up and save you from what shall come upon you. Behold, they shall be as stubble, the fire shall burn them; they shall not deliver themselves from the power of the flame; it shall not be a coal to be warmed by, nor a fire to sit before!" {Underlined emphasis added}

Astrology, the study of celestial movements as having an influence in human affairs (such as horoscopes and other mythical practices based on the movements of the heavenly bodies), is different from Astronomy. The latter is the mathematical and observational study of those objects to better understand the universe and its overall function. Prognosticators, as they are called in the above verse, are forecasters who claim to obtain special knowledge of future events who, then, make supposed intimate predictions about one's life or group of individuals based on their secret understanding. As we can see, being driven to worship the signs of the sun or moon as entities or those that study them - even if it's fashioned in a manner to give praise to Yehovah - would also be a sin. They are merely objects that Yehovah uses (and ordained) in order for us to understand His timetable. Seeing them in the sky, or observing their motions, is completely different from worshiping them. It would be no different to observe them in the sky than it
would be to look at the hands of a watch (unless, of course, we fashion our watches to praise and worship as the creators, or gods, of time and space).

Jesus (Yeshua) gave a very moving end-time prophecy in Matthew 24 that also gives us an example of signs and seasons. The Messiah’s disciples listened very carefully to His prophecy of a future destruction of the Temple in Jerusalem and a later end-time age. As most of us in their shoes would do, the disciples immediately questioned when such things would take place. Notice what they ask in Matthew 24:3:

“And as he sat upon the mount of Olives, the disciples came unto him privately, saying ‘Tell us, when shall these things be and what shall be the sign of thy coming, and of the end of the world?’” {Underlined emphasis added}

Why would it occur to the disciples to ask for a sign? Yeshua described many events that would eventually come to pass - earthquakes, betrayals, false prophets and the abomination of desolation to name a few. But His answer was likely not what they were asking for here. We see the disciples’ original concern was when His Kingdom would be established. They were applying the concept shown in Genesis 1 and requesting a visible sign to determine when the time would arrive. Today, you and I would have likely asked Yeshua on what date will he establish his Kingdom. But Yeshua put it into a perspective they would understand by using the example of a fig tree in Matthew 24:32-33:

"Now learn this parable from the fig tree: When its branch has already become tender and puts forth leaves, you know that summer is near. So you also, when you see all these things, know that it is near - at the doors!” {Underlined emphasis added}

Yeshua refers to the summer season here. But he’s not referring to the mathematical concept of the summer solstice (or the spring equinox); rather he is putting his reply into context by describing the use of observable signs to determine the arrival of future events - in this case, the growing season! But he stopped short of predicting when the exact sign, or date, would occur. Instead, he described multiple events that will serve as a sign of the end-time age. And ALL of these events would be required to take place for anyone to know that the time is very near. The disciples learned that they would not be able to predict, even with the use of mathematics, when these things would eventually take place, but they clearly understood the analogy when Yeshua referenced the sign of the fig tree to determine when the time would eventually arrive.

In the modern world, many "so-called" prophets give in to their confidence of mathematics that often lead them to the added desire to predict the future. We see this all the time with modern "doomsday" predictions throwing out future dates like candy claiming they know the exact time the end-time age, referred to by Yeshua, will happen or begin. But, as we were told, any such events would be tied to signs and (according to verse 36) no man can calculate or predict the day or hour when all of these signs will occur - not even Yeshua Himself! But He did give us the signs to look for and, when they do appear, we can then know that the season, or appointed time, has indeed come upon us and we can be ready for it! To be prepared, though, we must keep watch! The message in Matthew 24 ends with this very warning in verses 42-44:

"Watch therefore, for you do not know what hour your LORD is coming. But know this, that if the master of the house had known what hour the thief would come, he would have watched and not allowed his house to be broken into. Therefore you also be ready, for the Son of Man is coming at an hour you do not expect.” {Underlined emphasis added}
This same principle can also be applied to the Biblical calendar. If we truly desire to know when Yehovah has appointed His Holy time, then we need to be like watchmen! Only by actively observing the ordained signs given to us can we truly understand in our hearts that we are proclaiming and guarding His time properly.

Now that we have a better grasp on these lights serving as "signs (observable in the sky) and seasons (to determine His Feast days), and for days and years", let's begin by looking at what constitutes a Biblical Day by using these signs.
BIBLICAL DAYS

At the very beginning of the Bible, during the Creation Week in Genesis, we are told exactly how days were measured by Yehovah Himself. Genesis 1:3-5[1] states:

"And God said, Let there be light: and there was light. And God saw the light, that it was good: and God divided the light from the darkness. And God called the light Day, and the darkness he called Night. And the evening and the morning were the first day." [Underlined emphasis added]

Six times in Genesis 1, we are told that the Day was divided into two parts: evening and morning. This same phrase is repeated for each day of the Creation Week (Genesis 1:8, 13, 19, 23 and 31). In order to have an evening and a morning, light was required to divide light from darkness - and we read that light itself was first created on Day One. Although some attribute this "light" as referring specifically to the Messiah as what was actually being created here (with the sun and moon coming later), this is debunked by the apostle John who explained in chapter 1 of his gospel:

"In the beginning was the Word (Yeshua), and the Word (Yeshua) was with God, and the Word (Yeshua) was God. He (Yeshua) was in the beginning with God (Yehovah). All things were made through Him (Yeshua), and without Him (Yeshua) nothing was made that was made." [Underlined emphasis added]

We see here that, like Yehovah, Yeshua has always existed and nothing (not even the light created on Day One) was made except through Yeshua. Although light may seem like a fitting and appropriate analogy for Yeshua, it would be illogical for Yeshua to have created Himself. In order to have any sort of evening and morning, there had to be some sort of light source that caused the earth to be divided into two parts: day and night. Now, many will claim that the Bible only considers the literal day-time portion as constituting a Biblical Day (with the evening portion being ignored). In other words, the Day would begin at sunrise and end at sundown with the darkness serving only as empty filler in between. But this would ignore completely the description of the evening and the morning as comprising each day of Creation. There are also many examples that describe the Day as starting and ending when the "sun goes down." For example, Exodus 22:26[1] states:

"If you ever take your neighbor's garment as a pledge, you shall return it to him before the sun goes down." [Underlined emphasis added]

Obviously, there's nothing that says you can't take your neighbor's garment unless the sun is shining. Even if you took it in the middle of the night, you should still be returning it before the end of the day. Leviticus 2:4-8 states:

"Whatever man of the descendants of Aaron, who is a leper or has a discharge, shall not eat the holy offerings until he is clean. And whoever touches anything made unclean by a corpse, or a man who has had an emission of semen, or whoever touches any creeping thing by which he would be made unclean, or any person by whom he would become unclean, whatever his uncleanness may be? the person who has touched any such thing shall be unclean until evening, and shall not eat the holy offerings unless he washes his body with water. And when the sun goes down he shall be clean; and afterward he may eat the holy offerings, because it is his food. Whatever dies naturally or is torn by beasts he shall not eat, to defile himself with it: I am the LORD." [Underlined emphasis added]
Using this example, should we infer that touching a dead corpse in the middle of the night has no effect on our cleanliness - because the sun has already gone down? Of course not! Similar examples include Deuteronomy 16:6, 24:13, Joshua 8:29, 10:13, 10:27, Judges 14:18, II Samuel 2:24, 3:35, I Kings 22:36, II Chronicles 18:34, Ecclesiastes 1:5, Jeremiah 15:9 and Daniel 6:14.

Further explanation of days is referred to as "evening to evening", "between evenings" or "twilight". The going down of the sun is also shown as being before the "evening" or "even". Deuteronomy 23:11\textsuperscript{[1]} says:

"But it shall be, when evening comes, that he shall wash with water; and when the sun sets, he may come into the camp." \{Underlined emphasis added\}

Joshua 8:29\textsuperscript{[1]} says:

"And the king of Ai hanged on a tree until evening. And as soon as the sun was down, Joshua commanded that they should take his corpse down from the tree." \{Underlined emphasis added\}

Joshua, here, was following the Torah's instruction in Deuteronomy 21:22-23\textsuperscript{[1]} regarding the handling of dead bodies of those put to death:

"And if a man have committed a sin worthy of death, and he be to be put to death, and thou hang him on a tree: His body shall not remain all night upon the tree, but thou shalt in any wise bury him that day: (for he that is hanged is accursed of God;) that thy land be not defiled, which the Lord thy God giveth thee for an inheritance" \{Underlined emphasis added\}

All of these examples clearly indicate that the Day ends at evening, as the sun had gone down. In the context of a calendar, obviously the Biblical Day includes more than simply the daytime portion, as not everything that happens at night simply falls into some sort of black hole never to have existed. The question simply becomes: does the evening belong to the day preceding the evening or immediately after? Some will attempt to use sequential logic to reinforce sunrise as being the start of the Day by claiming light was first created in Genesis 1. However, this also tells us that the world started out as being in darkness - therefore, by using sequential logic, it was actually darkness that existed before any light was created. Finally, the scriptures we just read indicate that the Biblical Day must begin, or reset, after the sun goes down - and, the Biblical Day (or date) comprises of both an evening and a morning (according to Genesis 1).

A very specific example of the Biblical Day starting at around sundown is given in Nehemiah 13:15-22\textsuperscript{[1]} where the Sabbath is clearly described as beginning with the closing of the city gates as the evening arrived:

"In those days I saw people in Judah treading wine presses on the Sabbath, and bringing in sheaves, and loading donkeys with wine, grapes, figs, and all kinds of burdens, which they brought into Jerusalem on the Sabbath day. And I warned them about the day on which they were selling provisions. Men of Tyre dwelt there also, who brought in fish and all kinds of goods, and sold them on the Sabbath to the children of Judah, and in Jerusalem. Then I contended with the nobles of Judah, and said to them, "What evil thing is this that you do, by which you profane the Sabbath day? Did not your fathers do thus, and did not our God bring all this disaster on us and on this city? Yet you bring added wrath on Israel by profaning the Sabbath." So it was, at the gates of Jerusalem, as it began to be dark before the Sabbath, that I commanded the gates to be shut, and charged that they must not be opened till after the Sabbath. Then I posted some of my servants at the gates, so that no burdens would be brought in on the Sabbath day. Now the
merchants and sellers of all kinds of wares lodged outside Jerusalem once or twice. Then I warned them, and said to them, "Why do you spend the night around the wall? If you do so again, I will lay hands on you!" From that time on they came no more on the Sabbath. And I commanded the Levites that they should cleanse themselves, and that they should go and guard the gates, to sanctify the Sabbath day." {Underlined emphasis added}

The burden being avoided here was the merchants pushing to sell their goods inside the city on the Sabbath (starting in verse 15). This is important in that the Sabbath required no work or business to be conducted the entire evening and the following day (and the Sabbath was no exception in how Days were to be measured - it was merely the seventh Day to be counted)! Leviticus 23:3\(^1\) states:

"Six days shall work be done: but the seventh day is the sabbath of rest, an holy convocation; ye shall do no work therein: it is the sabbath of the Lord in all your dwellings."{Underlined emphasis added}

Therefore, the scripture in Nehemiah is a clear example that shows the Sabbath day of rest, being the seventh Biblical Day, began in the evening as the sun was going down and as it "began to be dark". This example clearly debunks arguments that the Sabbath, or the Biblical Day, should only be during the daytime portion (or that it begins at sunrise). If this were true, trading would have continued into the evening without any issue.

Scholars argue that the better translation of "evening" in the Bible is "dusk". The definition for dusk is (Merriam-Webster dictionary) "darkness or semidarkness caused by the shutting out of light". The source of this light is the sun and the consistent cause of shutting out of the sun would be by the horizon of the Earth. Therefore, logically speaking anyway, the proper starting point of dusk (or evening) would be sundown (or after the sun has gone down).

If you will remember, Genesis 1:14-19 gave us three signs that are used in the Biblical Calendar - the sun, moon and stars. We are also given three functions that these signs provide. The first rules over the day - the sun would clearly play that role here. Although the moon can be seen during the day at particular phases, it certainly does not overpower the sun's light. The second and third signs rule over the night and separate the day from the night. Since the moon can be seen during the day, it obviously does not separate the day from the night. However, when visible in the night sky, the moon does dominate as being the more powerful light source. Therefore, the moon rules over the night and the stars serve as the sign that separates the day from the night. Stars only appear to an observer after the sun goes down.

As a side note, this does not necessarily mean that a Day has always lasted 24 hours in length (as our minds today have been trained to think through the use of fixed formulas). In fact, it was not until the fourth day of the Creation Week that both the sun and moon's movements were set into place and ordained. This opens up the possibility that a Biblical Day may have lasted any number of hours in length (perhaps even as long as several years if you measured it with a stopwatch). Joshua 10:12-13 gives us an example where Yehovah extended the Day (by as much as an additional 24 hours), which is known as "Joshua's Long Day". This is a clear example that shows that the Biblical Day should not be measured by mathematics. It is measured by observing the Biblically-based signs - regardless of how long it takes - with the new Day starting after the sun is down and stars are shining.

Clearly, Yehovah understands the concept that the sun doesn't actually "go down" as it is the earth that moves in relation to the sun. But, rather, He inspired scripture to be described from an observer's perspective on earth. If it were the intention for us to fully understand the celestial movements in order to obtain calculations for a mathematical calendar, the sun would never have been referenced so consistently
in this manner. With the added Biblical description of the sun being a sign ('oth) in Genesis, our beacon of light, it is clear that Yehovah refers to time from an observer's perspective. You will find no further instruction to repeatedly calculate using a defined mathematical formula, or to make any attempt to predict when this (or any) sign will occur in the future.

In modern society, we begin days starting at midnight. This is a point on the mathematical timetable of a day that spans exactly, just as our minds have been trained to quantify as being, 24 hours (plus or minus a possible leap second in Coordinated Universal Time, or UTC). Most of us are used to 12-hour clocks that complete a full 12-hour cycle twice a day. Originally, these two cycles were tracked by the sun and the moon, and evolved to the mathematical noon, or 12 p.m. (or post meridiem, meaning "after midday"), and midnight, or 12 a.m. (ante meridiem, meaning "before midday"). The Romans, historically, used a 12-hour clock to measure the daytime portion (while night was divided into four watches)\(^\text{[68]}\).

Midnight is a mathematical concept that roughly coincides with the celestial event called "solar midnight". Solar midnight is when the sun is directly behind the Earth in correlation of where we are located on the Earth's surface (or when the sun is at the most direct point below our feet). This concept is the exact opposite of "high noon" when the sun is directly overhead and begins its decent toward the western horizon. Historically, 12-hour clocks were synchronized with this locally observed event when the sun could be seen at its highest point in the sky. Many communities, just a few centuries ago, marked the high noon event using a time ball. This was generally located on a pole in the center of town that would drop a ball from the top of the pole to the bottom, giving everyone a chance to sync their watches to the exact moment the ball completed its fall. This concept is the origin of today's New York Times Square event every New Year's Eve marking the arrival of the new year on the Gregorian calendar (albeit, in a much more elaborate fashion). This practice, however, varied slightly from town to town and led to confusion for those traveling via the Railroad system developed in the late 1800's. It quickly became evident of the difficulties involved creating arrival and departure schedules for each town that would set their local time of day based on their local observations. For this reason, mathematical and geographical time zones were created to bring mathematical consistency in calculating and telling time (the development of the telegraph also helped play a role). Eventually, city dwellers decided to change over to the railroad's method for setting the official clocks around town. Certainly, this mathematical solution served its purpose well, but it has now become ingrained into our way of thinking when we consider time itself.

In contrast, Biblical Days remain relative based on differences in geography and seasonal positioning of the celestial objects. Mathematics was never intended to be applied like it was for the railroad system. Therefore, the Sabbath begins for different individuals at varying times around the world and does not
universally begin at the same time, on the clock, for everyone. Even if two observers are located in the same time zone, one person may observe sundown (the Sabbath) up to an hour earlier (or more, in some cases) than the other. This is due to the curvature of the Earth and its axis being tilted in relation to the sun as the Earth completes its orbit. Our clocks have become an average mathematical timetable, similar to a calendar, and have completely redefined the concept of a Day from that in the Bible. Obviously the Biblical examples we read above do not translate the Day to begin at solar midnight or when our watches show 12:00 AM. We have completely abandoned the Biblical concept of time and, instead, chosen to follow a mathematical concept (one that began with the railroad system). Now, we rely solely on the latter, which has created a bias in favor of the mathematical rules - often without even knowing that we're doing it.

If you have observed the Sabbath or have been associated with a Sabbath-observing organization, the concept of observing the sun is not new to you - we simply look to the horizon and observe the sun as it goes down. There aren't too many controversies over this method for determining the Sabbath and the actual timing of the event has little variance (i.e. sunset versus sundown) - likely because the different opinions span only a few minutes compared to a few hours (or days), so we don't worry as much about being consistent or mathematically accurate when observing the start of the Biblical Day. Even though the modern concept of solar midnight would technically be when the sun was at its lowest point before turning back upward again, most Biblical scholars and church organizations accept the Biblical method of observation over unseen mathematical concepts to determine the Sabbath and, therefore, the Biblical Day.

Even Hebrew calendar followers begin days starting at sunset (or sundown) which is observed rather than calculated. Some Jewish traditions do add more specific man-made rules - such as starting the Sabbath (Shabbat) when the sun is seen by an observer at the treetops. This later changed to a requirement of lighting a Shabbat candle (or lamp) 18 minutes before sundown to begin the weekly Sabbath (this would require some calculation to be achieved). Other Rabbinical definitions require that three stars should be visible in the night sky before evening begins (with two stars fulfilling the requirement of twilight). This can be found within the Talmud for Shabbat 35b:

"One star-it is day. Two-twilight. Three-night. Rabbi Yose said, ‘Not large stars that we see in the day, nor small stars that we only see at night, rather medium stars...’"

"Rava said to his beadle, ‘You all, who do not have a trasp on Rabbinic measurement [of time], should light the [Shabbat] lamp while the sun is at the treetops.’"

This is in contrast to scripture where we plainly see the sun & stars are directly referred to throughout the Bible and that the day began/ended when the sun was observed to be down and stars clearly divided the day from the night. There is no calculation involved, no rules for treetops or for counting or measuring stars. The Bible gives no other specific examples, rules or mathematical requirements. Therefore, such methods should not be used. Using a simplistic and basic perspective, with no further detailed information, signs (including the sun) would have to be interpreted literally rather than conceptually. This means that the only acceptable argument for using solar midnight would be if the observer could actually see the sun at midnight (which could be the case for individuals in the extreme northern or southern poles, but only at certain times of the year).
In any case, most of us that keep Yehovah's Sabbath have accepted and grasped the Biblical concept of **observing the sun** (and possibly the stars) and not relying on a **timetable of calculated averages** to determine when the Sabbath begins. If you are new to keeping the Sabbath, you may still have an adjustment period that many of us have gone through who were not raised from childhood with an observational, versus mathematical, concept. Although math could be used as a tool to try and predict when the sun will either set or go down at a given geographical location, we understand that it is not the **calculated concept** that determines when the day begins, but rather when the **sun actually goes down**. Also, if either method differs from the other, it is ultimately the **sun & stars** that we should observe and comply with, **not** man-made concepts based on calculations, rules or average timetables (unless there was scripture to specify otherwise).

As humans, we tend to want to change the simple Biblical methods for our own selfish reasons. One of these reasons is often to satisfy our own **conveniences**. For example, an employed person may determine that - in order for them to be available to work at the office on a Friday until 5pm in the winter (after the sun has gone down) - they will self-appoint Sabbath as being "observed" from 6pm-to-6pm and ignore when the sun goes down (since it is so annoyingly inconsistent throughout the year). They may convince themselves that they are still making an attempt to keep Yehovah's Sabbath while at the same time conveniently pleasing their boss' wishes to work past sundown on Fridays. Since 6pm is a specific time that can be **mathematically predicted** and consistent from week-to-week, they may then convince themselves that this method is easier to use in this modern age. This person may even further argue that a 6pm cutoff is valid and authorized due to the **oral** Jewish definition of the "zero hour" that is traditionally defined to begin at 6pm. Of course, now you have allowed man-made concepts to define the **Biblical Day**. This leads to using additional man-made concepts to accommodate for different time zones, datelines, and the rules of Daylight Savings Time, etc. Finally, if this person were to somehow get a Rabbi or other religious "authority" to approve or excuse these methods, the fact that they are man-made wouldn't matter, right?

But you and I now know that defining days with a daily 6pm boundary is **not** supported anywhere within scripture any more than it supports the mathematical concept of **midnight**. We are not given any rights or authorization to make this change on our own. Therefore, this would **not** be of Yehovah! This is the case regardless of how accurate 6pm would be or how convenient it would be to the masses. **Mathematically** speaking, using 6pm would certainly seem easier to predict when the day will begin. But as we have seen, the **mathematical clock** is blatantly in conflict with the Biblical example of **sundown**. Again, this is not to say that using mathematics is a sin or should be avoided completely; however, if we replace or abandon the use of **observation** in favor of **mathematics**, we end up ignoring the Biblical examples of Yehovah's ordained **signs** (regardless of our intentions) and rely, instead, on man-made concepts. The primary reason for all of this is due to many leaning toward their bias for **mathematics** (man's method for understanding time in a unified fashion). As we see in the above example, replacing **sundown** with 6pm would be an example of doing just that.

Finally, the **Biblical Day** is an important foundation to the **Biblical Calendar**. This is because scripture uses the Day for the only mathematical requirement. Simply put, that requirement is to count the number of days starting with particular events. Just as it was demonstrated within the Creation Week, **Day One** was the creation of light, **Day Two** the separation of waters in the air creating the sky, followed by Days **Three, Four**, and so forth. These are the first Biblical dates given to us by referencing the start of creation itself and determining the first **Weekly Sabbath**, which occurred on the mathematically-counted **Seventh Day of Creation**!
BIBLICAL MONTHS

We have discovered the sun's role in establishing Biblical Days with the stars dividing each day as the sun goes down - all described from an observer's perspective. Now we turn to the moon, the other celestial sign that we have already seen plays a major role in the Biblical Calendar. To some, if one observes the sun to begin the day and measures the length of a day based on its routine cycle, then it may seem natural to them that this same process would also apply to the moon in order to measure months. To others, this may not be as clear for the moon is not always visible to an observer throughout its cycle. The moon's cycle, as it orbits the Earth, is referred to as a lunar month. Although most don't actively refer to this cycle today when it comes to a calendar, this concept was used to establish the measuring of months even before the Bible existed. It certainly will surprise some to find references to the moon itself being littered throughout the pages of Biblical scripture in the context of telling time. In fact, the moon serves as the only monthly marker (or a measure thereof) for when events took place (and were to take place into the future).

The Hebrew word for month within scripture is nearly always yerach or, more often, chodesh (also translated as hodesh). Yerach translates (Strong's 3391) simply as moon or lunation:

"3391 - yerach: from a unused root of uncertain signification; a lunation, i.e. month:--month, moon."

The Hebrew word chodesh specifically translates (Strong's 2320) as New Moon:

"2320 - chodesh: the new moon; by implication, a month:--month(-ly), new moon."

So, we can see that when the Bible refers to months it is quite literally using the ordained sign of the moon itself and, more specifically, measuring time using the new moon as a specific event of reference. For example, Exodus 12:3 would read (using "new moon" for chodesh):

"Speak ye unto all the congregation of Israel, saying, in the tenth day of this new moon (chodesh) they shall take to them every man a lamb, according to the house of their fathers, a lamb for an house." {Emphasis added}

Today, it's simply a habit for many of us to consider a month as having a fixed number of days, such as the month of July having exactly 31 days. We also take comfort in knowing that most everyone keeps July universally around the globe as 31 days in length (in order to be consistently calculated anywhere, anytime). Even though the original secular concept of a month was not always based on a fixed number of mathematical days, many have simply forgotten that months used to be commonly measured based directly on the movements of the moon itself. The Wikipedia Encyclopedia describes the word month as:

"A unit of time, used with calendars, which is approximately as long as some natural period related to the motion of the Moon; month and Moon are cognates. The traditional concept arose with the cycle of moon phases; such months (lunations) are synodic months and last approximately 29.53 days". {Underlined emphasis added}

Cognates mean that these two English terms are one and the same! So why don't we use this reference today? The problem is that the average length of a lunar month will vary, averaging 29.53 days in length and does not divide evenly into the solar cycle that lasts approximately 365.25 days. When it comes to
accuracy, most mathematical calendars choose to focus on the solar cycle and loosely estimate the lunar cycle to fit, or rather ignore it all together. The result is often a fixed month that is similar in length to the lunar cycle, but ultimately becomes disconnected from the moon entirely. For example, the modern Gregorian calendar's month averages 30.44 days in length in order to have 12 whole months (of varying fixed lengths) in a solar year. This has changed our modern concept of the month and has, once again, been ingrained into our way of thinking by applying a bias toward mathematical averages and man-made formulas.

The word chodesh appears 224 times in the Hebrew Bible; however, the King James writers favored the English translation as "month" rather than "new moon" over 200 times. Regrettably, most readers today will likely apply their mathematical bias when they come across the word month and may completely miss any correlation being made to the moon or its cycle within the Bible. This is why I prefer to use the descriptive phrase new moon (instead of the alternative word month) when reading scripture in order to help break free from the programmed bias.

Now that we have established the basics, let's look at some examples. I Kings 6:38[1] use both Hebrew terms yerach and chodesh (which has been substituted with our unbiased translation):

"And in the eleventh year, in the MOON (yerach) of Bul, which is the eighth NEW MOON (chodesh), the house was finished in all its details and according to all its plans."

You can see here that this is clearly referencing a date pertaining to a type of calendar. The eighth moon, or month, here is named Bul. This is similar to saying (using Gregorian calendar names) "in the month of August, which is the eighth month". You may notice in verse 1 additional references to particular events being used to convey a specific year - in this case, the eleventh full year following Solomon's crowning as King of Israel. We also learn that this same year is the 487th full year since the Children of Israel came out of the land of Egypt. Just as we counted the number of days within the Creation Week to determine the Seventh Day Sabbath, Biblical Years are also communicated to the reader by referencing the number of years following an event or sign (we'll cover more on the names of new moons and Biblical Years later in this paper). And, just like the Creation Week count to the Sabbath, so too are the number of days counted from the first visible new moon. For example, Leviticus 23:27[1] states (continuing with our word-substitution for clarity):

"Also the tenth day of this seventh NEW MOON (chodesh) shall be the Day of Atonement. It shall be a holy convocation for you." {Underlined emphasis added}

Here, referring to the appointed Day of Atonement, you can see that we should count the number of whole days from an event: Chodesh, or the new moon (the seventh new moon of the year, in this case). There are over one hundred references in the Old Testament that refer to the moon in this manner. Just as a reminder, both the moon and the sun are used merely as a point-of-reference. There is nothing to infer from the practice of observing these ordained signs (regardless of phase) that they should be worshiped in any manner. They do not control time, Yehovah does (through His visible signs)! Many, including Sabbath keepers, tend to resist looking to the moon for the sake of the calendar thinking that they are partaking in such a practice. But it is no different to look to the moon to begin the month than looking to the sun (as it goes down over the horizon) and stars to begin the day.

The question then becomes: exactly when is the Biblical New Moon? In other words, at what phase of the moon should we begin to observe its cycle as being new? Just as the sun and stars are not laid out in step-by-step instructions to describe the start of the Biblical Day, scripture also does not give direct, step-by-step instructions on how to ascertain the start of a lunar cycle. However, the Bible does utilize the very
specific Hebrew word *chodesh* for this event that serves as an important key to understanding the *Biblical Month*.

Semitic languages have a unique feature that other languages, such as English, do not provide. These languages, particularly Hebrew, allow most words to be condensed down into a series of three consonants (referred to as a "root") that provide an additional layer of meaning, causing both words to be connected with the same root. Even if you don't know Hebrew, you can often get a better understanding by identifying and studying the "root" word. As one online Hebrew lesson describes[^69]:

"You take a root, like K-T-V (meaning: write/writing), combine it with different patterns, and that's how you get words like 'writing', 'book', 'to write', 'to dictate', 'reporter', etc.

As you can imagine, this is a very powerful tool for Hebrew student. Patterns by themselves usually carry some meaning too; knowledge of root and pattern can give you a hint to understand a word, even if this is first time you read it."

The patterns being referred to above are achieved by simply adding vowels, prefixes (such as prepositions), suffixes (such as pronouns), possessives, gender and number (plural or singular) to the root word[^67]. In our case, *chodesh* shares the same root (CH-D-SH) and is constructed (originally derived) from the word *chadash* (Strong's 2318[^3]), which means:

"2318 chadash - *a primitive root*; to be new; causatively, to rebuild;--renew, repair."

The idea is that something, which once existed, will now begin anew. For example, Isaiah 61:4[^1] states:

"and they shall build the ancient ruins, raise up the desolations of old, and renew (chadash) the ruined cities, the desolations of many ages." {Underlined emphasis added}

This is referring to the renewing, restoring or rebuilding of the city after its destruction. These examples of *chadash* continue in I Samuel 11:14, II Chronicles 15:8, 24:4 and 12, Psalm 51:10, 103:5, 104:30, Lamentations 5:21 and Job 10:17. In each case, we see the process of making new, or to repair, from what previously existed. By applying this understanding to *chodesh*, it would be more accurate to translate it as a *Renewed Moon*.

Certainly the *moon* itself doesn't physically repair or rebuild itself. So when does the *moon* begin to *renew*? It was on Day Four of Genesis 1 that stated the moon's function, as an ordained sign, was to be a light in the firmament to rule the night. It is this light that grows stronger and lasts longer night after night until eventually the light recedes again until it can no longer be seen. For an observer, this process would begin with the first indication of visible light - at the time of the waxing crescent. This renewed light, raising up from the desolation of the old, previous cycles would best describe *chodesh*. There is no other phase of the moon that can describe a rebuilding from what once existed. It involves a simple practice of searching for that renewed beacon of light to indicate that the moment of the renewed moon has arrived. This is as easy a task as it is to observe the sun at its *going down* behind the horizon. Only the new crescent preserves the Biblical description and retains the meaning behind the Hebrew term *chodesh* and its root word *chadash*. It also means that the term *chodesh* is self-describing and requires no step-by-step definition.

As it turns out, the event of the visible *renewed moon* just happens to occur in the western horizon just as the sun goes down. Both *sunset* and *moonset* take place within minutes of one another at the time of the renewed moon with the crescent first being visible as the sun's light fades away and the stars begin to
shine - at the start of the Biblical Day! All of Yehovah's celestial signs in the sky coinciding with one another to begin the Biblical Month! What a wonderful sign we are given! And what better sign could we have to know when to determine Yehovah's appointed times?

There do exist, however, many other theories (many we will cover) that create observable calendars starting with various different phases of the moon. However, the methodology of searching for the specific phase of the waxing crescent is also repeatedly documented as being the first original concept long before other phases were ever considered. The Collins Discovery Encyclopedia[58] describes the phrase "new moon" as:

"the moon when it appears as a narrow waxing crescent; the time at which this occurs"

The Wikipedia Encyclopedia[66] also confirms the earliest practice of using the crescent and further clarifies the original, historical definition of the term new moon:

"The original meaning of the phrase new moon was the first visible crescent of the Moon, after conjunction with the Sun. This takes place over the western horizon in a brief period between sunset and moonset" {Underlined emphasis added}

In modern society, the result of creating mathematically-based calendars has led to a completely new designation of the term new moon from being the waxing crescent to the calculated astrological event of the moon's conjunction (i.e. when the Earth, moon and sun are in a straight line with one another during each lunar cycle around the Earth). You may notice on today's Gregorian calendar the indication of an astrological new moon (the unilluminated moon) is signified by a black dot. This concept is strictly a mathematical classification. Just as solar midnight would be the conceptual start of the day, the conjunction is used by many today, including within the scientific world, as the conceptual start of the lunar month. This has become a stumbling block for many when reading scripture because they try to apply this newer, more modern concept to the Biblical Calendar. By redefining the term new moon into a mathematical one and shifting to a phase that cannot be seen by an observer, the concept of observation of this ordained sign has become completely abandoned.

**Trumpets**

There does exist, however, an additional layer of instruction within the book of Numbers that we must consider as to when this sign of the new moon arrives. It also helps us to solidify the use of observing the crescent phase specifically. Numbers 10:10[1] states:

"In the day of your gladness, in your appointed feasts, and at the beginning of your RENEWED MOONS (chodesh), you shall blow the trumpets over your burnt offerings and over the sacrifices of your peace offerings; that they may be to you for a memorial before your God: I am the LORD your God." {Underlined emphasis added}

And additionally, on the seventh month, this blowing of trumpets served as a reminder to the people His holy convocation at His appointed time in Leviticus 23:24[1]:

"Speak unto the children of Israel, saying, In the seventh month, in the first day of the month, shall ye have a sabbath, a memorial of blowing of trumpets, an holy convocation."{Underlined emphasis added}
This instructs the people of Israel and the Levitical Priesthood to blow trumpets at the *renewed moon* (chodesh). This serves as a proclamation to all of Yehovah’s people that the new month has begun. Many think of this as only an annual occurrence at the seventh month. But does Numbers 10:10 mean, then, that we should celebrate every month as if it’s the modern New Year’s Day with a count-down celebration? Or, perhaps it better serves a purpose of communicating to His people that the *renewed moon* has been seen. This would serve as a witness to the whole world that His new month has begun, resolving any doubts. You can read in Joel 2:15 that trumpets were also blown for the purpose of assembling together. Numbers 10 then implies that we are to assemble together every month, at each renewed moon, keeping the seventh as a holy convocation. This is how an observational method can bring unity and precision. The more individuals that are looking for the renewed moon each month, the more accurate the practice becomes.

As a side note, the various phases of the moon that are argued to begin the *Biblical Month* that are not visible to an observer (such as the conjunction and Molad) would not fit well with the instructions to blow trumpets as there would be nothing to see. The moment to blow a trumpet would require calculation or repeated observation in order to be mathematically averaged (which is not supported by scripture). Another theory is that the month begins with the *dark moon* (at the moment light fades away from the moon's surface - a similar concept to sundown where the day begins in darkness). This is established by first observing the waning crescent and establishing the first of the month when the moon can no longer be seen. Other than the fact that this method is not a process of the moon being renewed (rather it is depleting) as the root word *chadesh* describes, the primary problem with this theory is that the waning crescent can only be confirmed visually in the darkened sky just prior to sunrise. Gathering together to blow a trumpet in the morning would no longer correlate with the start of the *Biblical Day*. This would not seem to mesh well with the Day of Trumpets (Yom Teruah) either as you wouldn't know the evening prior that the morning would bring confirmation of the moon's disappearance. You would have to delay first day of the new moon to be the following evening. This is one reason why some attempt to change the start of the *Biblical Day* to be in the morning rather than the evening (and we have already seen that this cannot be the case). Additionally, the disappearance of the moon’s light could not be easily confirmed that it was because the moon was no longer reflecting light or if it was simply blocked from the observer's particular point-of-view - not to mention it may be blocked simply because the sun became brighter as it rose above the horizon drowning out any visual evidence. A secondary witness, then, could only confirm that the moon can’t be seen, but not as to why it can't be seen. It’s also possible for two people in one geographical location to not be able to see the waning moon because they are too far north or south of the equator, but others closer to the earth’s center still can view it clearly. This is due to the curvature of the earth's surface. In contrast, the waxing crescent can be easily confirmed by a secondary
witness and is unquestionable as to whether the moon's light is being renewed within its cycle and can be
ascertained and communicated to everyone at the moment it first arrives anywhere on earth.

The practice of looking for the visible crescent, along with the use of trumpets to communicate such an
event, is also documented historically as a regular practice that took place centuries ago. This is not just
conjecture, ideas or make-believe stories made up to support a theory. Rather, it is a part of Jewish history
specifically! Notice what the Encyclopaedia Judaica explains[9]:

“Originally, the New Moon was not fixed by astronomical calculation, but was solemnly
proclaimed after witnesses had testified to the reappearance of the crescent of the
moon”. {Underlined emphasis added}

Communication is a key element to the start of the Biblical Month and the blowing of trumpets serves the
purpose of relaying that message. Notice there is no instruction to delay blowing these trumpets until a
certain time of the day (they are simply blown at the time of the renewed moon), nor is there any
instruction to only blow the trumpets from a specific geographical location. While Numbers 10:10
described silver trumpets to be blown at the tent of meeting, the entire chapter describes the purpose of
trumpets as serving the purpose of communicating to the people so that they would take notice! At the
time of the renewed moon, these trumpets were blown from a central location where His people would
gather together to recognize the renewed moon in a unified fashion. Later, this location would be located
at the temple mount within Jerusalem, but the purpose of communicating this event remained! When you
look carefully throughout scripture, you will find that Yehovah often uses trumpets as a tool to relay
information to large numbers of people, including the entire world. Trumpets play a very large role in
long-range warning, and they were extremely important to both the one blowing the trumpets and to those
that heard them. Consider Ezekiel 33:3-6[1]:

“If when he (the watchman) seeth the sword come upon the land, he blow the trumpet, and warn
the people; Then whosoever heareth the sound of the trumpet, and taketh not warning; if the
sword come, and take him away, his blood shall be upon his own head. He heard the sound of the
trumpet, and took not warning; his blood shall be upon him. But he that taketh warning shall
deliver his soul. But if the watchman see the sword come, and blow not the trumpet, and the
people be not warned; if the sword come, and take any person from among them, he is taken
away in his iniquity; but his blood will I require at the watchman's hand.” {Underlined emphasis
added}

Here we see the importance of the watchman's role and the people's responsibility when they heard the
sound of the trumpet. Alternatively, if one does not blow a trumpet (as instructed), the fault is on them.
Another example that has a serious impact may be found in the book of The Revelation as angels are
described as using trumpets to signal warning to the entire world and the heavens of end-time events yet
to occur! Most notably being the seventh trump that will signal the return of Yeshua, the Messiah, to this
earth (Revelation 11:15[2])!

"And the seventh angel sounded (a trumpet); and there were great voices in heaven, saying, The
kingdoms of this world are become the kingdoms of our Lord, and of his Christ; and he shall
reign for ever and ever."

Matthew 24:30-31[1] parallels this same event using a trumpet to communicate to the entire world:

"And then shall appear the sign of the Son of man in heaven: and then shall all the tribes of the
earth mourn, and they shall see the Son of man coming in the clouds of heaven with power and
great glory. And he shall send his angels with a great sound of a trumpet, and they shall gather together his elect from the four winds, from one end of heaven to the other."

Jewish history also supports the use of mass communication, in addition to blasting trumpets, to make the event of the renewed moon known to the masses. This included the lighting of bonfires and sending messengers throughout Israel. An example of such an exercise was dramatically played out in the film Lord of the Rings: Return of the King when the city of Gondor lit its beacon on fire to signal for help in defending their city whose enemy was threatening to attack. The scene continued with an aerial shot that pulled back into the mountain tops showing the start of a chain reaction of additional bonfires being lit by individuals located in watch towers. Bonfire after bonfire was set in flames until the final one was lit looking over the valley of Rohan - their signal for assistance. This concept was not just a fantasy story, but rather was based on actual methods of ancient communication. Arthur Spier, author of the book Comprehensive Hebrew Calendar, was a Rabbinical authority that was utilized by the Worldwide Church of God (the Sabbath-keeping organization I once attended) in its determination of calendar dates. Although he concludes with the modern usage of a calculated calendar with the majority of the book laying out the calendar spanning several centuries, Spier does describe Jewish history as once relying on observation of the new moon crescent followed by direct communication to the people: "In the early times of our history the solution was found by the following practical procedure: The beginnings of the months were determined by direct observation of the new moon. Then those beginnings of the months (Rosh Hodesh) were sanctified and announced by the Sanhedrin, the Supreme Court in Jerusalem, after witnesses had testified that they had seen the new crescent and after their testimony had been thoroughly examined, confirmed by calculation and duly accepted. The Jewish communities were notified of the beginning of the months (Rosh Hodesh) in earlier time by kindling of night fires on the mountains, and later on by messengers."

The Sanhedrin was a man-made judicial council that claimed authority in making decisions related to Biblical commands. We'll discuss this group in a later chapter, but there are some important factors we can learn from their practices. For instance, although the Sanhedrin council did utilize calculations, we see that it was merely a general method for confirming an eyewitness account given within the courts. And, even though the primary council was located in Jerusalem, they still considered eyewitness accounts from various locations (with many making special journeys to the council to report their findings). If the use of a fixed calendar existed, there would be no need to consider any eyewitness accounts. Instead, it
was the practice of the Sanhedrin to determine the month as being 29 or 30 days long depending on when the following month's new moon was first sighted. They bestowed upon themselves the authority to then blow trumpets when they deemed the new month as being confirmed - or sanctified by the courts.

Psalm 81

Today, the majority of Judaism has abandoned observation in favor of the fixed, calculated Hebrew calendar. As mentioned earlier, this calendar relies on an astronomical calculation of the moon known as the Molad Emtzai. The Molad goes back in history to the 2nd Century BCE in Babylon where ancients used this mathematical average based on repeated observation in order to obtain a closely calculated average of the dark-moon (essentially, the conjunction) that would take place at the time between the visible waxing (new) and waning (old) crescents. This would be similar to establishing a calculated average for midnight by repeatedly observing the time between sunset and sunrise. Other calendar systems use the waning (old) crescent to begin their month (or the dark moon just after the light disappears). Although there are those (including Jews) that do fully accept the fact that the Bible supports a method of observation over calculating a theoretical unseen event, there are still those that try to twist scripture to support other phases of the moon to begin their theoretical month model - even the full moon! More times than not, these alternative arguments often hinge on one particular scripture - Psalm 81:3-4. In the King James, this verse reads:

"Blow up the trumpet in the new moon, in the time appointed, on our solemn feast day. For this was a statute for Israel, and a law of the God of Jacob."

Although this may seem innocent enough on the surface as describing what we have already discussed: blowing trumpets at the chodesh (new moon) and at the appointed time and on a feast day. There are some English variations on how this verse may be interpreted, however, due to some loose associations of particular Hebrew words being used within this sentence. Given the translation's culpability, some attempt to claim that this verse is giving an entirely different definition for the Hebrew word chodesh. For example, the American Standard Version of this verse reads:

"Blow the trumpet at the new moon (chodesh), At the full moon (bakesseh), on our feast-day. For it is a statute for Israel, An ordinance of the God of Jacob." {Underlined emphasis added}

The primary difference here is the phrase "full moon" replacing "time appointed". This difference is due to the Hebrew word being used here, which is bakesseh (Strong's 3677). While some interpret this as "time appointed" or "in preparation", it can also be translated as "full moon" by connecting to the root word kasah (Strong's 3680), which means "plump" or to "fill up hollows". However, kasah can also mean "covering" or "hidden". This tends to give credence to interpret bakesseh as being a "hidden moon". Even though the term chodesh is also used here and throughout the scriptures when referring to the new moon, this is the only scripture that pairs it with the term bakesseh making it a target within calendar debates. Regrettably, this is also the only location within the Bible that uses the specific term bakesseh, so it's just vague enough to allow for varied speculation without having any other context to compare and contrast.

The Orthodox Jewish Bible reads:

"Blow the shofar at Rosh Chodesh, at the full moon, on Yom Chageinu {Underlined emphasis added}

Yom Chageinu means "day of celebration" or "day of festival". There are three appointed Biblical times, all of which involve blowing trumpets (as we are commanded to do in Numbers 10:10 over the offerings
given and in days of gladness and appointed times), that fall around these specific phases of the moon: the Day of Trumpets (Yom Teruah), which takes place at the time of the renewed moon (chodesh), the Feast of Unleavened Bread (Chag HaMatzot), which begins around the time of the full moon (15th day of the renewed moon) as well as the Feast of Tabernacles (Sukkot), which also begins around the time of the full moon. In this case, the term full moon does not necessarily describe Rosh Chodesh itself, but rather could be generally describing various days of celebration that fall at the time of the renewed moon and full moon when trumpets happened to be blown.

There is also the case that this verse is referring to a "Feast Day". The Hebrew word chag (Strong's 2282) indicates one of the pilgrimage feasts described in Leviticus 23, of which there are only three: The Feast of Unleavened Bread, the Feast of Tabernacles and the Feast of Weeks (Pentecost). Since the Feast of Weeks does not land on a day when the moon is full or hidden, we are only left with the full moon as being described for bakesseh.

But does this mean that the new moon is, in actuality, the full moon? No. Only the Day of Trumpets is an appointed day that occurs at the time of the chodesh and it, also, is not a pilgrimage festival. Therefore, this verse must be describing multiple days where trumpets are blown - not just one. Additionally, the Hebrew word used for Day (the Yom in Yom Chageinu) uses an inflection where the word is prefixed with a lamad which implies "leading toward the day". When we consider these things, clearing out any commas that have been added into the English interpretation, we would get the following:

"Blow the shofar at the RENEWED MOON (chodesh) and at the full moon (bakesseh) leading toward the [pilgrimage] festival day (Yom Chageinu)

In either case, there is no historical support or any other hard evidence (or additional scriptural references) to the chodesh being definitively tied to either the full or conjunction (or dark) stages of the moon. The argument that either phase should be considered as a "new moon" is extremely weak and, coincidentally, based on one poetic verse written long after the Torah (instruction) was given. There is also no need to use the term bakesseh to describe the new moon here when the word chodesh was just used. Neither the full moon nor the hidden moon could be considered as being renewed.

Jerusalem Time

There are several organizations today that use the new moon crescent to begin their months, but believe that observation should be limited from within the Israeli borders (or, more specifically, from Jerusalem itself). In other words, if someone outside of the land were to see the new moon crescent, they would ignore the instruction to blow a trumpet and delay the month until it could be confirmed from Jerusalem (where trumpets would then be blown). For example, this would require an observer in the United States, who can clearly see the renewed crescent, to ignore the sign of the new month until after the moon's existence can be confirmed from an observer in Jerusalem - causing a full day delay to the month for the person in the United States. Additionally, if weather conditions had prevented the observer in Jerusalem from confirming the crescent, the observer in the United States would have to delay yet another full day in order for the observer in Jerusalem to confirm. This practice would create a fixed mathematical dateline causing one to avoid looking to the moon and, instead, to Jerusalem. Finally, it causes the potential for an observer outside of Jerusalem to have a month that would last 31 days in length. Suddenly, you are no longer using a system that is directly based on the lunar cycle, but rather a mathematical baseline (or timeline, if you will). But does the Bible define such a timeline? Many like to think so by referring to scriptures that pertain to Biblical law - such as Isaiah 2:3[1] which states:
"For out of Zion shall go forth the law. And the word of the Lord from Jerusalem."

Although the correlation could be made that blowing trumpets to proclaim a new month would be similar to establishing law, man does not create the laws of Yehovah! Neither should we limit ourselves to only following His laws, including the Biblical signs, strictly from Jerusalem. In other words, we can't ignore any aspect of Biblical law (or instruction) simply because we are not located in Jerusalem! If this were the case, then the Biblical Day would only begin when it was sundown in Jerusalem - not where you are actually located anywhere on earth. Additionally, using this logic, we would not be able to keep any of Yehovah's commandments unless we were located within Jerusalem itself. This is simply a ridiculous assumption! Mathematics is not the context of this verse in Isaiah (nor with others like it). Instead, it is a prophetic context as it is referring specifically to the future coming Kingdom of Yehovah with His throne being established in Jerusalem (or Zion). Even so, any rules or laws that would be established at that time, including those for a calendar, would simply be given from that location - but they would be for the entire world to follow.

By not restricting sightings to just one location, observation becomes much more accurate - lessening any room for error. It is also true that the accuracy increases the more people you have available to look! Just as the Sanhedrin, described earlier, considered eyewitness accounts of those that came forward to give their testimony of sightings, so should we consider the testimony of others as they sight the moon and blow a trumpet (as instructed). There is no reason to exclude such a witness simply because they are located outside of Jerusalem or the land of Israel. This dilemma is nothing new to Jewish practices. Many Jews have created a man-made tradition where those located outside of the Holy Land always recognize New Moon Day after 29 days and 30 days (see Yom Tov Sheni in the Historical Sanhedrin section), "just in case" the crescent was seen early in Israel. When confirmed, then an adjustment is made as to which day truly marked the start of the month. In fact, many Jews outside of Israel observe Rosh Hashanah/Day of Trumpets for two days just for this reason. Therefore, those outside of Israel ignore local observation completely, which is once again not instructed within scripture.

Others believe that trumpets could only be blown from the physical Temple (or from the Tabernacle that was located with the people of Israel in the wilderness) as a location of authority. But this would introduce a new problem, if it were true, as there is no physical temple today (nor has it existed for nearly 2000 years). Because of this, many choose Jerusalem since it was the last site of a temple and, according to prophecy, the future site of Yehovah's throne that will be established here on Earth. But even if this could be proven, many Christians (or followers of Yeshua) should understand the concept of the "New Testament" temple as referenced in I Corinthians 6: 19-20:

"Or do you not know that your body is the temple of the Holy Spirit who is in you, whom you have from God, and you are not your own? For you were bought at a price; therefore glorify God in your body and in your spirit, which are God's."

The Body of Yeshua is made up of individual followers, each with Yehovah's law (Torah) written in their hearts. Our temporary bodies (or tabernacles) serve as His temple while we live on this Earth - and Yeshua serves as the Head Priest and intercessor to the Father's throne. If it were true that a trumpet must be blown strictly from a physical temple, then it would be our duty as members of the Body of Yeshua, His Church, to blow trumpets at the start of every Biblical Month regardless of physical location! Any authority bestowed, if necessary, would be from Yeshua Himself as our High Priest and authorized covering. There is certainly no Biblical reason for us to ignore the ordained sign of the crescent just because we are not located in Jerusalem - no more than we should ignore any of Yehovah's laws and instructions when we are outside of the holy land.
New Moon Burnt Offerings

Besides the blowing of trumpets, we read that there were further Biblical events for the *day of the New Moon* that included the presentation of two offerings. The first, which was a requirement, was a burnt offering as described in Numbers 28:11:

"At the beginnings of your new moons (chodeshi) you shall present a burnt offering to the Lord: two young bulls, one ram, and seven lambs in their first year, without blemish;" {Underlined emphasis added}

In addition to required offerings, a peace offering was also customary during the time of the renewed moon (as we read in Numbers 10:10):

"In the day of your gladness, in your appointed feasts, and at the beginning of your months, you shall blow the trumpets over your burnt offerings and over the sacrifices of your peace offerings; that they may be to you for a memorial before your God: I am the LORD your God." {Underlined emphasis added}

A voluntary Peace Offering was included as the memorial practice and would have consisted of the head of the household selecting an animal (without defect) from their herd and presenting it at the tent of meeting. The animal would then be proportioned prior to being placed on the fire. The first portion, presented to Yehovah, was burned. Another portion was given to the priests, but the remainder was eaten at a later time by the presenter in a meal eaten at some point prior to the third day, after which the remains were destroyed. This was a free-will offering and is sometimes referred to as a Fellowship Offering (Leviticus 3:1-17; 7:11-34; 19:5-8 and 22:29-30). There were very specific rules associated with this offering, as found in Leviticus 7:16-19:

"But if the sacrifice of his offering be a vow, or a voluntary offering, it shall be eaten the same day that he offereth his sacrifice: and on the morrow also the remainder of it shall be eaten: But the remainder of the flesh of the sacrifice on the third day (bay-yo-wm) shall be burnt with fire. And if any of the flesh of the sacrifice of his peace offerings be eaten all on the third day, it shall not be accepted, neither shall it be imputed unto him that offereth it: it shall be an abomination, and the soul that eateth of it shall bear his iniquity. And the flesh that toucheth any unclean thing shall not be eaten; it shall be burnt with fire: and as for the flesh, all that be clean shall eat thereof." {Underlined emphasis added}

Here we see that the Peace offering was considered clean up until the third day (bay-yo-wm specifically being the daytime portion - Strong's 3117 - this is the same form of the word yom, meaning day, used in Genesis 1:18 when we are told the sun ruled the day, or ruled the bay-yo-wm). It was on this third day when the food had to be completely destroyed by fire (this requirement is repeated in Leviticus 19:5-8). If not destroyed, then it was considered an abomination for anyone that ate of it, offered it as an offering or for any other food that touched it! Additionally Leviticus 7:20 indicates that the person that ate of this meal also had to be clean less they be cut off as His people:

"But the soul that eateth of the flesh of the sacrifice of peace offerings, that pertain unto the Lord, having his uncleanness upon him, even that soul shall be cut off from his people." {Underlined emphasis added}

These peace offerings were in addition to the renewed moon burnt offering and the daily morning and afternoon sacrifices. Additionally, there were others required for specific holy days, including Yom
Mathematical Bias and the Biblical Calendar

Teruah that also took place at the time of the renewed moon. We see an example of this again in Ezra 3:5:

"Afterwards they offered the regular burnt offering, and those for New Moons and for all the appointed feasts of the Lord that were consecrated, and those of everyone who willingly offered a freewill offering to the Lord." {Underlined emphasis added}

It was most likely the custom to partake in a sacrificial peace-meal together as an assembly. Even though physical sacrifices are no longer offered at a temple today, the tradition of partaking in a meal together during required assemblies should be heavily considered. Although some groups have an occasional potluck (also referred to as an oneg or Jacob's Join), a meal provides an opportunity for everyone, as a group, to fellowship and share their experiences and understanding. Such assemblies for the New Moons are supported in scriptures, including I Chronicles 23:31, II Chronicles 2:4; 8:13; 31:3, Nehemiah 10:33, Ezekiel 46:1, 3, Psalm 81:3, Isaiah 66:23 and Colossians 2:16.

This means that when the next renewed moon is expected (at the end of the 29th day of the month) we should be gathering together as Yehovah's people. It is not treated as a Sabbath Day but as a "living" calendar with each of us partaking in its function. If the new moon crescent is observed on this day (or has been communicated as such via distant trumpets), we should proclaim the month by blowing the trumpets and sharing in a meal together in honor of Yehovah! If the moon is not seen (or declared) that evening, then we should gather together again as the crescent arrives at the end of the 30th day. We also have learned that this process evolved to include communications via bonfire and then messengers that would ride out to spread the news. Today, we have telephones, television and internet media with a worldwide audience of potential observers we have been blessed to be made available.

David's Example

Now that we have established some context, let's look at one Biblical example that is often referenced when studying these New Moon celebrations. The story is in I Samuel 20 when David is invited to eat a meal with Saul, the King and Father-in-Law to David. David had come to fear that the King wanted to kill him, so he consulted with the King's son Jonathan, a close friend whom he trusted, to learn the truth of the King's intentions toward David. To achieve this, David planned to go into hiding for three days while Jonathan remained behind with the King. We also learn that one of these days would be the New Moon in verse 5:

"And David said unto Jonathan, Behold, to morrow is the new moon [that evening], and I should not fail to sit with the king at meat" {Underlined emphasis added}

Many stop here and claim David knew in advance when the "new moon" would arrive - therefore, he must have used calculations and not observation! Or, at best, any observation would have already been made with the waning crescent allowing David to have known, in advance, when the moon would be new. But was David referring to the arrival of the moon itself, or was he referring to the meal that was being planned for that evening for the purposes of looking for the "new moon"? Now notice what David says next:

"...but let me go, that I may hide myself in the field unto the third day at even." {Underlined emphasis added}

The Hebrew reckoning of time is usually all-inclusive when spoken in such a manner. In other words, when David refers to hiding for three days at evening, he would be including the current day (the day this
Within the context of what we have learned regarding offerings, David's plan seems to imply that the intention was for him to miss the peace offering meal being planned that evening by the King (perhaps he planned a meal at every renewed moon) - not that David had some insight or guarantee that the future new moon crescent would arrive that evening. The only thing David knew, for certain, was that evening was a planned meal that would have been made ready that evening just in case the moon was spotted! It very well could have been that David and Jonathan were making their arrangements at the same time the King's meal was being presented as a peace (or fellowship) offering to be slaughtered - perhaps David and Jonathan themselves were the ones presenting that offering for the King. This we are not told. Either way, the question remains: why did David plan to hide from the King for three days instead of just two? This is especially odd if David were so certain that the new moon itself was to arrive that first evening based on calculation!
Notice also that David only refers to this future-coming day as being the New Moon - not a Sabbath or Holy Day. Some claim that this story must have taken place on the Day of Trumpets where the modern Jewish tradition is to observe two days (Yom Tov Sheni) and this was the reason for David's mysterious timing. But this story took place in Jerusalem - the very location where such a dateline would be fixed to a specific day. Jews do not observe Yom Tov Sheni unless they are located in the Diaspora (outside of the Holy Land) and is, historically, a more modern tradition not established until after the time of Yeshua. Furthermore, a high holy day, such as the Day of Trumpets, is never mentioned.

Let's continue with the story: David and Johnathan devise a plan where Johnathan would secretly signal to David in the morning, after hiding until the third day at even, whether or not it was safe for David to return. In order to have an excuse to cover David's time span, Jonathan was to tell the King, if asked, that David had gone to Bethlehem (approximately 6 miles away) by request of his brother, who lived there, to attend a meal with his family (instead of with the King). Whether David actually went to Bethlehem we are not told - only that he was going to hide in the fields. We see in verse 24 that the renewed moon (chosesh), indeed, arrived that first evening where the King held a fellowship meal:

“So David hid himself in the field: and when the new moon (chodesh) was come, the king sat him down to eat meat.” {Underlined emphasis added}

Notice we are told specifically that the moon was come, the sign that the month had begun. This verse also implies that the King waited to eat meat until the moon's arrival was confirmed. However, when David did not show King Saul did not become upset. Rather we are told in verse 25 that the King assumed David was unprepared (unclean) - a requirement for the ceremonial burnt peace offering meal:

“Nevertheless Saul spake not any thing that day: for he thought, Something hath befallen him, he is not clean; surely he is not clean.” {Underlined emphasis added}

The King never asked Jonathan about David's absence and seems to be accepting that David could not attend. The evening ended uneventful. It's at this point, the morning of the second day, that David's original intention of missing the New Moon celebration meal was fulfilled. Certainly if David and Jonathan relied solely on calculation to determine the New Moon's arrival, it was at this time Jonathan could now have easily signaled the “all clear” letting David know that the King did not become upset and there would have been no need for Jonathan to tell his father that David had gone to Bethlehem. But instead, David's plan continues to keep him in hiding another full day and evening!

It wasn't until the next evening meal, on the second day of the renewed moon, that King Saul inquired Jonathan of David's absence in verses 27-28:

"And it came to pass on the morrow, which was the second day of the month, that David's place was empty: and Saul said unto Jonathan his son, Wherefore cometh not the son of Jesse to meat, neither yesterday, nor to day?" {Underlined emphasis added}

Here we see King Saul's assumption of David being unclean is no longer a concern. Many things that make one unclean are not automatically expired after one day. Rather, it seems this second meal was not a sacrificial meal because it had been eaten the previous evening. However, had the renewed moon not arrived, the offertory meal would have still been available to eat - allowing for the previous month to be either 29 or 30 days in length!

It was now that Jonathan tells his father the excuse for David's absence. Whether the King called his bluff or was simply upset for allowing David to leave, the King now became furious toward Jonathan:
"Then Saul's anger was kindled against Jonathan, and he said to him, You son of the perverse rebellious woman, do not I know that you have chosen the son of Jesse to your own confusion, and to the confusion of your mother's nakedness?"  {Underlined emphasis added}

King Saul truly despised Jonathan's favor toward David and knew he would most likely allow David to rule in his stead when the time came. To protect his dynasty, Saul now orders the death of David. It is not until after this second meal, on the morning of the third day, that Jonathan then delivers the bad news to David.

David's original concern (in verse 5) was missing the meal intended for the New Moon celebration and gathering. The chronological layout of this story suggests that David did not know which night the King would be hosting a sacrificial meal versus a standard nightly meal (regular meals could have likely been hosted by the King quite often). It's obvious that David purposely accommodated for the possibility of either meal to be the one intended for the New Moon gathering. In fact, David's plan simply followed along with the standard practice for obtaining and eating the fellowship peace offering that was prepared for the purposes of the new moon celebration. It would have been this preparation process and searching that David was referring to when he claimed that the next day was the "new moon".

Proponents of the Hebrew Calendar claim that David relied upon the Molad and would have already observed a waning crescent moon when he had made his plans to go into hiding. The first day of the month would have been a celebration of the conjunction moon and the follow-up meal would have been to observe the waxing crescent in order to confirm the previous evening as being the start of the month. This practice is not only clumsy and inaccurate; it is - once again - not given within scripture. There is a similar process of using the waxing crescent as confirmation that is pulled from Jewish stories given within the Talmud, but these writings were strictly inspired by men (and admittedly so by the Rabbinical sources that wrote them) and should not be considered as part of the canon of scripture.

When you begin to rely on calculated calendars, you may begin to realize that this monthly New Moon event of partaking in a fellowship meal quickly becomes vain and completely useless. In fact, this is exactly what most Sabbath-keeping church groups believe today! Many don't even recognize this monthly event and their members could care less as to when the moon's cycle begins. Since the New Moon Festival gathering was not instructed as serving any other purpose (such as a Sabbath or Appointed Festival), there can be no other significance to their existence within scripture other than to confirm an observation and recognize the renewed moon when it comes! What better setting could there be to blow a trumpet to announce the start of Yehovah's month than when they were all gathered together in fellowship? Additionally, we learn in Isaiah 66:23[13] that these monthly observances of the New Moon will continue into the future coming Kingdom:

"And it shall come to pass that from one New Moon to another, and from one Sabbath to another, all flesh shall come to worship before Me,' says the Lord."  {Underlined emphasis added}

We see here where we will gather together, not only on the Sabbath but, at the New Moon! Proponents of a calculated calendar cannot understand the significance of this scripture. Instead, many will simply brush it off or believe that keeping such a ceremony today is unimportant or, worse, inferring that it must be treated as a Sabbath day or that searching for the crescent moon is equivalent to worshiping it as an idol in the heavens.
Overcoming Our Bias

Even if the new moon crescent is accepted, our seemingly uncontrollable urge to predict this event kicks in! Predicting when the moon's cycle is renewed every month is not a simple task - especially if one's objective is to create a common fixed mathematical calendar that everyone can use around the world! This can make it extremely frustrating for those looking for a unified mathematical solution. As stated earlier, this is due to the fact that a complete lunation cycle does not complete in an exact number of whole days. This cycle, more specifically, is called the Synodic Cycle and is closer to 29.530588853 days, varying anywhere from 29.26 to 29.80 days depending on the sun's gravity as it affects the moon's eccentric orbit around the Earth throughout the year. But to an observer on the surface of the Earth (the Biblical perspective we established for observing the sun to determine the day), they would find that a lunar cycle will last either 29 or 30 whole days (with days starting locally after sundown).

Because our modern mathematical calendars use the same fixed number of days in our months regardless of geography, we may also tend to apply this same reasoning with lunar months believing that everyone around the globe witnesses the same lunar cycle in the same number of whole days, but that would be incorrect. Thanks to the man-made invention of the international dateline, we incline ourselves to think that everyone must count the same number of whole days from every geographical position - in this case, either 29 or 30 days. But depending on where you are located, this number will vary for each observer depending on where they are located. How is that possible? The reality is that, since a lunation cycle lasts approximately 29.5 days, one half of the world observes a lunar month for 29 whole days while the other half will observe the same lunar month for 30 days. This makes each lunar month of no particular length when considered from a global perspective. This is also true for a Biblical Month and would also mean that it does not necessarily begin on the same day of the week for one observer as it does for an observer on the other side of the globe (as there is no Biblical requirement to do so). But our bias has our minds trained to think that this scenario is mathematically inconsistent, or at least confusing and unpredictable - and so an observational-based system must be as well.

It can be very uncomfortable for individuals who rely heavily on their mathematical bias to make the transition to a lunar cycle - especially in our modern age. But if we, as a society, returned to the simple act of observing the moon (just as most Sabbath observers do with the sun to determine the Biblical Day) it would make scripture much clearer to perceive and understand (especially when it refers to dates) because they would be uncomplicated.

So, what do we do when the new moon crescent can't be seen due to clouds? Could the proclamation of the month be delayed? This argument is the one most often used against a method of observation because it appears to contradict the unity mathematics provides. Although it is certainly possible a local delay could occur, weather would only be a factor because Yehovah allowed it to happen. With observation, though, its accuracy increases as more people participate. Unlike the central location of the courts utilized by the Sanhedrin, if everyone around the globe followed a method of observation (using trumpets to communicate their findings), it would be extremely unlikely that no one would be able to view the crescent when it first arrived. Its appearance would most certainly be seen within a very short time frame as the Earth continued to rotate. The likelihood that no one on the entire Earth's surface could see the crescent for the entire day (or even within just a few hours) would be very rare. This would likely only occur with a global catastrophe like that of the flood during the time of Noah.

As a side note, the story of Noah references a specific number of days the ark was afloat that happens to be evenly divisible by 30. Combined with other references, many are led to believe that the Bible once measured all months as being exactly 30 days in equal length. There are also Biblical references to 30 days as being a generic number when referring to future or conceptual months (such as allowing for 30
days to mourn a person's death). Since half of the world always observes 30 days every lunar cycle, this would be an appropriate generalization for the length of the moon's cycle. It is also possible that Noah was simply unable to see the crescent due to weather conditions (from the continuous rains followed by the enormous amounts of water evaporation). If Noah had no visual confirmation (and since there was no one left to blow a trumpet), it is possible Noah simply counted the months as being 30 days in length because he could not see the moon to make a confirmation. Although this is merely conjecture, there is no hard evidence that a fixed calculated calendar system once existed at (or prior to) the time of Noah any more than you can prove that the movements of the celestial bodies have changed drastically over the millennia causing the moon's cycle to move at a slower pace today.

Some will simply argue that living day-to-day using a method of observation is just plain clumsy and can only lead to chaos and anarchy. Since observance of the moon's crescent can vary, depending on viewing conditions (including weather, geography, etc.), it's generally believed that the crescent event is simply not "math friendly" and that mathematical calculation is the only way to achieve true uniformity. Mathematical uniformity, though, can only be achieved if everyone used the same mathematical formula. To accomplish such a task, one would have to successfully predict when sunset and moonset would occur at the exact moment the moon's crescent was first visible by an observer located at any geographical location on Earth at any time of the solar year. The math would be so complicated that it would require a computer for the layman to understand. This is why most mathematical calendars are simplified by creating averages and defining datelines and time zones to make it more feasible to utilize. But observing the new moon crescent and counting the number of days from its appearance is a method simple enough to be taught to a five year-old child, which supports how His laws should be perceived according to Psalm 119:130. By adding the additional instructions to blow a trumpet and gathering together in fellowship as one Body (regardless of where one lived), His people would be of one mind all over the world using faith and a strong focus on the Heavenly Father and His creation (not a formula). There would be very little doubt in its accuracy. Ultimately, observation combined with communication proves to be more accurate than mathematical averages - especially as the number of participants increase. And although either method could produce similar results, only observation forces His people to practice the Torah in mind, body and soul without adding or subtracting from its requirements. Observation presents no Biblical conflicts.

One final point of consideration to support the new moon crescent as the start of the Biblical Month - and that is the physical practice of looking for the renewed moon should perfectly represent the purpose that is embodied in the celebration of the Day of Trumpets (Yom Teruah). This appointed Sabbath (Leviticus 23:24-25) is the only one commanded to be held on the first day of the month. This day is a memorial of blowing trumpets, the last of which will signal the coming Messiah to rule over the Earth and we are told that He will ascend from the heavens at the sound of a trumpet (I Thessalonians 4:16). The search for the new moon crescent perfectly preserves the actions we should be practicing regularly by looking to the sky for the sign of His coming and, when it arrives, the blasting of a trumpet informs the entire world that He has returned! This cannot be embodied by calculating an invisible sign as that of the conjunction (or, as I like to call it, "the Agnostic Moon"), nor is it preserved by looking to the fading light of the waning moon as it disappears (or my nicknamed "Rapture Moon"). We are told that no man will know the exact time He will return (Matthew 24:36), but when He does there will be no doubt as He descends from the heavens. I believe there is a deeper purpose and meaning in which we can take comfort practicing every month - looking to the heavens for the first appearance of the Father's ordained sign of the times...until one day when it will be the Messiah we see.
BIBLICAL YEARS

Now that we have established the Biblical Day and Month, one major element remains: the Biblical Year. Just as our mathematical bias persuaded us to assign a fixed number of days to a given month, we are also determined to assign a fixed number of months in a given year. For those of us comfortable with the Gregorian calendar, we assign twelve months per year. As we learned in the previous chapter, a lunar cycle lasts just over 29 1/2 days and does not easily divide into the solar year. The solar year lasts just a few days shy of 12 1/2 lunar months. But, does the Bible explain to us how many months we should keep in a given year or when the New Year should begin? To understand the answer to this question, we need to turn to the scriptures. We are told directly by Yehovah Himself in Exodus 12:2:\[1]\n
“This month shall be your beginning of months; it shall be the first month of the year to you.” {Underlined emphasis added}

This instruction was given to Israel at the time of their exodus out of Egypt. The following statements continue the rules of keeping the Passover. We also know that the Passover was observed in the same month, the first month (or renewed moon). Exodus 13:3-4[\[1]\] further explains the month Israel left Egypt:

“And Moses said to the people: ‘Remember this day in which you went out of Egypt, out of the house of bondage; for by strength of hand the Lord brought you out of this place. No leavened bread shall be eaten. On this day you are going out, in the month of Abib.’” {Underlined emphasis added}

Understanding the definition behind the word month as being translated from Chodesh (Strong’s 2320), we can understand these verses as saying:

"On this day you are going out, in the RENEWED MOON of Abib;" and "This RENEWED MOON shall be your beginning of RENEWED MOONS; it shall be the first RENEWED MOON of the year to you."

So, to understand when the Biblical Year begins, we just need to know one thing: when is the renewed moon of Abib? Abib (also translated Aviv) is used here as a very specific term. We will see that this Hebrew term is not merely a proper name given to the first month; it is also a descriptive state of being.

Proper names within the Hebrew language always contain an inherent meaning (and still do today) within their construct. Unlike our traditions in the Western World where names are merely a unique reference label (not much unlike a number assigned by a computer), the Hebrew language is broken down into representative segments (similar to a group of picture images that, when combined, form a word or name). When Yehovah gives a name for someone or something, the meaning is always perfectly represented. Understanding this, we must then look at the meaning behind the proper name Abib. Let's start with the King James’ version translation from Strong's (24), which translates as[\[2]\]:

“24 ‘abiyb aw-beeb’ from an unused root (meaning to be tender); green, i.e. a young ear of grain; hence, the name of the month Abib or Nisan:—Abib, ear, green ears of corn (not maize)."
Exodus 13:4 specified that the first month was of Abib. With this definition, we would infer that the new moon crescent was of green, young ears of grain in the fields.

Another translation is often green, tender ears. In either case, we see that the name Abib itself is a reference to the growing stage of crops. This definition, however, is derived outside of Biblical resources (as there is no "root" word used within the Bible to better define its meaning). So, we must look further for other references in order to understand the context. Exodus 23:15\textsuperscript{[1]} refers, once again, to the month of Abib:

"You shall keep the Feast of Unleavened Bread (you shall eat unleavened bread seven days, as I commanded you, at the time appointed in the month of Abib, for in it you came out of Egypt.)"

Additional references to Abib are found in Exodus 34:18 and Deuteronomy 16:1. As we mentioned earlier, seasons (as we refer to them today) were only defined as summer and winter in the Bible. Essentially, the year was broken into two parts - the season of harvesting and the season of winter. People were agrarian in nature and were quite aware of which crops would be ripened and when. The people at the time of Moses would have identified perfectly with Yehovah's description of the first month. They would have understood what Abib referred to and as being related to crops. We are also given a very specific description during the plague of the hail prior to Israel leaving Egypt in Exodus 9:31-32\textsuperscript{[1]}:

"Now the flax and the barley were struck, for the barley was in the head [Abib] and the flax was in bud [Giv'ol]. But the wheat and the spelt were not struck, for they are late crops [Afilot]." \textit{[Underlined emphasis added]}

This describes a state of mature barley as being brittle enough to be damaged by hail and not flexible (Afilot) enough to take on the barrage of the storm. Barley is the first cereal grain to be harvested every year. This makes the translation "green ears of corn" a bit misleading. The Karaite Korner, a group dedicated to observing the barley harvests within the land of Israel, claims the Strong's definition of green ears is not completely accurate. They explain in the FAQ page that\textsuperscript{[6]}:

"Abib does not mean "green ears", despite the incorrect translation in the King James Bible. The precise meaning of Abib must be reconstructed by going into the fields and studying the barley and cross-referencing this with the Biblical evidence. The Bible often speaks of "Abib parched in fire". This refers to grain which is developed enough to be eaten after it has been parched. In contrast, "Green Ears" is such a broad term that it can refer to grain which when parched will shrivel up leaving no edible material. This has been confirmed by experiments. In order to be Abib, the barley must be more developed than Green, tender ears.." \textit{[Underlined emphasis added]}

The full meaning of this passage and its ramifications for understanding the agricultural term Abib is discussed in an article titled "Abib (Barley)\textsuperscript{[6]}". With the additional support from Exodus 9 above, we can conclude that Abib is a reference to the state of the harvest - more specifically, that of the barley harvest.
The use of barley crops to determine the year is further supported after Israel would arrive in the Promised Land where we are told that, during the Feast of Unleavened Bread, Yehovah commanded a wavesheaf offering (Leviticus 23:10-12) that consisted of the first picked barley of the harvest. In fact, this command included that none of the early harvest could even be consumed until this event took place. This wavesheaf offering began the Feast of Firstfruits - or the count to Pentecost. Obviously, the requirement of having ripened barley available for the wavesheaf offering was an extremely important factor at the start of each year and, since the people could not eat it until it was offered, it was vital to identify the correct month that would be of Abib. As the article above references, Leviticus tells us, in even further detail, what conditions (or stages of growth) the barley would be acceptable as an offering - giving us a further description to the meaning of Abib. Leviticus 2:14[1] states:

"If you offer a grain offering of your firstfruits [wavesheaf] to the Lord, you shall offer for the grain offering of your firstfruits green heads of grain roasted on the fire, grain beaten from full heads."

This specifies that the firstfruit offering of Abib barley could be either 1) parched in fire, or 2) as crushed Carmel. Therefore, at the time the grain is given as an offering, if the seed within the barley heads have not matured past the milky stage and would simply burst open when squeezed or parched in a fire, it is not yet Abib. However, if it is simply moist, but not quite enough to be crushed into flour, a fire could be used to remove the moisture and, then, be crushed. At this stage of growth, Barley is often visually green in color, but with tell-tale signs of yellowing. This stage would be acceptable for the offering. Additionally, barley stalks at this stage would be better protected against hail damage. All together, these indicators would be considered as being in a state of Abib. If the new moon crescent arrived at a time when barley could be found in such a condition to be used in the Wave Sheaf, then the season had obviously arrived and everyone would be gearing up to harvest and partake in what they reaped. They obviously would be ready for the Wave Sheaf so that they could begin to eat of the year's new produce.

If a renewed moon arrived with no Abib barley, then declaration of a new year would not begin until the following renewed moon sighting. This would mean that the barley harvest could mature to a level of hardened grain - visibly yellow in color. For more information regarding the barley harvesting, see Growth and Development Guide for Spring Barley[15]).

We can see, then, that the scriptures give us yet another sign on which to measure our Biblical Calendar. The renewed moon remains the primary marker for the start of the Biblical Month, but with the added caveat of Abib barley being available (assuming it is proper for the Wave Sheaf barley offering) it also marks the first month of the Biblical Year. The Israelites would have clearly understood the significance behind the word Abib. Today, many often dismiss this term as simply an arbitrary name to a defunct calendar that not even the Hebrew calendar retains (it has renamed the first month as Nissan). But now that we have a better understanding with an applied context, we can use this meaning and apply it to scripture. For example, in Exodus 34:18[1] we can understand the commandment given to Yehovah's people as follows:

"The Feast of Unleavened Bread you shall keep. Seven days you shall eat unleavened bread, as I commanded you, in the appointed time of the RENEWED MOON [Chodesh] of MATURE/PARCHABLE BARLEY [Abib]; for in the RENEWED MOON [Chodesh] of MATURE/PARCHABLE BARLEY [Abib] you came out from Egypt."

There are those that argue if any kind of green herbage exists in the land then the month should be considered Abib. But as we have seen, it is required that the plant be matured enough to be parched in fire, at a minimum. Then the question becomes: does the year begin when any Abib plant is discovered at
the necessary level of ripeness in a particular location or do you wait until it can be found throughout all the land? We have learned that the Biblical Calendar is based on signs and events. Therefore, any Abib barley that is found (at least, where it grows naturally) would be a sign, or marker, from which to begin the year. Waiting for the entire region to be filled with Abib barley would be like waiting until the moon was full to determine it was renewed. Additionally, we have the wave sheaf offering that requires only the first fruit of the land (as a whole), not the first fruit of every patch of land growing barley.

We now have the basis to begin the Biblical New Year. But, if the appointed Festivals are to be based on Abib barley specifically, where should we look? Just as there is nothing specified as to how much Abib barley is required, we are not told where to search for it. The people of Israel were given the instruction of identifying the first month (in the first month) while they were in Egypt. But barley is grown today in various locations around the world and at different times of the year. In fact, barley is grown during the late fall and winter months quite regularly in farmlands located in the southern hemisphere (as this is their warmest months). Of course, we do know that the Passover season took place in the spring timeframe, but large amounts of barley are also grown within North America at about the same time of the year, but its maturity levels of growth can vary from that in Egypt or Israel significantly to deter results depending on various factors, including area weather conditions. Furthermore, crops can be grown in controlled environments, such as greenhouses, any time of the year. If Abib barley is instructed as our sign of reference, how do we know which barley is accurate?

Although barley may be located in various locations throughout the world, it hasn't always been the case. Obviously referring to barley grown in controlled conditions under man's guidance should not be considered when looking for Abib barley at the time of the renewed moon. This, then, would lead us to question the authenticity of barley exported to various locations around the world that take advantage of climate conditions at various times throughout the year. This means that our best, most logical choice would be to look to indigenous barley - the geographical origin where barley historically grew naturally.

Natural, or wild, barley is referred to as Hordeum spontaneum. Its origins spread from regions of North Africa and Crete in the west (primarily Egypt), to Tibet in the east. It grows most abundantly in the Fertile Crescent region (with modern-day Israel located in the middle of this region). According to the scriptures, the original borders of the Promised Land extended well beyond the modern-day borders of Israel. Yehovah's borders included all of the land from the river of the Nile in the east (in Egypt) to the Euphrates River in the west (located in modern-day Iraq). This entire region is located directly inside the Fertile Crescent. The earliest evidence of wild barley in an archaeological context comes from the Epipaleolithic at Ohalo II at the southern end of the Sea of Galilee. In other words, barley originated in Israel with the Fertile Crescent having the natural conditions in which it grows naturally. Therefore, this geographical region would provide a point of reference that would match that within scripture. This area would have included Egypt, which is where the people of Israel were located when they were instructed to use the Abib to begin their Biblical Year. Although the Fertile Crescent region contains both harvested (Hordeum Vulgare) and wild (Hordeum Spontaneum) barley, the wild barley is much rarer the further you go outside of this region.

Just as with the renewed moons, there are some that believe you must only observe barley from Jerusalem; however, the city itself does not have a history of growing barley - either cultivated or wild. barley is generally located a few miles outside of Jerusalem itself, closer to the river.

Although barley was grown in Egypt, it would not have been in such a large abundance in the wilderness. Arguments abound that Israel could not have used such a method during the 40 years of dwelling in the wilderness following the exodus out of Egypt. However, there is no certainty that Hordeum Spontaneum did not exist entirely. In fact, barley is relatively drought tolerant. After coming out of
Egypt, if Israel did not have any wild barley to determine the start of their years, Yehovah still tabernacled with them at the temple and He most certainly would have known when this occurred (if not caused it to grow). But since we are not given examples of Yehovah giving this instruction every year, another possibility is that they looked to an alternative source. The fig trees, which still exist in the wilderness today, bloom at the same time each spring in this region during the breba fig crop\(^4\). It is likely that figs would have been harvested while in the wilderness as a primary source of food and would have served as a strong equivalent to barley. This is conjecture, of course, but perhaps this is why Hosea 9:10 compares Israel to grapes in the wilderness\(^1\):

"I found Israel like grapes in the wilderness; I saw your fathers as the first ripe in the fig tree at her first time."

We also saw earlier that the wavesheaf offering was referred to as the firstfruits. By harvesting fig trees, as an early-season crop, Israel may have inferred from the barley wavesheaf (that they were to begin after entering into the Promised Land) being called the firstfruits as also being the first fruits of the harvest season. We also read earlier that Yeshua referenced a fig tree as an indication of the growing seasons (in Matthew 24). In either case, most that argue against Abib barley to begin the year based on availability in the wilderness is also based on conjecture. We also know that the people utilized scouts to search and report back findings to the camps - this was likely the simplest solution as Abib barley certainly would have been in nearby locations.

So now, just as we learned that the new moon crescent arrives with the blowing of a trumpet while gathering together in fellowship, we see here that the new moon crescent of Abib arrives at the same time, but with the existence of ripened barley in the fields (whether wild or harvested). Communication of such findings would have been simple as everyone came together during the New Moon Festival. If there were no reports of Abib barley in the fields, then another month was added to the current year.

Now that we have read the instructions regarding the Biblical Year, we may notice that there is no scriptural foundation for a pre-determined number of Biblical Months within a given year. Just as a lunar month lasts 29.53 days, a solar year (a full orbit of the Earth around the Sun) lasts 365.24 days (or about 12.37 lunar months). Yes, this means that a Biblical Year can last either 12 or 13 months. The calculated Hebrew calendar resolves this by inserting a 13th month (or leap-month) into the year at various times on a rotating 19-year cycle. This is similar to the Gregorian calendar inserting a leap-day once on a 4-year cycle (unless the year is divisible by 100 but not 1000). Of course, there are those that believe the Hebrew calendar always existed. But this is not true. The Wikipedia Encyclopedia\(^2\) confirms:

"Pesach [Passover] is a spring festival associated with the barley harvest, so the leap-month mentioned above is intercalated periodically to keep this festival in the northern hemisphere's spring season. Since the adoption of a fixed calendar, intercalations in the Hebrew calendar have been at fixed points in a 19-year cycle. Prior to this, the intercalation was determined empirically."

However, through the simple task of observing the barley fields, we can rather easily determine that the New Year has begun (especially if it is communicated). It is the visible sign of the harvest that is given to us directly by Yehovah Himself when he named the first moon Abib. This is how we can truly know when His season has arrived: at the moon's crescent of Abib - regardless if it's the 12th or 13th month!

Now, some think they find fault with the Abib method by claiming that the entire time it takes to harvest barley lasts anywhere from six to eight weeks and could not possibly be used to refer to one specific month of the year. But Abib does not refer to the harvest process itself, but rather the availability of
barley ready to harvest at the time of the renewed moon. This is likely confusing to some because they may believe that each person throughout the land was required to bring their own barley as an offering. But the Wavesheaf ceremony, which required the first portion of harvested barley, was not performed for each individual - rather for the entire community as a whole. The Jewish Encyclopedia explains this service:\(^{[65]}\):

"The reaping was done with much ceremony. Messengers, sent by the bet din to the chosen field on the day preceding the Passover Feast, drew the heads of the stalks together in sheaves and tied them in order to facilitate the work of the reapers. Then when the hour for gathering came the reapers thrice asked permission to reap; this was done in order to impress upon the Boethusians that this was the proper time for the gathering of the 'omer (Men. vi. 3). After the grain had been gathered it was brought to the courtyard of the Temple, where, according to R. Meï¿½ it was parched while it was still in the ear; according to the other rabbis, it was first thrashed and then parched. The grain was ground into coarse meal and then sifted through thirteen sieves until it became very clean, after which the tenth part was taken, the measure of the 'omer, and given to the priest. The remainder, which was subject to hallah, and, according to R. Akiba, to tithe also, could be redeemed and eaten even by laymen. The priest proceeded with the 'omer as with any other meal-offering: he poured oil and frankincense over the meal, "waved" it, and then burned a handful of it on the altar; the remainder was eaten by the priests (Men. vi. 4). The "waving" was done in the following way: The offering was placed on the extended hands of the priest, who moved them backward and forward (to counter-act the effects of injurious winds) and then upward and downward (to counteract the effects of injurious dews; Pesik. R. xviii. [ed. Friedmann, p. 92a]; Pesik. viii. 70b; Men. 62a; Lev. R. xxviii. 5). As soon as the 'omer ceremony was completed the people of Jerusalem were permitted to eat of the newly harvested grain."

This ceremony was, essentially, a kick-off of the harvest season. The important factor was that barley would be ready in time to perform this ceremony which required it to be Abib. It did not require all of the land or each household to have Abib no more than the moon is required to be full of light to be considered new.

The use of crops by the Children of Israel has always been intricately tied directly into the Festivals of Yehovah that were kept within their seasons. The Wikipedia confirms this connection:\(^{[46]}\):

"In ancient times, the grain harvest lasted seven weeks and was a season of gladness (Jer. 5:24, Deut. 16:9-11, Isa. 9:2). It began with the harvesting of the barley during Passover and ended with the harvesting of the wheat at Shavuot."

Judaism 101 further makes this connection to the ancient calendar explaining when the 13th leap-month would be inserted into the first month:\(^{[35]}\):

"In ancient times, this month was added by observation: the Sanhedrin observed the conditions of the weather, the crops and the livestock, and if these were not sufficiently advanced to be considered "spring," then the Sanhedrin inserted an additional month into the calendar to make sure that Pesach (Passover) would occur in the spring."
We see here that Israel (the Sanhedrin) considered several variables, over time, when the renewed moon was declared the first renewed moon of the year. But only the term *Abib* is directly instructed by Yehovah within scripture. Only with the method of observation can all of the signs given by Yehovah in scripture be preserved: the sun, moon and harvest seasons.

There are other arguments that claim the Bible supports use of the equinox (or the *equilux* - a definition used in the Enoch calendar that indicates equal day and night in Jerusalem). Many refer to the Hebrew word *tquwphah*, used by Moses in Exodus 34:22 when describing the three pilgrimage Feasts. Even though we have already seen direct instruction from Yehovah to Moses that the moon of *Abib* was to be the first month, the mere possibility that the equinox is referred to in scripture opens up a new Biblical variable to support calculation. *Tquwphah* is used Biblically in context to the year’s end, or the end of the harvest. The Hebrew meaning of the word *tquwphah* (Strong's 8622[^1]) is:

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8622 tquwphah tek-oo-faw' or tquphah {tek-oo-faw'}; from 5362; a revolution, i.e. (of the sun) course, (of time) lapse:--circuit, come about, end.
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Therefore, the best meaning would be *full circuit* or *completion*. Psalm 19:6[^2] also uses this word in relation to the cycle of the sun:

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"Its rising is from one end of heaven, And its circuit (tquwphah) to the other end; And there is nothing hidden from its heat."
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This is referring to the daily cycle of the sun from an observer’s perspective - there is no further detailed explanation here of the solar equinox. This same Hebrew word is also used to describe the time of year kings go to war (II Chronicles 24:23) and for the cycle of pregnancy (I Samuel 1:20). Therefore, its meaning cannot be specifically *equinox*, nor is there nearly enough detail given in either context or meaning of the word. It is merely a cycle that could be attributed to any number of repeating events. So, what repeating event is being used in Exodus 34:22-23[^1]?

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"And thou shalt observe the feast of weeks, of the firstfruits of wheat harvest, and the feast of ingathering at the year’s end (tquwphah). Three times in the year all your men shall appear before the LORD, the LORD God of Israel."
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The context here is referring to the pilgrimage harvests throughout the year. These harvests are a repeating event every year and end with the wheat harvest in, what we now call, the fall season. With the
context of Psalm 19 using the word *tquwphah* in a daily manner, there is no reason to radically assume this is referring to the complex anatomy of the Earthly equinox in relation to its orbit around the sun. That being said, some refer to specific star constellations that occur at the time of the equinox that many claim to use to determine spring. In combination with the requirement that Passover take place in the spring, the rule used is to count a month as the first of the year if it causes the 14th (Passover) to fall on or after the arrival of the constellations that correlate with the equinox. In recent years, this method happens to correlate with the arrival of Aviv barley within the Fertile Crescent. Whether this method trumps that of physical Aviv, however, is not specified within scripture and cannot be fully supported. It also is a future event that must be calculated (and not observed at the time the event occurs).

It is a disadvantage to many of us today who ignore agriculture as a natural sign of timing and weather conditions. In these modern times, we rely mostly on mathematical formulas to predict seasons (usually based on the calculated equinox or equilux). In the past few hundred years, many relied on almanacs to help predict seasons and assist farmers in planting at the right times. Although these almanacs were based on mathematics, many considered them to be more accurate as they factored in specific elements such as sunrise and sunset, weather, tides, and so forth with respect to time. In other words, the math was more closely based on an observer's perspective. Even city dwellers recognized the accuracy of such publications over that of local meteorologists when it came to long-term forecasts. But even the readers of such almanacs would often fall prey to the desire to predicting such events.

The fact remains that a mathematical calendar simply cannot provide the flexibility of knowing when crops will be ready to harvest. As the saying goes, "actual results may vary". Many will feel that using the Biblical Signs for a calendar is extremely unreliable and find it difficult to break free from their comfort zones. The challenge came when the people left the Promised Land and were no longer able to observe the barley growth. This led to the decision to mathematically average the observed cycle. The long-term result, however, has led many to turn to the Hebrew calendar that uses this average method and completely ignore the instructions given to them by Yehovah Himself when the opportunity to observe barley, once again, from the Promised Land became possible again. We'll discuss this further as we begin to see how the Hebrew Calendar has developed throughout history.
BIBLICAL WEEKS

Now that we have established the primary elements of the Biblical Calendar, there is one last element that should be covered for clarification - the Biblical Week. Even more so than the Biblical Day, there is very little that is questioned about the Biblical Week. We are first given the example of the Week in Genesis 1 that consisted of six days of Creation ending with one day of Sabbath rest. The Ten Commandments further support the week as being six work days plus one rest day. The Biblical concept of the week has always been based on the perpetual, never-ending count of seven day cycles to determine the regular Sabbath that began with the Creation Week. We are told to continue this cycle forever in Exodus 31:16:

"Wherefore the children of Israel shall keep the sabbath, to observe the sabbath throughout their generations, for a perpetual covenant."

Although the Bible does not name the days of the week other than the Seventh Day being the Sabbath, it does refer to the remaining days as the "First Day", "Second Day", etc. and are first referenced in this manner in Genesis 1. Modern calendars now use specific names whose origins are pulled from Pagan gods including Saturn for Saturday and the Sun god for Sunday. Although we have adopted these Pagan names as a society (and have changed the day to begin at midnight instead of sundown), the weekly concept remains.

Similar to the Biblical Month, the Bible generally always uses a specific Hebrew term, shabua (Strong's 7620), when referring to Weeks. Quite literally, this word translates into English as "seven" or "a period of sevens". This would be why the prophecies in Daniel (such as the 70-week prophecy) use this form of measurement when, instead, it is understood as totaling 490 (or seventy sevens). The mere fact that the weekly cycle continues to be recognized today serves as a testament to the Bible itself and the perpetual Sabbath Day it has measured throughout history.

Historically, Rome (the birth place of the Christian movement) utilized a pattern of days known as the Nundinal cycle (which consisted of 8 days) that was adopted as early as the 5th century BC. This cycle provided a repeating pattern where city dwellers and travelers from outside of the city would purchase food and supplies made available by the city merchants. This business cycle was known as the "market week". But the day-to-day living of Romans eventually adopted the seven-day week of the Jews. Although there was a period of time when both patterns of weeks were kept simultaneously, Roman Emperor Constantine officially disbanded the market week in the 4th century AD. Constantine, a pagan, adopted certain beliefs of the Jews at the time who were following the example of Yeshua but made changes to adopt to pagan practices - including changing the seventh-day Sabbath to Sunday. This was the origin of modern Christians keeping Sunday - even though many would like to believe Yeshua changed the Sabbath to the first day of the week. But even most Sunday-based Christians understand that the week itself still begins and ends in the same manner today as it did throughout the Bible (although, most think of days as being midnight-to-midnight). Some modern calendars, however, list Sunday as the last day of the week in a deceptive attempt to make it look like the seventh day. Thankfully, this practice has not caught on as a day-to-day standard. However, this practice is becoming more popular outside of the Western World and is often used in international business relations (including the ISO 8601 date standards). Additionally, it is common to use the term "week-end" when referring to both Saturday and Sunday. Either way, it's hard to argue against history, which overwhelmingly supports Saturday as being the seventh day.

The Sabbaths (a term that includes the Festivals) listed in Leviticus 23 specify two appointed days that are based on the perpetual seven-day count that make up the Biblical Week. The first, being the most obvious, is the regular Sabbath that occurs every seventh day. The second one is the Day of
Pentecost (Shavuot): which takes place on the fiftieth day of the Wave Sheaf Offering (which would take place, as Biblically commanded, on the first day of the week, or the "morrow after the Sabbath", that begins the Feast of Weeks - or the Feast of Sevens). This also places Pentecost on the first day of the week (starting after sundown on Saturday evening). This is further supported in Leviticus 23:16, which repeats the phrase “morrow after the Sabbath”, after seven complete Sabbath's have passed. Some Jews believe that the Sabbath-day being referred to in the phrase “morrow after the Sabbath" would begin the count from the First Day of Unleavened Bread (which would always place the Wave Sheaf on the 16th of the Abib moon), but this would not coincide with verse 16. If the Wave Sheaf always took place on the same day of the new moon, why wouldn't the verse simply state it clearly as it does every other Festival that takes place on a specific day of the month? That's because it's not fixed on the new moon, but rather on the Sabbath fixed on the weekly count of seven days. All other days are counted from the start of the new moon specifically.

Because of our mathematical bias, we tend to think that the monthly, lunar Festivals must take place on the same day of the Biblical Week for everyone around the world. But this is not the case! These two counts (one lunar-based and one solar-based) are not tied together. Also remember that half of the world observes a lunar month one day longer than the other half. These two cycles (lunar and solar) do not depend on one another, but many will try to force the lunar cycle to fit into the solar (or vice versa), which is no different than trying to force a square object into a round hole. The Biblical Month and the Biblical Week are based on these two different events from which an observer is to count from.

Again, the Bible does not give us an "international dateline" (which is strictly a mathematical concept) or instructions to do likewise. However, the dateline was established based on the migration patterns of historical human settlements. Early history supports humans slowly migrating eastward from the mid-east region toward India, China and down toward Indonesia while westward migrations lead to the lower portions of South Africa as well as northwestern migrations (primarily by Anglo Saxons) into Europe and Britain and finally to the Western World and the Americas. Although history marks these migrations starting nearly 200,000 years ago, the patterns are fairly accurate. From an observer's perspective, the day of the week would have been preserved based on where groups of people migrated. There is no Biblical record of anyone observing the day of the week (or the Sabbath) a day earlier simply because they were located east of Promised Land (even when Israel was held captive in Babylon). Therefore, the established dateline today (in regard to the Biblical Week) would be roughly similar to an observer's perspective of history. Without any instruction to consider a particular geographical location as a dateline, there is no reason to assume otherwise.
An alternative concept to the Biblical Week, which has grown rather quickly in the past few years, is that of the Lunar Sabbath. This is a belief that the Biblical Week is also based on the moon - specifically the four primary stages of the moon (new moon, first quarter, full moon and last quarter). This concept is very similar to the modern Zoroastrian Calendar that is also believed to have originated from Babylon[citation needed]. Although this lunar week concept also contains seven whole days, it is extended at the end of the lunar cycle to account for extra days in the lunar month (adding leap days to the week). Followers of this system do keep the new moon day to begin the month, but also treat it as the Biblical Sabbath day, or the Lunar Sabbath (but does not correlate with the secular week, placing the Weekly Sabbath on a different day of the commonly-accepted week with each new lunar phase). This is then followed by four additional Sabbaths that always fall on the 8th, 15th, 22nd and 29th day of the lunar cycle. Since the lunar cycle is just over 29 days in length, the last Sabbath can extend into the 30th day (making for either two or three Sabbath days in a row as the lunar cycle repeats). Consequently, this also forces the First Day of Unleavened Bread, Pentecost, the Day of Trumpets, the First Day of Tabernacles and the Last Great Day as always falling on one of these Lunar Sabbaths.

But the Lunar Sabbath concept is not directly instructed anywhere within the Bible and is only derived through scattered examples of Biblical events combined with several assumptions. The primary example used is the story of the heavenly manna in Exodus 16. Here, we are told about the arrival of Israel in the Wilderness of Sin:[1]

"And they journeyed from Elim, and all the congregation of the children of Israel came to the Wilderness of Sin, which is between Elim and Sinai, on the fifteenth day of the second month after they departed from the land of Egypt." [Underlined emphasis added]

Supporters of the Lunar Sabbath claim that Israel's purpose of pitching camp, here in verse 1, was to observe the 15th day Lunar Sabbath (as the 15th is always a Sabbath using this theory). They claim that this is supported because of the instruction regarding the heavenly manna that fell following their arrival (which is described in verses 4-5[1]):

"Then the Lord said to Moses, 'Behold, I will rain bread from heaven for you. And the people shall go out and gather a certain quota every day, that I may test them, whether they will walk in My law or not. And it shall be on the sixth day that they shall prepare what they bring in, and it shall be twice as much as they gather daily.'" [Underlined emphasis added]

The claim is that the sixth day referenced here is describing the sixth day following their arrival in the Wilderness and not as a reference to the day of the week. But as we have learned, the Bible does refer to days of the week by number. In the modern-day vernacular, this would be no different than stating "And it shall be on Friday that they shall prepare what they bring in, and it shall be twice as much as they gather on other days". This would mean that verse 1 could have taken place at any time during the standard week mirroring that of the Creation Week. Verses 22-23[1] then concludes:

"And so it was, on the sixth day, that they gathered twice as much bread, two omers for each one. And all the rulers of the congregation came and told Moses. Then he said to them, 'This is what the Lord has said: 'Tomorrow is a Sabbath rest, a holy Sabbath to the Lord. Bake what you will bake today, and boil what you will boil; and lay up for yourselves all that remains, to be kept until morning.'" [Underlined emphasis added]

If the Weekly Sabbath were based on the lunar cycle, then we would have an issue with the Creation Week given in Genesis as the moon itself is not even appointed until the Fourth Day (Genesis 1:14-19). Even if the moon were created on Day One, then according to the Lunar Sabbath model, the first day
should have also been a Sabbath and the Creation Week should have lasted eight days (starting and ending with a Sabbath), instead of seven. There are also direct instructions for keeping specific Festivals in Leviticus 23 that specify the exact day of the month (or lunar cycle) to be kept. But no such reference is used when referring to the regular Sabbath.

More importantly, the Lunar Sabbath concept would also negate the one sign of Yeshua as being the true Messiah who told us we would know of his authenticity because He would be in the ground for three days and three nights before being resurrected (the sign of Jonah). Although mainstream Christianity believes that Yeshua died on Friday afternoon and rose Sunday morning, there would also be no weekly scenario where you can get three days and three nights between Passover (the 14th of the month, which always falls one day prior to a Lunar Sabbath) and the first day of the "lunar" week - it would be simply impossible to confirm Yeshua's authenticity as Messiah. In order to explain this, many claim that the Jonah prophecy implies three days OR nights making the count as: 1) the "night" of the 15th; 2) the "day" of the 15th; and 3) the "night" of the 16th - with a resurrection before the day-time portion of the 16th. Others will count this as 1) died on the 14th; 2) in the grave on the 15th; and 3) rose on the 16th. Both of these scenarios ignore that an evening and a morning constitute a day, which would be yet another contradiction to the Creation Week example. Only a mid-week Sabbath (the First Day of Unleavened Bread) can you then complete three days AND three nights (or three full days) with Passover falling on the 4th day of the week where Yeshua died at the end of the 4th day (a Wednesday afternoon). The count would then be 1) "night" and "day" of the 5th day (Wednesday evening and Thursday - the Day of Unleavened Bread); 2) "night" and "day" of the 6th day (Thursday evening and Friday); and 3) "night" and "day" of the 7th day (Friday evening and Saturday - the Weekly Sabbath). Yeshua was then witnessed as already being resurrected in the night-time portion of the 1st day (Saturday evening).

Finally, the Lunar Week is also not a documented method among Jewish history - and certainly not during the time of Yeshua (a blatantly obvious contradiction that would have certainly raised concern with the Jews of the New Testament).

The origin of today's secular week itself - a perpetual repeating seven-day cycle - serves as a witness to the Biblical Sabbath. There is no other origin outside of the Bible to explain why we keep a perpetual seven-day week today and there is no historical record of this count ever being broken. Although there are historical records of certain societies keeping weeks of different patterns, they were not wide-spread and none of them pre-date the seven-day week concept. The week was originated and preserved by non-Biblical historical Jewish records as far back as the Babylonian captivity with the Biblical instruction given prior to that time.

The Sabbath day of rest is also referred to within the Bible as a sign for Yehovah's chosen people. It is also this sign, first used in Genesis, which serves as the delimiter of the Biblical Week, separate from the lunar cycle.
TIMES AND SEASONS

We have now established, using Biblical scripture and eliminating any mathematical bias, that days, months and years are determined through Yehovah's ordained signs that are defined from an observer's perspective. We are given no variation or alternative method. Sighting of these objects depend on variables controlled by Yehovah Himself that not only include the movements of the celestial bodies themselves, but whether they appear in the sky to an observer (such as weather). He gives us the sun to indicate days (starting after it goes down), the moon to indicate months (starting after sundown on the first day where the blowing of trumpets confirm to others the visual new moon crescent) and seasons (the appointed festivals of Yehovah). He refers to the harvest to indicate years (starting after sundown on the first day of the visible crescent when Abib barley is found growing in the fields). In addition, He gives us direct instruction for keeping a perpetual Sabbath every seven days, which creates the week. It is this system that we can determine the Annual Festivals based on the number of days from particular, pre-defined new moon crescents starting with the first moon of Abib.

One piece that has not yet played an active role is that of the stars. We saw in Genesis 1 that they also can be used within Yehovah's calendar. However, we are not given any instruction to use the stars to determine calendar days, months or years specifically. However, the constellations have served a prophetic role in determining the arrival of specific events. An example of this practice is seen by the group of Magi (also known as the Three Wise Men in modern Christianity) when they stated in Matthew 2:1-2:

"Now when Jesus was born in Bethlehem of Judaea in the days of Herod the king, behold, there came wise men from the east to Jerusalem saying, 'Where is he that is born King of the Jews? for we have seen his star in the east, and are come to worship him.'"

A supposed celestial description is later described in Revelation 12:1-5:

"And there appeared a great wonder in heaven: a woman clothed with the sun, and the moon under her feet, and upon her head a crown of twelve stars: and she being with child cried, travailing in birth, and pained to be delivered. and there appeared another wonder in heaven; and behold a great red dragon, having seven heads and ten horns, and seven crowns upon his heads. and his tail drew the third part of the stars of heaven, and did cast them to the earth: and the dragon stood before the woman which was ready to be delivered, for to devour her child as soon as it was born. And she brought forth a man child, who was to rule all nations with a rod of iron: and her child was caught up unto God, and to his throne."

Here, describing the birth of Yeshua, we see a child being born (the moon) to a virgin (the constellation Virgo, meaning virgin) while being clothed with the sun (at sunset). Just over the head of Virgo is another constellation known as "Coma Bernice's hair," which would serve as the crown of twelve stars (verse 1). Just above the "legs" of Virgo, the constellation "Draco the Dragon" is found ready to consume the virgin's child. Now whether this happened at the time of Yeshua or happens again at another future event, it does indicate that the stars can be used as signs. Again, this does not mean that Astrology and its inherit meanings are valid or should be followed. Merely, that stars themselves can be used as a reference for telling specific times. Perhaps, in a pinch, they could serve as an alternative timepiece when the preferred methods are unavailable. There are Biblical references to "twilight", which infer the appearance of stars (stars are also referred to in Job 3:9 at the time of twilight). But again, unless specifically instructed within scripture, there is no evidence that stars should not be relied upon within the context of a day-to-day calendar.
As we have touched upon earlier, there is one noticeable complexity with the Bible's naturally-based calendar method of observation when compared to other calculated or modern calendars: you simply cannot predict, with any certainty, when these signs will occur into the future. Although mathematics has recently matured to a point that will allow man to calculate when the sun should go down at any geographical location worldwide or when the new moon crescent should be visible to the naked eye, determining mathematically when barley crops will be ready to harvest years in advance (even months in advance) cannot be determined with 100% certainty. This is mostly due to weather conditions and other environmental variables that are still beyond our complete understanding. Furthermore, when you apply mathematical findings into a timetable of average time-spans for everyone to reference (like the calendar that hangs on our walls at home) you begin to lose any accuracy the math originally obtained. Certainly corrections and adjustments can be made to any mathematical formula in hopes of better anticipating future events, but unless the variables involved are completely static and unchangeable, fixes will never cease. Since Yehovah has created the celestial bodies in a continual state of flux, and since He can allow any variable to change at any time, our mathematical result would no longer be as good as it once was. However, we are never told anywhere in scripture that we need to predict Yehovah's appointed signs beyond counting the number of days from particular events (new moons and weekly Sabbaths); neither are we instructed to calculate or average the time between these events. Again, that's not to say that math in itself is somehow evil, it's just not the method we are given to use. But our bias toward mathematics forces us to make changes in order to force the variables into fixed universal patterns that help us predict and measure future events. Eventually, we become to rely on the math-based prediction rather than observing the event we were attempting to predict in the first place. This is wrong. In fact, scripture encourages us not to predict the future for our own planning. James 4:13-15[1] tells us:

"Come now, you who say, 'Today or tomorrow we will go to such and such a city, spend a year there, buy and sell, and make a profit'; whereas you do not know what will happen tomorrow. For what is your life? It is even a vapor that appears for a little time and then vanishes away. Instead you ought to say, 'If the Lord wills, we shall live and do this or that.'"

And Leviticus 19:26 warns:

"Ye shall not eat any thing with the blood: neither shall ye use enchantment, nor observe times." [Underlined emphasis added]

Here, observing times is the Hebrew word anan, or soothsayer, which predicts the future. Proverbs 27:1 also reminds us:

"Do not boast about tomorrow, for you do not know what a day may bring forth."

Given what we have learned, perhaps Yehovah did not give mathematical formulas within scripture for a good reason. Mankind tends to break these principles when it comes to creating calendars and some go even further by trying to apply spiritual understanding using patterns of numbers thinking they have found the magical key to understanding Yehovah or the universe. By letting go of this bias and relying on pure observation, however, it requires us to have faith in His overall intelligent design to show us His signs and accept that the times and seasons, or the Calendar and Festivals respectively, are controlled by Him rather than by man - no matter how wise men may be (including the wisdom of mathematics). We see, though, that we should always choose Yehovah's wisdom in I Corinthians 2:5[2]:

"that your faith should not be in the wisdom of men but in the power of God." [Underlined emphasis added]
Mathematics is a tool that is perceived to put the times and seasons in control of men. But Yehovah is the one in control of the times and seasons. Acts 1:6-8\(^\text{[1]}\) tells us:

"When they therefore were come together, they asked of him, saying, Lord, wilt thou at this time restore again the kingdom to Israel? And he said unto them, It is not for you to know the times or the seasons, which the Father hath put in his own power. But ye shall receive power, after that the Holy Ghost is come upon you: and ye shall be witnesses unto me both in Jerusalem, and in all Judaea, and in Samaria, and unto the uttermost part of the earth." \textbf{(Underlined emphasis added)}

Once again, the people were asking for a sign of the future coming kingdom. But it is Yehovah that has ultimate control of time itself! With faith and guidance in the Spirit, we too can understand using the signs that are given to us - and we can prove it with scripture. Given the lack of any further Biblical instruction to calculate a calendar, we must then infer that we have been given all that we need. The act of observing these signs is simplistic in nature and can be taught to school children. Only by participating in observation (combined with the power of the Holy Spirit) will we truly come to realize how this practice can apply to understanding prophecy and signs of the end-times. Furthermore, by creating and manipulating rules for the sake of mathematical averages we are directly disobeying what we have been instructed in Deuteronomy 4:2\(^\text{[1]}\):

"Ye shall not add unto the word which I command you, neither shall ye diminish ought from it, that ye may keep the commandments of the LORD your God which I command you."

Yehovah does not change from one methodology to another nor would He ordain a particular man-made formula that requires periodic adjustments. How do we know this? Because we are told in Malachi 3:6\(^\text{[1]}\):

"For I am the LORD, I change not."

This is a principle on which we can rely upon! There is no indication given from the Bible that we should have changed to a method of calculation at any time. Telling time and seasons has always been through the use of Yehovah's ordained signs in Genesis, to the time of Moses, and will continue into the coming Kingdom. Just as we understand that Yehovah never intended on His people to cease celebrating His annual Festivals, neither did He ever intend on changing what was created on Day Four of the Creation Week! If we look to the Heavenly Father in our day-to-day lives, we would understand that we have no need to mathematically predict when Yehovah's Festivals will be held years in advance and, instead, wait on Him to show us His appointed times.

Our bias toward mathematics and fixed timetables gives us a false sense of security that we are somehow immune to uncertainty. Even church organizations will often fall back on the calculations of the Hebrew Calendar for the sake of unity. But this decision can only be achieved by accepting the twisted perceptions and added rules that are not provided in the words or context of the written scriptures. Only when you take a step back and remove the rose-colored math glasses we look through when reading scripture, you
may just realize that we rely too heavily on men and have *desensitized* ourselves from the methods of Yehovah.

We also know that Satan has made many attempts to fool Yehovah's people throughout history. Math is just one tool that he can use to do just that. In fact, it is prophesied that Satan himself will attempt to change time itself in Daniel 7:25:

"*He shall speak pompous words against the Most High, Shall persecute the saints of the Most High, And shall intend to change times and law."

Satan has been very successful in deceiving even the very elect by making Yehovah's *times and seasons* confusing to many - enough to consider it a "can of worms". There have been many different calendars created (nearly all mathematical in nature). Because of this, many avoid studying this very important topic.

Now that we have a better understanding of the Biblical concepts and historic evidence of an *observed calendar*, let's take an even deeper look into Jewish history and exactly how the current Hebrew calendar came about and how the *mathematical bias* began.
We have briefly touched upon Jewish history and the documented support of an observational method of *new moon crescents* and *barley crops* to determine a calendar, which continued as late as the fourth century of the Common Era. It isn't until this timeframe we find evidence that the *observation of signs* based on Biblical principles were replaced by *mathematical principles*. The Encyclopaedia Judaica further confirms this by stating:

"By the middle of the fourth century, the sages had established a permanent calendar and the public proclamation of the New Moon was discontinued."  {Underlined emphasis added}

So we see that the Biblical event and gathering together on the *New Moon* was eventually *discontinued* by men nearly four hundred years after the time of Yeshua. Today, most Jews are fully aware of this historical change and the abandonment of eyewitness testimony in favor of consistent mathematical formulas, not just because it's convenient but, because they have been directed to do so by the Rabbinical authorities. In fact, the initial changeover to a *mathematical method* is believed to be authorized by a member of the original Sanhedrin Court system, which in their eyes gives this *mathematical method* an overall *stamp of approval*.

In Jewish history, the Sanhedrin was a group of men consisting of the wisest elders that were *believed to be originated* from the Levitical Priesthood - the same group of seventy elders described in Numbers 11:16-24. They acted as court judges in interpreting scripture and Biblical law and it is this authoritative system of judges that appear several times within the New Testament that tried the likes of Yeshua Himself, as well as Paul, Steven and others.

As it pertains to a calendar, we read earlier that it was the Sanhedrin that oversaw the testimony of eyewitnesses of *the new moon crescent* sightings at the time of the second temple. They believed that it was their ultimate responsibility to determine and inform the people of Israel when the *new moons* were, indeed, sanctified as the start of each month. At the time, many people in the land looked to the Sanhedrin as the official authority on this subject and accepted them to fill the role of the high priest to sound the shofar trumpet blasts at each *new moon*. It was also this same group of men that would inspect crops searching for evidence of *Abib barley* to begin the year (in addition to other man-made requirements they believed needed to be met). Eventually, the Sanhedrin developed a system of messengers that would quickly spread their findings on such matters across the land of Israel and even further as settlers began to disperse outside the Israeli borders. Even the Roman Christians relied upon the information of these messengers prior to the time of Constantine (as we will see later). Although this group of men created additional rules and practices not defined within scripture, many of them were based on the observational methods that we have seen are required within Biblical scripture.

Much of the history of the Sanhedrin has been preserved and has also contributed to several modern-day Jewish traditions. These historical records detail the procedures and methods practiced by the Sanhedrin that included the interrogation of witnesses who claimed to have seen the *new moon crescent*. The
Sanhedrin would use methods in an attempt to determine the validity of a person's testimony, a system that lasted for many generations up to, and including, the time of Yeshua. Much of these documented practices originated in the first centuries following His death as pressures from the Roman government took a toll on the Jewish authority. Although there were various courts and smaller Sanhedrin throughout the land, the primary Sanhedrin court (also referred to as the Great Sanhedrin) was located at the Temple Mount in Jerusalem. The Jewish Encyclopedia explains this traditional role of the Sanhedrin in their *New Moon* article:

"In the Temple, New Moon was celebrated by special sacrifices and by the blowing of the trumpet. Of the greatest significance, however, was the proclamation of New Moon (Kiddush ha-Hodesh) by the president of the Sanhedrin - originally, of course, by the high priest - just as in Rome the Pontifex Maximus fixed New Moon by proclamation (whence the name Calendar)."

This traditional celebration is further explained:

"The Sanhedrin was assembled in the courtyard ("bet ya'azek") of Jerusalem on the 30th of each month from morning to evening, waiting for the reports of those appointed to observe the new moon; and after the examination of these reports the president of the Sanhedrin, in the presence of at least three members, called out: 'The New Moon is consecrated'; whereupon the whole assembly of people twice repeated the words: 'It is consecrated'. The blowing of the shofar at the time of the proclamation of New Moon was practiced also in the Babylonian schools."

We see here that when the Sanhedrin confirmed multiple eyewitness accounts given on the 30th day of the month (since the last new moon crescent was consecrated), the day would be declared and changed as being the first day of the current new moon instead - making the previous month a total of 29 days long. Otherwise, if no witnesses came forward, the new month would begin after 30 days were completed.

Although this court methodology was ultimately a man-made system, waiting until the morning for eyewitnesses and confirming their validity before finally authorizing the sounding of trumpets to signal the new moon, this crude procedure became the norm for the Sanhedrin and the people of Israel. However, the basic principles were the same as the Biblical principles we read earlier (and they are fully documented within the Mishna [R. H. ii 5-7]) and clearly were based on a method of observing the Biblical signs. It's also very clear that the Sanhedrin examined eyewitness accounts of, specifically, the new moon crescent, and no other phase of the moon. Judaism 101 confirms the details of the Sanhedrin customs:

"Observers would watch the sky at night for any sign of the moon. If they saw the moon, they would report their sightings to the Sanhedrin, which would interrogate them to make sure that they were not mistaken. Where in the sky did the moon appear? Which direction was it pointing? If two independent, reliable eyewitnesses confirmed that the new moon had appeared and
described it consistently, the Sanhedrin would declare the new month and send out messengers to tell people when the month began."

We see here the added description of sending messengers as confirmation of the Sanhedrin's findings at the time the trumpets were blown each month.

The start of the year (the month of Abib) was also determined by the Sanhedrin. In fact, their determination of years based on the barley crops were just one of several variables that would be considered before declaring the moon of Abib. Arthur Spier, the rabbinical calendar authority, also explains further in his book:\[44:\]

"The Talmudic sources report that the Council intercalated a year when the barley in the fields had not yet ripened, when the fruit on the trees had not grown properly, when the winter rains had not stopped, when the roads for Passover pilgrims had not dried up, and when the young pigeons had not become fledged."

We see that it was by the authority of the Sanhedrin that the people would follow of when to insert a 13th leap-month based on several conditions that were deemed necessary to begin the Passover season. Although not all of these conditions are given in Biblical scripture, it certainly shows that their decisions were not based solely on a fixed mathematical formula.

Another piece of evidence that proves observation was used over mathematics within Jewish history is today's tradition of keeping Rosh Hashanah (the Day of Trumpets) for two days instead of one. Due to the Sanhedrin's crude timing of allowing for witnesses to come forward and report their observations to the court, it was possible that the people would be unclear whether the evening of the 29th, prior to the Day of Trumpets, was actually the Rosh Hashanah Festival day or simply the 30th day of the prior new moon crescent. The Day of Trumpets is the only annual Festival commanded by Yehovah to take place on the first day of the New Moon (considered the first of the secular year by Jews today) and is, therefore, intricately tied with the Sanhedrin traditions that were performed every month. Author N.S. Gill explains the origin of this double-observance tradition in an article titled Secular vs. Religious New Year:\[39:\]

"Rosh Hashanah was the first day of the first month of the secular year (Tishri), from at least the time when new moons were proclaimed by the Sanhedrin and its successor, the Jewish Assembly. As Jewish population grew, it spread out. Signal fires had to be relayed. Soon not everyone was aware of the new month on the same day, so Rosh Hashanah came to be celebrated for two days. Today, even with instant satellite communications, Rosh Hashanah continues to be celebrated over two days, possibly because the first glimmer of the new moon is visible in Israel before it is visible in many other parts of the globe." \{Underlined emphasis added\}

Again, we see the support for mass communications that were employed through the use of signal fires to publicize the event to everyone in the land of Israel. However, these signal fires became unreliable when individuals (Samaritans and Boethusaeans) lit false signals to purposely mislead others to keep different days:\[12\]. In addition to a population spreading further outward from Israel, the Sanhedrin commanded the observation of two days for Rosh Hashanah (Day of Trumpets) if they were, otherwise, unaware that the new moon crescent had been spotted. The fact that this double-observance tradition even came into existence supports an observed calendar methodology prior to the calculated Hebrew calendar used today. Additionally, this tradition has continued into modern Jewish practices even though they now rely solely on mathematical calculations. The Wikipedia Encyclopedia:\[38:\] confirms that:
"Since the time of the destruction of the Second Temple in Jerusalem in 70 CE and the time of Rabban Yohanan ben Zakkai, normative Jewish law appears to be that Rosh Hashanah is to be celebrated for two days, due to the difficulty of determining the date of the new moon."

This Encyclopedia article continues:

"Orthodox, Conservative Judaism, and Reconstructionist Judaism now generally observe Rosh Hashanah for the first two days of Tisheri, even in Israel where all other Jewish holidays dated from the new moon last only one day." {Underlined emphasis added}

Due to this Sanhedrin rule, many modern Jews who are now considered in exile (outside of Israel - or the Diaspora) continue to observe two days for the beginning of every new month (after the 29th & 30th day) just in case either is found to be the new moon in the Holy Land - this tradition is called Yom Tov Sheni today. However, this tradition of observing two days for the Day of Trumpets (or the New Moon) is strictly man-made. Obviously, we are not instructed to observe two days for the Day of Trumpets in the Bible; however, we do see a Biblical assembly that gathers together at the expected New Moon in order to be in unison and hear the trumpets sound when the new moon crescent appears. We can see, then, that on the Day of Trumpets this same assembly, patiently looking for the sign in the heavens, must be prepared to keep either day holy as the Day of Trumpets rather than requiring it to be observed for two consecutive days.

We saw how this was laid out in the example of David in II Samuel 20 when we discussed Biblical Months. David planned around two evening meals at the time the New Moon gathering was being prepared, which allows either evening meal (either on the 30th or 31st evening from the prior crescent appearance) to be the sacrificial fellowship meal that would be eaten when the next new moon crescent had come. Just as we should always be watchful of current events that may serve as signs of prophetic times, the gathering together of Yehovah's people at the time of the New Moon, especially on the seventh month that is the Day of Trumpets, we need to be looking up to the heavens for Yehovah's ordained signs that perfectly fulfill the purpose this day pictures: the return of Yeshua, the Messiah!

The fact that today's Jews keep a calculated calendar but also observe two days for Rosh Hashanah suggests that one of these traditions did not always exist and now conflict on principle. Only a change to a mathematical determination explains such a conflict. Dr. Spier continues to explain in his book that the Sanhedrin also utilized other tools in addition to natural conditions.

"The Council on intercalation considered the astronomical facts together with the religious requirements of Passover and the natural conditions of the country".

The Mishna does describe a possibility that the Sanhedrin may have used mathematical calculations to confirm the testimony of eyewitnesses. In fact, one of these documents explains a specific conflict that occurred between two members of the Sanhedrin where specifically the mathematics of the new moon were argued. But we see that the eyewitness testimonies of new moon crescents were interrogated to confirm their sightings and it was these sightings that served as the basis of their ultimate decision - not the math. Whether the Sanhedrin utilized mathematics in addition to the
eyewitness testimonies, it would have only been to distinguish whether a witness was likely telling the
truth.

It is a member of the Sanhedrin named Rabbi Hillel II who is first attributed to implementing a Hebrew
calendar based solely on calculation in the fourth century (358 C.E.). It wasn't until this time we find that
the Sanhedrin changed the calendar system to be based on mathematical principles rather than
observation. In the Wikipedia article regarding the Modern Calendar of the Hebrews,[20] it is explained:

"...there is a tradition, first mentioned by Hai Gaon (d. 1038 CE), that Hillel b. R. Yehuda 'in the
year 670 of the Seleucid era' (i.e. 358-359 CE) was responsible for the new calculated calendar
with a fixed intercalation cycle. Later writers, such as Nachmanides, explained Hai Gaon's words
to mean that the entire computed calendar was due to Hillel b. Yehuda. Maimonides, in the 12th
century, stated that the Mishnaic calendar was used 'until the days of Abaye and Rava', who
flourished ca. 320-350 CE, and that the change came when 'the land of Israel was destroyed, and
no permanent court was left.' Taken together, these two traditions suggest that Hillel b. Yehuda
(whom they identify with the mid-4th century Jewish patriarch hilel, attested in a letter of the
Emperor Julian, and the Jewish patriarch Ellel, mentioned by Epiphanius) instituted the
computed Hebrew Calendar because of persecution.

The fourth century was a very dangerous time to be a Jew - most feared for their lives as Paganism (lead
by the so-called Christian Constantine) forced its way onto the scene. The Romans established law
prohibiting meetings of the Sanhedrin and it quickly became apparent that the standard practices for
determining the calendar were not able to continue. Additionally, the Jews were being pushed out of the
Promised Land and their temple in Jerusalem had already been destroyed in 70 CE. It became more and
more difficult for the Sanhedrin to proclaim new months and years and to send messengers as was
traditionally practiced. The Wikipedia Encyclopedia describes part of the tension put on the Jews at this
time to adopt a standardized calculated timetable.

In addition, an increasing number of Christian followers began to look for a change to the early calendar
system that was still using the Jewish system of observation that Constantine eventually outlawed. It was
during this time period that the Catholic Church was establishing its own doctrine and held the
historical First Council of Nicaea in 325 A.D. The calendar was one of several topics that were addressed
including the determination of Easter, which was being kept by many Christians in the first month that
was still being declared by the Jewish Sanhedrin (by this time, the first month was named Nisan). The
Wikipedia article[11] states:

"To determine which lunar month was to be designated as Nisan, Christians relied on the Jewish
community. By the later 3rd century, however, some Christians began to express dissatisfaction
with what they took to be the disorderly state of the Jewish calendar." [Underlined emphasis
added]

The article continues to explain:

"Christians, these thinkers argued, should abandon the custom of relying on Jewish
informants and instead do their own computations to determine which month should be styled
Nisan, setting the Easter festival within this independently-computed, Christian Nisan, which
would always locate the festival after the equinox." [Underlined emphasis added]

We see here a growing majority of Christians were looking for a predictable, calculated calendar instead
of one relying on informants, which the Christians viewed as being disorderly. It also supports that the
Sanhedrin did not utilize the Spring Equinox (whether they relied on observation, calculation or both). Emperor Constantine pushed for an accurate calendar based on the mathematical Equinox to pinpoint seasons rather than observing the barley crops and the new moon crescents. It was only after a few decades after the Council of Nicaea that Rabbi Hillel II is now attributed to succumbing to mathematically computing a calendar for the Hebrew community. This computation was a mathematical average, likely based on Hillel's experience with the Sanhedrin, of observed seasons. In essence, he created a mathematical timetable of the average lunar cycle lengths that coincided with barley crops.

Hillel did not determine his timetable based on the equinox; rather it is an average of how often to insert a 13th leap-month that spanned a repeating 19-year cycle. This way, primarily because the Sanhedrin were being dissolved and the people of Israel were dispersed throughout the world, the people would not have to rely on a Sanhedrin court system. Instead, they could now predict mathematically when to insert the extra month. It provided the best alternative to an organized community searching for the Biblical signs - especially the barley crops within Israel. However, further evidence shows that Hillel did not continue to create the full Hebrew calendar as it exists today, but was only partially responsible for contributing to the current version. The Wikipedia Encyclopedia further confirms that Hillel II...

"...is traditionally regarded as the creator of the modern fixed Hebrew calendar. However this attribution is tenuous. It first appears in a responsa of R. Hai Gaon (earlyeleventh century) cited by R. Avraham b. Hiyya in his Sefer Ha'ibbur, written in 1123. The topic of that responsa is the 19-year cycle for leap year intercalations, so the most that can be inferred from that attribution is that Hillel was responsible for the adoption of that cycle for the regulation of the distribution of leap-years. Scholars who have studied the history of the Hebrew calendar are in general agreement (and there is much evidence for this in the Talmud itself and in other rabbinic sources) that in practice, the evolution of the calendar into its present form was a gradual process spanning several centuries from the first to about the eighth or ninth century CE." (Underlined emphasis added)

The Hebrew Calendar we know today was an evolving process that was not fully established until hundreds of years after Hillel's initial concepts were documented. In fact, the topic of the calendar was recorded as being a hot topic and issue of dispute for hundreds of years after the time of Hillel II. If the Jews, through the Sanhedrin, were already maintaining and relying solely on a calculated calendar that was simply made public by Hillel, the question then becomes: why was it such a disputed topic? The Christians viewed the original method of messengers as being disorderly, but if the debated issue was merely a matter of the communication methods being implemented by the Sanhedrin as being disorderly, why didn't Hillel's public declaration continue to be disputed?

We can determine that it wasn't until hundreds of years later when the mathematical computations of the months within the Hebrew Calendar started to be determined based on the mathematical lunar Molad (a rough estimate of the conjunction), rather than the new moon crescent. Although very accurate, the Molad calculation of the lunar cycle differs very slightly from the mathematical calculations of the conjunction we have today. Because of this variance, we can perform reverse-math to determine when the Molad was first instituted by the Hebrews. Dr. Kelley Ross explains this in his article, The Jewish Calendar further confirms that Hillel II...

"We can estimate the date for the present full mechanism of the calendar from the amount of error that has accumulated. The benchmark for the New Moon is now accurate for a meridian in Afghanistan. If we run things back to when it would have been accurate for a meridian through Jerusalem or Babylon, the centers of Jewish life and calendar studies, we just get back to around..."
the 9th or 10th centuries. As it happens, we know that there were controversies about the calendar in that era."

He then concludes:

"It seems beyond coincidence that was the period for which the new Moon benchmark would have been accurate, and it implies a Babylonian meridian."

We see that the benchmark of the Molad calculation itself, in combination with Talmudic documentation of disputes, that the start of its usage can be placed at around the 9th century - further evidence that the Hebrew Calendar has been a developing process. This is a very large contradiction from the belief that the Hebrew Calendar was a part of the Oracles preserved by the Jews in the same manner as the scriptures themselves - far from it! It seems that when Hillel II, in 358 C.E., introduced the intercalary 19-year average cycle, he opened the door to a mathematical bias that would later grow into a topic of great controversy. Controversies likely contributed to observed signs versus mathematical results that did not coincide. It is not until the 12th century where a certain Rabbi named Moshe ben Maimon "Rambam" (or Rabbi Maimonides) attributed to the calculated Hebrew calendar's accuracy as compared to the solstice or equinox in his book titled *Hilchot Kiddush haChodesh* in 1178 A.D [32]. The same mathematical equinox referenced by Constantine's Christian calendar. It was also in the 12th century where we find documented evidence supporting the majority of Orthodox Jews, under the rabbinical leadership, giving into their mathematical bias and relying solely on a calculated Hebrew calendar. In other words, the Hebrew calendar became favored because the math of the equinox was compared to the math of the average timetables and found to best coincide - using math to confirm the math. Nowhere in scripture do we find the equinox even described, much less measured from for counting days, months or determining seasons. *This purely mathematical calendar, first instituted in the 9th century and deemed mathematically accurate in the 12th, was the birth of the current Hebrew Calendar used today.*

This history strongly contradicts the concept of a preserved Calendar given within the Oracles. Some Hebrew Calendar supporters, though, will claim that the origin of today's calendar was a highly held secret of the ancient Sanhedrin and that its calculations were established through divine revelation from Yehovah Himself! Daniel 2:20-22[1] is referenced as proof of this theory:

> "Daniel answered and said, 'Blessed be the name of God for ever and ever: for wisdom and might are his: And he changeth the times and the seasons: he removeth kings, and setteth up kings: he giveth wisdom unto the wise, and knowledge to them that know understanding: He revealeth the deep and secret things: he knoweth what is in the darkness, and the light dwelleth with him.'" [Underlined emphasis added]

We see here that it truly is Yehovah that is in control of the *times and the seasons* as it is He that sets the celestial bodies into motion, allows the weather to produce crops and can alter any of these signs at any given time. But does that infer that Yehovah gave secret calculations that then control them? Even though Dr. Spier documented that the Sanhedrin practices utilized astronomical facts within the court process - at best it would have been to confirm the testimony of witnesses declaring their sightings of the *new moon*
crescent. But this would contradict with the theory that they relied purely upon calculation - much less used the Molad or conjunction instead of the crescent. We also know that the equinox was not referenced by the Sanhedrin due to Christians changing to this method in their own calendar determinations for Easter.

Could it be that the Sanhedrin possessed calculations for the celestial movements that have since changed? Scripture actually gives us an example where Yehovah stopped time itself. Unlike our ideas of time stopping in a science fiction story, the Bible describes the feat by halting the tracking of the sun and the moon. Joshua 10:12-14\(^{[1]}\) explains:

"Then spake Joshua to the LORD in the day when the LORD delivered up the Amorites before the children of Israel, and he said in the sight of Israel, Sun, stand thou still upon Gibeon; and thou, Moon, in the valley of Ajalon. And the sun stood still, and the moon stayed, until the people had avenged themselves upon their enemies. Is not this written in the book of Jasher? So the sun stood still in the midst of heaven, and hasted not to go down about a whole day. And there was no day like that before it or after it, that the LORD hearkened unto the voice of a man: for the LORD fought for Israel."

This example clearly tells us that Yehovah directly manipulated the celestial signs to delay time rather than simply issuing a revised set of mathematical formulas. If Yehovah determined times and seasons through mathematics (either directly or indirectly) then we would see a dire need here for them to be adjusted.

But, the question still remains: why would any such mathematics need to be a secret to begin with? Would He not give this information to all of Israel or, at a minimum, mention to them that the Sanhedrin or other particular individuals would have this information bestowed upon them? If so, then who has them today? If it is the Jews and their Hebrew calendar, why are they no longer a secret? But we find no such example of calculations being administered. It then must be considered why Yehovah would give such detailed instructions for the Count to Pentecost and for the counting of days from specific new moons for all of His other Festivals in the book of Leviticus, yet remain completely silent on the math that would be required to determine the dates they are based upon.

The Wikia Encyclopedia\(^{[20]}\) discusses the "secret calculations" theory:

"...a popular tradition, first mentioned by Hai Gaon (d.1038), holds that the modern continuous calendar was formerly a secret known only to a council of sages or 'calendar committee,' and that Patriarch Hillel II revealed it in 359 due to Christian persecution. However, the Talmud, which did not reach its final form until c. 500, does not mention the continuous calendar or even anything as mundane as either the nineteen-year cycle or the length of any month, despite discussing the characteristics of earlier calendars."

This article continues to explain:

"Jewish dates during post-Talmudic times (specifically in 506 and 776) are impossible using modern rules, and all evidence points to the development of the arithmetic rules of the modern calendar in Babylonia during the times of the Geonim (seventh to eighth centuries), with most of
Even math proves that the math used today could not have existed in its current state for more than 1100 years - much less from the time of Moses or even during the time of Yeshua. Not only do we not find scripture to support such a theory, but there is also no evidence in Jewish history either. It also contradicts with the Sanhedrin's documented practice of relying on witnesses in determining the new moon. If the Sanhedrin relied on secret calculations, instead, eyewitness testimony would not have been required, the declaration would not have been delayed to wait for witnesses and the commanded traditions of keeping the Day of Trumpets for two days, instead of one, would have never existed. Certainly the Sanhedrin were fallible men, but it seems highly unlikely that Yehovah would have put full trust in their abilities to maintain His secret calendar calculations and not trust the remainder of Israel to even know they existed. This would also go against the instructions Yehovah gave us to not put our faith in the wisdom of men. But if this were, indeed, the case then Hillel went directly against Yehovah's intentions by making this secret public!

In the earlier scripture referenced above, Daniel was thanking the Creator for granting him the wisdom to interpret the King's dreams, but there is never any indication that the authority of times and seasons and the revealer of deep and secret things was declaring that times and seasons were those deep and secret things. Nor are the Sanhedrin ever mentioned receiving any such revelations. If anything we should know of Yehovah by now is that He reveals all things and does not operate "in secret" with mysterious concepts - that is done by Satan with his mysterious Babylonian religions.

The Sanhedrin practices for declaring the new moon developed into the traditions of the Jewish day Rosh Chodesh - a modern-day holiday that celebrates the event of the New Moon. Wikipedia Encyclopedia describes this day as:

"The name for the first day of every month in the Hebrew calendar, marked by the appearance of the New Moon. It is considered a minor holiday, akin to the intermediate days of Passover and Sukkot." [Underlined emphasis added]

Judaism 101, a website that gives basic understanding for Jewish customs and practices, explains the customary Rosh Chodesh ceremony:

"In ancient times, Rosh Chodesh was a significant festival day. At that time, the new months were determined by observation. Each month began when the first sliver of moon became visible after the dark of the moon." [Underlined emphasis added]

Again, here is confirmation that the Sanhedrin relied upon observation of signs. The Wikipedia continues:

"Despite the existence of a fixed calendar, the date of Rosh Chodesh is still announced in synagogues on the Shabbat (called Shabbath Mevarchim) prior to its observance.

The day after the moon appeared was a festival, announced with the sounding of the shofar [trumpet], commemorated with solemn convocations, family festivities and special sacrifices [meal]. The importance of this holiday in ancient times should not be underestimated. The entire
calendar was dependent upon these declarations; without the declarations, there would be no way of knowing when holidays were supposed to occur."

We see that the Sanhedrin traditions parallel what we have learned directly from Biblical scriptures. Today's Jews are fully aware of their own history and that of the Sanhedrin which includes an observational-based calendar. They are aware of the significance in the action of blowing a trumpet when sight of the new moon crescent was confirmed by at least two independent witnesses (a principle of II Corinthians 13:1 and John 8:17). This fact is still recognized in their Rosh Chodesh celebrations. The Modern Hebrew Calendar, however, is comprised of mathematical averages and tables that do not coincide with Biblical practices. It is an independent system created to predict future dates without the need of observing the signs. Even though the Hebrew Calendar is likely the closest mathematical calendar in use today that often coincides with actual observation, it does not allow for any kind of variance within Yehovah's creation. Ultimately, perpetual use of the Hebrew Calendar creates a mathematical bias, regardless of when the physically observed signs appear - which can be different by one or two days and, in the case of averaging the barley harvest, a difference of an entire month! But because of their mathematical bias, and because it is found to be mathematically accurate using the equinox, the Hebrew Calendar is today's chosen method that Orthodox Jews and many Sabbath/Festival keeping groups follow.

Today, a Jewish group claims to be the reestablished Sanhedrin created in preparation for any needed court system in the future should the temple in Jerusalem ever be restored. It is believed by these Jews that should the people wish to return to the original traditions, the method of observing signs would once again be standard practice. They further explain in their article Fixing of the Calendar:

"In recent years, a situation has been created where more and more frequently the onset of spring does not coincide with [the] calendar currently in use. This means that the calendar is beginning to drift noticeably. Albeit, the rate of drift is very slow, much slower than other lunar calendars (such as the Islamic calendar). However, if continued unchecked, we will be celebrating Pesach in the summer, rather than the spring. Our current calendar will exceed halachically acceptable limits and we will be celebrating Biblically commanded holidays at times other than when Scripture requires them to be celebrated. One could argue that if a change is necessary in any event, it would be most correct according to Biblical and Jewish Law to once again use the system of witnesses. But it is certain that we will no[1] longer be permitted to use the mathematical calendar of Hillel II in the near future."

This clearly supports the fact that the current calculated calendar will no longer be adequate for the current Jewish community in the near future without some sort of change. Not a strong argument for mathematics being divinely given by Yehovah Himself. Yet, the Hebrew community views an observational method based on witnesses as not only being an acceptable method by Jewish law, but Biblical!

Now that we are familiar with the Biblical principles of a calendar and the history of how the Hebrew Calendar was established mathematically, let's take a deeper look at just how the current Hebrew Calendar is constructed, why it is drifting, and why it's overall architecture and man-made rules may further contradict what we have learned from scripture.
Mathematical Bias and the Biblical Calendar

Let's begin to take a look now at the current Hebrew calendar. Remember, we have already seen an evolution of this calendar from a Biblical perspective that is literally based on observing the lunar, solar and seasonal signs, to a process of observation confirmed by witnesses that purportedly used calculation to confirm the testimony, to a process of pure calculation abandoning observational practices. We have explained that the monthly search for a new moon crescent has been replaced with the calculation of the Molad - the mathematical average time of the moon's conjunction. Additionally, the annual search in the spring for indigenous barley or equivalent crops was replaced with a mathematical average that inserts a 13th leap-month based on a 19-year cycle pattern. Many that support the Hebrew calendar either accept this change or claim that it's calculations have actually been a mathematical system all along, since the time of Moses, and has merely been kept confidential among small groups of individuals (such as the Sanhedrin).

To make such a claim, it is then presumed that the mathematics have been divinely granted and preserved as part of the Oracles - the same way Biblical scriptures have been preserved from the Old Testament. But there are also other aspects of today's Hebrew calendar that have also changed.

One change that took place is actually preserved by the scriptures themselves. That is a change of the proper Hebrew names given for months. As we read in Exodus, Yehovah gave us the name for the first month of the year as Abib. The name Abib can be seen in Exodus 12:2, 13:4, 23:15, 34:18 and Deuteronomy 16:1. The current Hebrew calendar, however, has given the first month the proper name Nisan - although minor on the surface, a change indeed. There are three other months named in the early Old Testament Bible: Ziv (I Kings 6:1 and 6:37), the second month meaning light (splendor or radiance), Ethanim (I Kings 8:2), the seventh month meaning strong (ever-flowing), and Bul (I Kings 6:38) the eighth month meaning produce (or rain) when crops were often planted. The remaining months were simply numbered (third month, fourth month, etc.). But, in later writings of the Old Testament and in the New Testament, we see a change to references of the calendar as having all of the months named whose origins come from ancient Babylon (Nisan, Iyyar, Sivan, Tammuz, Av, Elul, Tishri, Keshvan, Kislev, Tevet, Shevat, Adar and Adar II). We can confirm this in the Wikipedia Encyclopedia:

"During the Babylonian exile, which started in 586 BCE, Jews adopted Babylonian names for the months, which are still in use. The Babylonian calendar also used a lunisolar calendar, derived from the Sumerian calendar, which was similar in structure to the Hebrew one."

As a side-note, the Babylonian and Sumerian calendars were also based on observation of the new moon crescent. However, we see here the first known modification to the Hebrew calendar by the changing of monthly names in 586 BCE. We also see these names referenced in the Bible (primarily in the New Testament) - so we know this change occurred. Without the Hebrew meaning behind the name Abib, we no longer have a foundation for basing our first month as the moon of the ripened barley harvest. Instead,
the name has been replaced with Babylonian traditions. Just because this change is recorded within the Biblical text, however, it does not mean that it should have! Furthermore, if the existing calendar was considered preserved as part of the Oracles, wouldn't the names have been preserved as well? Did Yehovah approve of such a name change? Even when He directly gave the original name for the first month of the year?

Just as we no longer refer to days of the week as the first day, second day, etc., today's society has adopted names of Sunday, Monday, etc. In fact, all of the names for the days of the week are now based on the names of Pagan gods - including the Babylonian Sun god (Sun-day). But just because we may reference the Sabbath as being on Saturdays, does that mean Yehovah intended to change his Sabbath to be called Saturday? No, of course not! Neither should we assume Yehovah changed the month of Abib to Nisan!

Notice the Babylonian name for the fourth month. Tammuz, which was one of the primary Babylonian gods that has evolved into many pagan practices intricately tied into the summer and winter solstices each year - including the celebration of Christmas. Tammuz is a Life-Death-Rebirth Deity\[^{42}\] that is mourned at the summer solstice as he begins to die and celebrated at the winter solstice as he is reborn. Tammuz is also mentioned in the Bible with the mourning ceremony for the Pagan god specifically classified as an abomination by Yehovah. Ezekiel 8:14-15[\[1\]:

> "Then he brought me to the door of the gate of the LORD'S house which was toward the north; and, behold, there sat women weeping for Tammuz. Then said he unto me, Hast thou seen this, O son of man? turn thee yet again, and thou shalt see greater abominations than these." (Underlined emphasis added)

Even Yeshua Himself never references the Babylonian names for the months within the scriptures. Certainly Israel, followed by the Jewish community and its authoritative leaders, picked up some Pagan practices after their Babylonian exile just as we continue to do today (beyond naming the days of the week). But regardless, even though He may have allowed it to happen, there are no scriptures showing the Babylonian names of the months as being ordained by Yehovah. And it certainly does not support a calendar system being preserved and protected in the Oracles from the time of Moses.

Another change the Hebrew Calendar makes is the length of months. We saw earlier that the Hebrew calendar uses the calculated Molad, the average of the moon's conjunction, instead of the visible new moon crescent. But instead of referring to the Molad calculation every month, the current Hebrew Calendar makes adjustments based on the timing of the seventh month - at the Day of Trumpets (or Rosh Hashanah as the Jews refer to it today).

These adjustments are made to either the 8th or 9th month of the previous year. The remaining 10 or 11 months are assigned a fixed number of days that never change - not unlike the Gregorian calendar uses February to add a leap day every four years. For the 1\(^{st}\), 3\(^{rd}\), 5\(^{th}\), 7\(^{th}\), 11\(^{th}\) and 12\(^{th}\) months, each are assigned 30 days. The 2\(^{nd}\), 4\(^{th}\), 6\(^{th}\), 10\(^{th}\) and 13\(^{th}\) months are assigned 29 days. When 13 months are required in the year, the 12\(^{th}\) month is considered the "leap month" - so for years only containing 12 months, the 12th month of this pattern is skipped. The 8\(^{th}\) and 9\(^{th}\) months can be either 29 or 30 days based on added mathematical rules.
These additional rules are called Dechiyot or Rules of Postponement. From a mathematical perspective, they are essentially leap-days added to the calendar to delay Rosh Hashanah/Yom Teruah (Day of Trumpets) in the seventh month (Tishri) based on certain conditions. To the Jewish community, they are referred to as "Fixing Rosh Hashanah". In the Encyclopedia of Judaism[37] regarding the Jewish Rosh Hashanah New Year, we see this fix is described in the...

"Eighth tractate of Order Mo'Ed in the Mishnah. Its four chapters deal primarily with two subjects: the laws for fixing the new month by the Bet Din and the laws relevant to blowing the Shofar (ram's horn) on Rosh Ha-Shanah (New Year) and the accompanying blessings (cf. Lev. 23:23-25; Num. 29:1-6)."

As a side note, the month of Tishri - the seventh month of the Hebrew calendar - is referred to in the Jewish community as the New Year. This can be confusing when most of us think of the New Year as being the first month. Although Jews still consider Tishri the seventh month on the calculated calendar, they consider it to also be the first month of a "fiscal" year. Traditionally, they claim that the seventh month marks the anniversary of the Creation Week given in Genesis.

The first rule delays the start of the 7th month (also the Day of Trumpets) based on what time the calculated Molad cycle repeats and whether it occurs before or after the noon hour in Jerusalem. If it is calculated to occur after the noon cutoff, the previous 8th month will be 30 days in length, thereby pushing Day of Trumpets forward one day (along with the start of the prior 10-11 months). This rule is not too dissimilar to the crude practice of the Sanhedrin that waited for eyewitness testimony. However, the final result of this rule creates a fixed mathematical dateline in Jerusalem so that a consistent trigger can be established to know when to changeover the month. This is necessary in order to have a fixed timetable that cannot be accomplished mathematically using the varying time of sunset. This timetable is similar to the calculated Gregorian calendar that establishes the midnight hour at the International Dateline in the Pacific Ocean.

So why is the noon hour chosen? Even though the Molad is, essentially, the moon's conjunction, some church groups seem to interpret this rule as actually taking the new moon crescent into account. For example, the United Church of God, in regard to this first postponement rule, has stated in their doctrinal paper of The Hebrew Calendar[19]:

"If the Molad of Tishri occurs at or after noon of a day, the first day of Tishri on the calendar must be postponed to the next day. It is not the Molad that is all important, but rather it is the appearance of the crescent of the moon that really counts. The rules of the calendar state that someone might theoretically observe the crescent as early as six hours after the conjunction, but not a moment earlier. Since there is no scriptural method for establishing the new moon, this rule would seem to make sense." {Underlined emphasis added}

In other words, the day that is established as being the first of the month, based on the noon cut-off, would be considered a guarantee that the moon's crescent would also be seen on that day somewhere on the Earth by the time the next sunset comes around in Jerusalem. Even though the Biblical method would not establish the month until the sun goes down after the moon's crescent actually appeared, this theory would allow you to begin the month a few hours prior to the crescent's appearance if that day is considered most likely to have the crescent seen somewhere else on Earth.
This theory also chooses the noon hour because it would be considered impossible for the crescent to arrive in the six hour period prior to sunset. But is six hours the most appropriate choice? The average time for the new moon crescent to appear from the moon’s conjunction is 18 hours. But if the minimum amount of time between the conjunction and the visible crescent is really being considered here to establish an appropriate cut-off time, six hours is too short. According to the NASA/Naval Observatory’s recorded history of the new moon crescent for the Islamic calendar - a calendar also based on observation -they state in *Crescent Moon Visibility and the Islamic Calendar*[^8]:

"The sighting of the lunar crescent within one day of New Moon is usually difficult. The crescent at this time is quite thin, has a low surface brightness, and can easily be lost in the twilight. Generally, the lunar crescent will become visible to suitably-located, experienced observers with good sky conditions about one day after New Moon. However, the time that the crescent actually becomes visible varies quite a bit from one month to another. The record for an early sighting of a lunar crescent, with a telescope, is 12.1 hours after New Moon; for naked-eye sightings, the record is 15.5 hours from New Moon. These are exceptional observations and crescent sightings this early in the lunar month should not be expected as the norm. For Islamic calendar purposes, the sighting must be made with the unaided eye."

This means the minimum number of hours, even by using a telescope, is just over twelve hours - not six. If the ancient calculation of the Molad is so accurate, why would six hours be considered the minimum amount of time between the conjunction and the visible crescent? If this were the determination, the cut-off time would be set closer to 6am in Jerusalem. Obviously, this rule is not taking the visible crescent into consideration - but rather it is simply a man-made fixed point established to create a mathematical deadline. Further, if the crescent was really considered the important factor for establishing the 7th month as this group claims, the calculations would be based on the average time the sighting of the crescent itself actually occurred instead of finding the conjunction that happens several hours earlier and then re-adjusting back to the noon hour to undo what you just computed. Additionally, if this method was truly to establish the start of the month based on the crescent, it would be the same rule applied to all months of the year - not just the seventh! Since the leap day is added to the prior year's 8th month, it destroys any integrity of the prior 10-11 months. Finally, based on the Biblical signs we have discussed that are involved in a calendar, there would be no need for any further adjustments to begin the seventh month - but as we will see, another delay can occur.

The second Rule of Postponement creates a fictional decree to avoid certain Festival dates to fall adjacent to the weekly Sabbath. Therefore, if the first day (after applying the first rule) falls on the first, fourth or sixth day of the week, the 7th month is postponed to the following day by adding another leap day to the previous year's 9th. Confirmed by the Wikipedia Encyclopedia[^20], this postponement rule is:

"...to ensure that Yom Kippur does not directly precede or follow Shabbat, and that Hoshana Rabbah is not on a Shabbat, in which case certain ceremonies would be lost for a year, the first day of Rosh Hashanah may only occur on Mondays, Tuesdays, Thursdays, and Saturdays (the "four gates"). Adjustments are made to ensure that Rosh Hashanah does not fall on the other three days."
This rule certainly does not take the *visible crescent* into account no matter how you attempt to twist the rules - it is strictly a man-made requirement. There is no Biblical support for this rule, and even the Orthodox Jews or the Rabbinical authorities claim that there is no such requirement given within scripture. Historically, you can find references to Rabbinical Jews instituting this rule to avoid bad smells that would occur when their dead were not buried after two days. But, the *United Church of God* accepts this adjustment by claiming in their doctrinal paper, *The Hebrew Calendar*[^19], that:

> "The second rule of postponement, therefore, prevents the significant difficulties that would arise from back-to-back Sabbaths in the fall Holy Day season. Although back-to-back Sabbaths can occur in the spring, they do not create a significant hardship, by virtue of taking place only once or twice in a two-month period."  

[Underlined emphasis added]

Therefore, United Church of God believes that Yehovah did not intend on His people to experience the hardship of having two Sabbath days in a row; although this scenario does appear to be allowed in the spring season - in fact, even forced (considering the Day of Pentecost always falls on the first day of the week). But again, this excuse is not Biblical or instructed anywhere in scripture. It assumes that back-to-back Sabbaths are a burden (or too difficult) and that Yehovah didn't intend on this scenario to occur too often (only once or twice).

Mr. John Ogwyn of the *Living Church of God* defends this postponement rule by using the Day of Preparation. He states in his article[^18]:

> "Recognizing that God set the weekly Sabbath and the Day of Atonement apart in their level of sanctity, the Levitical priesthood sought to implement these instructions in proclaiming the festivals. They realized that the Day of Atonement, a shabbat shabbaton upon which 'no work whatsoever' was to be done, should not be the preparation day for the weekly Sabbath (which would occur if the first of Tishri came on a Wednesday). Additionally, they avoided the weekly Sabbath being the preparation day for Atonement, which would happen if Tishri 1 fell on a Friday."

Mr. Ogwyn assumes here that the Day of Preparation must occur on the previous day and that we cannot prepare for more than one Sabbath should they occur back-to-back. Yet this very scenario occurs every year at Pentecost when the previous day is always the weekly Sabbath - where "no work whatsoever" is allowed. But we are given no Biblical reason to assume we cannot make preparations prior to the back-to-back Sabbaths and, in this example, prepare for both days on Friday. We see in Exodus, when the miracle of manna occurred in the wilderness to feed the people during the time of Moses, that Israel was commanded to gather twice as much before the Sabbath. Exodus 16:23[^1] states:

> "Then he said to them, 'This is what the Lord has said: 'Tomorrow is a Sabbath rest, a holy Sabbath to the Lord. Bake what you will bake today, and boil what you will boil; and lay up for yourselves all that remains, to be kept until morning.'""

Exodus 16:26[^1] says:

> "Six days you shall gather it, but on the seventh day, which is the Sabbath, there will be none."

Exodus 16:29[^1] continues:
“See! For the Lord has given you the Sabbath; therefore He gives you on the sixth day bread for two days. Let every man remain in his place; let no man go out of his place on the seventh day.” [Underlined emphasis added]

We see here that the important focus is the Sabbath itself, not the sixth day of the week. There is no reason to limit Yehovah by stating he would not have made enough manna available for three days instead of two if it were necessary to observe both of Yehovah's Sabbaths. It is only when His commands were ignored and the people gathered on the Sabbath day itself that the manna would spoil. Additionally, if the Day of Atonement were to fall on a Sunday, there would be no need to gather three times the amount of manna because no food would have been consumed on the Day of Atonement - a day of fasting. This scenario would be no different than any other Preparation Day for the given week. If the Day of Atonement were to fall on a Friday, why would we assume Yehovah would not have kept the manna from spoiling during the Day of Atonement and the start of the weekly Sabbath? The purpose of the Preparation Day is to prepare for the oncoming Sabbath - whether it is for one day or two days back-to-back. There is also no requirement that the Day of Preparation must fall on a particular day of week and, in fact, we are given Biblical examples where it doesn't (i.e. John 19:31). We are not instructed to wait until the weekly Sabbath has already begun in order to prepare for a Holy Day that falls on the proceeding Sunday - in fact we shouldn't.

Mr. Ronald L. Dart, a former Worldwide Church of God minister and recent radio evangelist, claims the Temple sacrifices were of a primary concern for this rule. In his article Why Do We Use the Hebrew Calendar?[^43], Mr. Dart states:

"The priesthood had special responsibilities on the holy days and the new moons, so it would not be surprising if they should take those duties into account when working out their calendar rules; especially when the law gave them no specific instructions to the contrary."

In other words, Dart defends this rule by stating the Rabbinical authorities could simply change Yehovah's appointed Holy Days due to inconveniences of multiple Temple duties of the High Priest. Since the Temple sacrifices were required on Holy Days, Sabbaths, New Moons, and in the mornings and evenings, placing the Day of Atonement adjacent to the weekly Sabbath would be difficult. Yet, there seems to be no problem with having the Day of Atonement fall on the same day as the weekly Sabbath which would increase the sacrifices tremendously at the same time, proving even more inconvenient! Also, according to Mr. Dart's logic, because we do not have Biblical instructions telling us not to postpone Yehovah's appointed days, we (or, at least, the Orthodox Jews) are suddenly able to do so? Does this mean we (or the Rabbinical authorities) can change the weekly Sabbath to Sunday and just simply call it the seventh day because the Bible does not instruct us that we can't? This again assumes that an authority can change what Yehovah Himself has already appointed and flies in the face of the commandment to not add to the Torah (or the law) found in Deuteronomy 4:2[^1]:

"Ye shall not add unto the word which I command you, neither shall ye diminish ought from it, that ye may keep the commandments of the Lord your God which I command you." [Underlined emphasis added]

Finally, why are any of these scenarios to be considered a conflict or an inconvenience for the Day of Atonement (a day of fasting) and not for the Day of Pentecost that would also fall back-to-back with the weekly Sabbath?
The Jewish festival of Hoshana Rabbah, mentioned above, is documented as being another purpose of instituting this second postponement rule. The traditions that occur on Hoshana Rabbah are some of the oldest in Orthodox Judaism. The Wikipedia Encyclopedia explains the Hoshana Rabbah rituals:

"...in which seven circuits are made by the worshippers with their lulav and etrog [pieces of the Sukkot], while the congregation recites Hoshanot [a recited prayer]. It is customary for the scrolls of the Torah to be removed from the ark during this procession. In a few communities a shofar is sounded after each circuit."

This festival, also known as a water festival, is held on every day of the Feast of Tabernacles in Jewish tradition. But there are specific rituals conducted specifically on the 7th day. The Encyclopedia of Judaism of Answers.com explains:

"On each of the first six days of the Jewish Sukkot festival, a single stanza of the Hoshanat litany is recited (except on the Sabbath) and the congregation circles the reader's platform carrying the four species: a palm branch, citron, three myrtle twigs, and two willow branches, all gathered into a bouquet. But on the seventh day, known as the Great Hoshana, the congregation makes seven circuits around the altar, after which the four species are laid down and a bunch of five willow branches is picked up and beaten on the ground three times to symbolize humanity's dependence on rain."

But these traditional ceremonies are not instructed within the Bible. In fact, they are man-made traditions that have been created as a prayer for rain by walking (or even dancing) in a circle chanting words repeatedly using the Aramaic expression "chabit, chabit velah barich". These traditions border very similarly to Pagan practices of rain god dances. In fact, the Encyclopedia of Judaism continues...

"...since the Middle Ages, Hoshana Rabbah has been regarded as an extension of the deadline for Divine judgment [following the Day of Atonement]. According to an old Jewish folk belief, notes fell from Heaven on this day informing people of how they had been judged. The traditional Yiddish greeting, a gute kvitl, "May you receive a good note," reflects this belief. There is also a popular superstition claiming that a man who doesn't see his shadow on this night is fated to die in the coming year."

Based on the necessity for Calendar Postponements, these various Church groups accept that we should delay the calendar to accommodate for these man-made superstitious traditions. Using such excuses to create a postponement of the month profanes Yehovah's Festival Appointments and His Sabbaths, ignores His ordained signs, and is certainly never instructed within scripture.

The remaining Rules of Postponement also allow these two leap days to be in effect based on two specific conditions. The first adds both leap days if the molad falls on a Tuesday after 9 hours and 204 parts in a 12-month (common) year. The second adds one leap day if the molad falls more than 15 hours and 589 parts after 6pm Sunday evening in a 13-month (leap) year. Regardless, the Calculated Hebrew calendar can last either 353, 354 or 355 days in a common year or 383, 384 or 385 days in a leap year. Leap years are determined using the 19-year pattern.

All of these adjustments, as you can see, can cause the Hebrew calendar to be off from the Biblical days we established earlier - and can occur in every single month of the year! By changing the methodology,
the Biblical signs and creating average timetables, there's no doubt that the Hebrew Calendar has changed from the Biblical instruction. Some freely accept a change to mathematics knowing the calendar's history - after all, the calculated result does get pretty close. But any change away from the Biblical method is still a change. Malachi 3:6[1] states:

"For I am the LORD, I change not."

But change is evident throughout the Hebrew Calendar. Regardless of whether someone argues that the Renewed Moon (chodesh) referred to in the Bible is the new moon crescent or the dark moon conjunction, you can see that the Hebrew calendar, by establishing fixed timetables, does not allow for any variance of the lunar event from month-to-month. It also causes us to ignore Biblical instruction - for example, the spring festivals are instructed to be kept a certain number of days following the renewed moon. With the Hebrew Calendar, you would now count the number of days from the Molad of the seventh month in the previous year, which would depend on whether it occurred before or after noon in Jerusalem and whether it started on Sunday, Wednesday or Friday and whether your count is adjusted based on the 19-year cycle. The mathematical principles cause Yehovah's given sign of the moon to essentially be ignored, or at best used only as a rough estimate (actual results may vary).

It is these mathematical man-made rules that conflict with the Biblical instruction that should cause us to question their validity. There is also too much evidence that shows the Hebrew calendar, as we know it today, has been an evolving process - from a calendar based on pure observation to one based on pure calculation. This evolving change has been fully documented within Jewish history and its Rabbinical authorities - the same group that various Western church organizations attest to preserving a calendar methodology within the (unwritten) oracles. But the primary reason Orthodox Jews follow the Hebrew calendar today is strictly due to the Rabbinical authority given to it through the man-made traditions and Rabbinical writings.

Glenn McWilliams, writer for Torah Keepers, a Messianic Jewish group explains in his Calendar Debate[11] article the growing Christian movement to abandon Pagan practices and return to the commonwealth of Israel. He further explains that:

"These new citizens have a zeal for studying the Torah and learning the truth. Not wanting to be deceived again, these newly liberated brethren are seeking to live according to the commandments of the Almighty rather than the doctrines of men. It is not long, however, before these new citizens realize that Judaism, like Christianity, is also shaped by 'the traditions of the elders.' Thus, what is practiced in Rabbinic Judaism is not necessarily any more consistent with the Torah than what was found and rejected in Christianity."

He continues to state that following the Biblical principles...

"...makes sense to inspect the barley instead of religiously following the rabbis' inaccurate mathematical calculations. This is especially true when the calculations of the rabbis are clearly contradicted by the physical evidence of the barley and the new moon. We are witnessing a..."
growing group of supporters for the ancient biblical calendar that was still in use in Israel long after the second Temple was destroyed."

We are witnessing this same growing concern over the Hebrew calendar right now within many Western church organizations and Sabbath-keeping groups. They have already been a concern for much of the Jewish community and, in fact, have been a topic historically debated since shortly after the time of Yeshua! Most have chosen to put their entire confidence and faith into the mathematics and by following the example of the Orthodox Jews' acceptance of rabbinical rules without any question. Many of us in the Western World have never even considered the architecture and history behind the Hebrew calendar's evolving process. We assume the calendar has been preserved and may not even realize that the Rabbinical Orthodox Jews themselves do not view their own calendar in the same way, but instead many follow the Oral Law and Rabbinical authority to accept "the next best thing" rather than directly using the written principles recognized within Torah - the Bible!
ACCURACY

So how accurate are the computations of today's Hebrew calendar? The Hebrew calendar claims to be lunisolar, meaning it takes into account both signs of the sun and moon. You have already seen, though, that this claim is not completely accurate due to some additional non-Biblical rules and redefinitions of observed signs to mathematical concepts to make the formulas consistent. We will also see that the overall calculated results are not 100% accurate - even when compared to the mathematical solar year - and is slowly drifting out of position over many centuries. Yet, supporters for using the Hebrew calendar continue to endorse its accuracy. John Ogwyn of the Living Church of God, author of an article titled The Hebrew Calendar[16], explains:

"...in antiquity, man had only two ways of knowing the time of the new moon. One was by physical sighting of the crescent; the other was by calculation based upon the average time between conjunctions. The Hebrew calendar uses 29 days, 12 hours and 793 parts (an hour contains 1,080 parts) as the duration of the average lunar month. This works out to 29.53059 days in decimal form. According to the 15th edition of Encyclopedia Britannica, modern astronomers using satellites and computers have come up with the figure 29.530589-one one-millionth of a day difference!"

This does, indeed, describe an amazing accuracy of determining the lunar cycle using observation. It does not explain, though, why computations for the Molad begin with the moon's conjunction rather than the visible new moon crescent or why Jerusalem and the noon hour are chosen as the line of final determination. It also does not explain why 12 out of 13 months are not determined by the Molad calculation and, instead, are assigned a fixed number of days. Furthermore, John Ogwyn does not continue to show that the calculation of a full year in the Hebrew calendar, using the 19-year cycle of inserting leap-months, is not as accurate as its lunar cycle counterpart. According to the Wikipedia Encyclopedia[20], the current Hebrew year is off from the solar year by over 6 minutes (not as accurate as the lunar calculation):

"as the present-era mean northward equinoctial year is about 365.2424 days long, the Hebrew calendar mean year is slightly longer than this tropical year. This results in a "drift" of the Hebrew calendar of about a day every 224 years."

The Wikipedia continues to show that as a result of this phenomenon, starting in the year 2011, Passover on the Hebrew Calendar will fall one full day later than the astronomical vernal full moon.

As purported, Rabbi Hillel II introduced the 19-year intercalary cycle that is responsible for computing which years to add a 13th month, which would place the Passover in its correct season. This extra month is added in years 3, 6, 8, 11, 14, 17 and 19 of the 19-year cycle. As we have discussed, this mathematical cycle has now abandoned the observation of barley as given in the Bible. The cycle's continued usage in modern years has shown discrepancies, however, where barley is not yet ripened in time when the Hebrew calendar denotes the New Year and the Passover season had already begun. Over time, this 19-year timetable is proving to be less and less accurate as the variables are changing that directly affect the
crops that could not have been accounted for in the original calculations - such as changing weather conditions and an overall fluctuating solar system causing slight variances in growing crops.

There is extensive research from many sources, including Jewish studies, which continue to search for the perfect mathematical calendar that varies from today's version of the Hebrew calendar. But the mathematical details of all of these findings are beyond the scope of this paper and, needless to say, only prove that the system currently used is not standing up to the "test of time". The fact remains that our universe is in a constant state of flux and contains too many variables - known and unknown (including what Yehovah Himself may adjust at will) - that would not allow for any mathematical formula to accurately predict with 100% certainty. When you further attempt to standardize any formula into equal segmented chunks of time into a table of days (a calendar), you also lose any accuracy that the formula claims. Only Yehovah Himself would be able to administer a mathematical formula or table of days that would either be precise over millennia, into the coming Kingdom and beyond or that He Himself would adhere to by adjusting the celestial movements to fit the formula. But it is the celestial movements in Genesis (on Day Four of the Creation Week) that were ordained by Yehovah - not some mathematical formula.

Even the Jews view their own calculated calendar as temporary. The Jews understand that the current calculations are not accurate and are drifting beyond their intended purpose. But they believe that it's the best method they have for now - at least, until the Messiah arrives or a third Temple is reestablished in Jerusalem so that an authority can either change the calculations or, once again, authorize the reception of eyewitness accounts through observations. The Wapedia Encyclopedia states in an article titled Rectifying the Hebrew Calendar[33]:

"Given the importance in Jewish ritual of establishing the accurate timing of monthly and annual times, some futurist writers and researchers have considered whether a 'corrected' system of establishing the Hebrew date is required, due to the small but accelerating changes in the actual lunar cycle interval. Further religious questions include how such a system might be implemented and administered throughout the diverse aspects of the world Jewish community.

It is traditionally held that the fixed arithmetic Hebrew calendar was established on the authority of Hillel ben Yehudah, President of the Sanhedrin in Hebrew year 4119, and therefore only an equal authority (a modern Sanhedrin) can either amend it or reinstate the observational Hebrew calendar."

We, as followers of Yeshua, do not need to wait for a Messiah or a High Priest! We serve as a temple and as the body of Yeshua, the Church! Therefore, we have a foundational system that can reinstate the observational methodology from ancient history and one that is supported by the Bible. Yet most church groups have chosen to ignore this issue!

Rood Ministries, a group dedicated to following the signs of Aviv barley, have taken it upon themselves to plant barley near Jerusalem (and other surrounding locations within Israel) annually to determine the appropriate month the barley is considered Aviv. Here are their findings[14]:

"

"...since our return to the land, observation of the barley crop has proven that the rabbinic cycle is often in error and now obsolete. Over the past decade, several Israelites have investigated the state of the barley crop at the time that the modern Jewish calendar declared the month of Aviv (Nissan) and discovered that the barley was not yet aviv."
The Wikia Encyclopedia confirms this finding and explains the conundrum of the supposed accuracy of the 19-year cycle and how it could be corrected. It states in the Accuracy\textsuperscript{20} section:

"As the 19 year cycle (and indeed all aspects of the calendar) is part of codified Jewish law, it would only be possible to amend it if a Sanhedrin could be convened. It is traditionally assumed that this will take place upon the coming of the Messiah, which will mark the beginning of the era of redemption according to Jewish belief. Theoretically, if Jewish law could be modified, one solution would be to replace the 19-year cycle with a 334-year cycle of 4131 lunations. This cycle has an error of only one day in about 11,500 years. However, this would be impossibly cumbersome in practice. Further, no such mathematically fixed rule could be valid in perpetuity, because the lengths of both the month and tropical year are slowly changing."

How can the Sanhedrin be reestablished? AllExperts Encyclopedia\textsuperscript{16} explains:

"This will only take place when the rebuilding of the Third Temple has begun, which will mark the salvation of the Hebrews according to Jewish belief."

We see here that the Jewish community is fully aware of their calendar's inaccuracy. They believe that the ultimate fix to this problem will be with the coming of the Messiah, or a reestablishment of the Sanhedrin with the building of a third Temple in Jerusalem (which would return to the traditions of observation). Their only other alternative would be the Rabbinical authority to establish an exception to the calculations currently in place today, further modifying the calendar that Sabbath-keeping churches in the Western World claim as being preserved.

Today, a group claiming to already be the reestablished Sanhedrin\textsuperscript{34} continues to push for restoration of a third Temple in Jerusalem and for the Jewish people to return to the original traditions. They agree that there is a major discrepancy in today's mathematical calendar as introduced in the 4th century described in their article Fixing the Calendar\textsuperscript{7}. They claim:

"In recent years, a situation has been created where more and more frequently the onset of spring does not coincide with (the) calendar currently in use. This means that the calendar is beginning to drift noticeably. Albeit, the rate of drift is very slow, much slower than other lunar calendars (such as the Islamic calendar). However, if continued unchecked, we will be celebrating Pesach in the summer, rather than the spring. Our current calendar will exceed halachically acceptable limits and we will be celebrating Biblically commanded holidays at times other than when Scripture requires them to be celebrated. One could argue that if a change is necessary in any event, it would be most correct according to Biblical and Jewish Law to once again use the system of witnesses. But it is certain that we will no longer be permitted to use the mathematical calendar of Hillel II in the near future."

This supports the fact that the current calculated calendar will no longer be adequate for the current Jewish community in the near future without some sort of change. Yet, an observation method based on witnesses would be Biblical and acceptable, even by Jewish standards.
Mathematical Bias and the Biblical Calendar | AUTHORITY

AUTHORITY

Although Christians, in general, do not recognize a Rabbinical authority on establishing doctrinal beliefs or following Talmudic traditions, many Sabbath/Festival keeping church groups tend to give an exception on the topic of the Hebrew Calendar. Their primary reason for doing so is based on the Jews being given the Oracles, as explained in Romans 3:1-2:

"What advantage then has the Jew, or what is the profit of circumcision? Much in every way! Chiefly because to them were committed the oracles of God." {Underlined emphasis added}

Notice the oracles were Yehovah's - not of men! This is referring to Biblical Scripture - more accurately, the Tanakh that included the instructions given to Moses in the wilderness at Mount Sinai and described within the Torah portion (the first five books of the Bible). Yet, many assume that the oracles also included a separate calendar, either in written or oral form. Acts 7:38 further explains what the oracles entailed:

"This is he who was in the congregation in the wilderness with the Angel who spoke to him on Mount Sinai, and with our fathers, the one who received the living oracles to give to us."

In the earlier sections, we just read from these same Oracles the words given to Moses regarding the New Moons, blowing of trumpets and setting the year to the Abib harvest moon. There is no scripture stating Yehovah then gave a separate calendar to calculate instead. Many will attempt to change what is in the written form by stating the phrase Living Oracles implied a separate oral instruction that contained different information! Based on the infrastructure of the Hebrew Calendar, however, this concept would introduce contradictions to the written instruction, the scriptures, which state that nothing should be added or subtracted from the written law and that Yehovah does not change! Therefore, if there were any spoken oracle given at the time of Moses, it simply would have expounded on what we already have in the written version (not change it or contradict it). The concept that portions of the Torah instructions were in written form while others only given orally is clearly not supported. Exodus 24:3-4 [1] explains:

"And Moses came and told the people all the words of the LORD, and all the judgments: and all the people answered with one voice, and said, All the words which the LORD hath said will we do. And Moses wrote all the words of the LORD, and rose up early in the morning, and builded an altar under the hill, and twelve pillars, according to the twelve tribes of Israel." {Underlined emphasis added}

We see here that the written Oracles contain all of the words of Yehovah given to Moses. Even though Jewish traditions have been added over many centuries, the Jews have managed to preserve this written oracle in its original form, as Paul explains in the Romans verse above. In fact, Jewish tradition required the scriptures to be meticulously preserved by creating copies word by word, line by line and then rechecking by counting paragraphs, lines, words and even letters to assure nothing had been missed. A finished copy of the Tanakh was extremely accurate from its original and allowed the original words to continue in their original form long after the animal skins and parchment faded away. Jewish scribes dedicated their entire lives to preserving the scriptures. However, this does not mean that everything the Jews interpreted from those scriptures were correct. Regardless of interpretation, however, even the Jews themselves - the holder of the Oracles - do not believe a separate calendar system has been preserved from the time of Moses. They understand that the Hebrew Calendar is different from that which is contained in the written Torah and there was no meticulous history of preserving a separate calendar system in the same manner. It is understood, even by the Jewish orthodox, that the Hebrew calendar is a
Rabbinically-authorized calculated system that contradicts the written Torah and that today's mathematical version has been an evolving process over the centuries (starting with Hillel's 19-year cycle introduced in the 2nd century A.D. and ending with Rabbi Maimonides' confirmed system in the 12th century A.D.). Their own documented history supports an original calendar system as once being based on observation and eyewitness reports (a practice documented by the Sanhedrin) which were based on instruction given directly from the Torah.

The eventual creation of fixed days and month cycles, along with the institution of mathematical rules, are strictly based on a Rabbinical authority that, they believe, is directly tied to the Biblical Pharisees that were established under the Sanhedrin. As we read in an earlier section, the Sanhedrin believed that observations were required to be made, or at least confirmed, from the temple or courts. The Jewish leaders were then forced to create an alternative solution for the people as they were being expelled from the Holy Land in the third and fourth centuries A.D. Even though this fact is recognized by many Jews today, they now believe that changing back to an observed system would require the restoration of this Sanhedrin authority or by the sought-for Messiah they still expect to arrive in flesh-and-blood to establish his physical kingdom and the third temple within Jerusalem. It is believed that such an established Priesthood could then correct matters such as the calendar. Until then, the latest authority is recognized and the calculated Hebrew calendar continues to be observed.

This Rabbinical authority is documented in the Talmud and includes the establishment of rules and many man-made traditions that require one to follow in addition to the written Torah. These traditions dictate details that go as far as which shoe to put on your foot first. It was this authority and leadership that Yeshua Himself challenged throughout His ministry by overriding their so-called "traditions" of man-made laws and regulations.

These traditions would never be recognized by Christian churches (Sabbath-keeping or not), yet it is considered acceptable by most when it favors the Hebrew Calendar. Despite what Christians claim, the Jews believe they must follow the Rabbinical system of government, even when it conflicts with the words of Yehovah. This practice is documented in the Rabbinical Talmud of Baba Metzia 59b. It is here that Rabbis claim they no longer have a need to even listen to Yehovah:

"That the Torah had already been given at Mount Sinai; we pay no attention to a Heavenly Voice, because Thou hast long since written in the Torah at Mount Sinai, After the majority must one incline."

If this authority no longer listens to Yehovah within its government, then it is not the direct authority of Yehovah! Although the Jews understand the written Torah is from Yehovah, they believe it has now been left for them to interpret. Yehovah Himself cannot correct or challenge their interpretations, regardless of any apparent conflict. This allows them to create new laws and calendars that conflict with the written Torah and with Yehovah's instruction despite the meticulous maintenance of the original scriptures.

Any church organization that accepts the Hebrew calendar doctrine based on the Jewish claim of authority must also accept their authority over Yehovah Himself and ignore all scripture conflicts. Although following this concept may be a convenient answer that can provide unity, it cannot be supported by scripture and, therefore, another answer must be sought. Perhaps, out of ignorance, some groups believe that the Hebrew Calendar has also been preserved in the same manner as the scriptures themselves from the time of Mount Sinai, but that would be untrue. Simply stated, one or both are
incorrect and both cannot be truth. Even though it can be difficult to let go of tradition and what is comfortable, church groups claiming "authority" through the Oracles for acceptance of today's Hebrew calendar is just illogical.

On the flip side, many church organizations use authority to purport the claim that individual supporters of an observed calendar also have no authority to determine a conclusion for themselves despite what Biblical scripture claims. United Church of God addresses this in their doctrinal paper:

"Some people have taken it upon themselves to determine the calendar. God lets them do so, but does He give them the authority in this matter?"

It is the Bible, though, that serves as the authority in this matter! Yet, even this Church of God group defended their decision of following the calculated Hebrew Calendar - not because they can prove it from the Bible, but - because the Jewish community is their chosen, self-appointed authority they have recognized for this topic. They are self-appointed because, as we read earlier in Deuteronomy 4:2, there is no authority but Yehovah Himself that can trump the Bible. We also saw that it was Yehovah Himself that ordained the signs of the sun and moon for times, seasons, days and years. Surely, this group doesn't teach that we should ignore Yehovah or that He bestowed an authority (the Jews) to then change what He has already ordained, do they? This is precisely the conflict that members of these churches are seeing.

Glenn McWilliams of Torah Keepers discusses this topic in his article regarding Christians and authority:

"The central and fundamental debate is over the issue of authority. The true question being asked by the members of this infant movement is not which calendar is right but what authority we are to follow. The authority behind the rabbinic calendar is clearly the rabbis. The rabbis have established their authority through the writings of the Talmud, the oral Torah. It is the Talmud that has established the rabbinic calendar as the calendar for all Israel, including those in the Diaspora. On the other hand, the authority behind the biblical calendar is the written Torah. The tension that is tearing at the unity of the Hebraic Roots/Messianic Movement is simply the tension that exists when the written Torah and the oral Torah do not agree. The calendar is only one of many such issues."

If, indeed, a Rabbinical authority were given by Yehovah Himself for us to follow, then the entire Talmud must also be accepted along with their calculations for a calendar. Although it's important to have an authority within an organization and equally important to not disrespect that authority held by a given office or position within any organization, it cannot be blindly followed whenever its judgment contradicts with scripture. Even Yeshua Himself did not fully accept the oral traditions of the Jewish leaders in His time on Earth and was threatened on many occasions to be stoned to death for breaking their oral traditions (likely assuming he was disrespecting them when, in actuality, they were disrespecting Yehovah Himself by not following His authority). Some cite Matthew 23:1-3 on the authority of the Pharisees and believe Yeshua instructed the people to follow their teachings in all matters:

"Then Jesus spoke to the multitudes and to His disciples, saying: “The scribes and the Pharisees sit in Moses' seat. Therefore whatever they tell you to observe, that observe and do, but do not do according to their works; for they say, and do not do.”"

At first, this seems to contradict the example Yeshua lived and taught against throughout His ministry. Did Yeshua contradict Himself by being disrespectful simply because He disagreed with the Pharisees?
No. When you consider the translation of this verse in Matthew, a book strongly supported as originating from Hebrew text, you can clarify what Yeshua meant. Nehemia Gordon, author of *The Hebrew Yeshua vs. the Greek Jesus*, explains the history of this translation and the verse above:

"These are two fundamentally different messages, but in Hebrew, this is a difference of only one single letter! In Hebrew, "he says" is yomar while "they say" is yomru. The only difference between the two in an un-pointed Hebrew text is the addition of the extra vav in yomru "they say". That this is the basis for a completely different message is amazing because the vav is one of the smallest letters in the Hebrew alphabet, really just a single stroke!"

By researching the Hebrew text of Matthew, you find that this verse should state, according to the Shem Tov's Hebrew Matthew:

"Then Jesus spoke to the multitudes and to His disciples, saying: "The scribes and the Pharisees sit in Moses' seat. Therefore whatever HE [Moses] will say to observe, that observe and do, but do not do according to THEIR [Pharisees] works; for they say, and do not do."

When you continue to follow the examples of Yeshua throughout His ministry, you see that He was telling the people to not follow the Pharisees' teachings whenever they conflicted with the "Law of Moses". Certainly we are to respect and follow the laws of men as long as they do not counter the laws of Yehovah or attempt to add/subtract from Yehovah's original instruction. Yet, Rabbinical rules give men an authority to create what are called takkanot, or decrees, that are not only binding on followers of Yehovah, but even on Yehovah Himself! Jewish practice goes as far as constructing a seat within the synagogues that is referred from the verse above as the Seat of Moses (as referred from the verse above) where such Rabbinical decrees are established by the person sitting on it. Mr. Gordon further explains that this scripture continues in the Hebrew as:

"Therefore, all that he says to you, diligently do, but according to their reforms [takanot - Hebrew text omitted] and their precedents [ma'asim - Hebrew text omitted] do not do, because they talk but they do not do. In the Hebrew Matthew, Yeshua is telling his disciples not to obey the Pharisees. If their claim to authority is that they sit in Moses' Seat, then diligently do as Moses says!"

However, there are some church organizations that argue that the Jews were specifically granted a separate authority specifically over the calendar in the Bible. For example, Mr. John Ogwyn, in his article for *Living Church of God*, references Leviticus 23:2:

"The feasts of the LORD, which you shall proclaim to be holy convocations, these are My feasts."

Mr. Ogwyn explains the Hebrew word for convocations as being miqra, a word meaning to designate an assembly. He then uses the derived Hebrew verb qara, a word meaning to proclaim, also used in Leviticus 23:2. This same verb qara was used in Genesis 2 when Adam named the animals. His argument is that: since Adam called (qara) each animal's name, this granted an authority upon Adam that allowed him to create names for the creatures. Mr. Ogwyn continues:

"How does this relate to the holy days? In Leviticus 23, we learned that a certain group, (you, plural) was responsible for naming or designating the days on which the congregation was to assemble before God. Numbers 10 explains that this refers to the priesthood, and shows the means God gave them to announce the designation of new moons and festival days. It was not an
Therefore, Mr. Ogwyn argues that the Levitical Priesthood (using the words you, proclaim and convocation in Leviticus 23) were granted an authority to name (or ordain) Yehovah's appointed days of worship through the use of the trumpet mentioned in Numbers 10:10. He then infers that this authority allowed them to change the days of holy convocations, and the calendar, solely based on this authority. However, Mr. Ogwyn assumes that because Adam was given authority to name the animals that the Levitical Priesthood, in turn, had the freedom to change Yehovah's signs that were previously ordained by Yehovah Himself in Genesis 1. However, the animals named by Adam were not yet named when they were presented to him. Additionally, it was under the command of Yehovah that Adam named the animals. Genesis 2:19 states:

"Out of the ground the Lord God formed every beast of the field and every bird of the air, and brought them to Adam to see what he would call them. And whatever Adam called each living creature, that was its name." {Underlined emphasis added}

Furthermore, when you combine verse 1 and 2 of Leviticus 23, it becomes clear who Yehovah commanded Moses to speak to in regard to the Feasts:

"And the Lord spoke to Moses, saying, speak to the children of Israel, and say to them: 'The feast of the Lord, which you shall proclaim to be holy convocations, these are My feasts.'" {Underlined emphasis added}

Moses was not given a special authority to change Yehovah's laws or instructions. Instead, he served as a spokesperson for all of the people of Israel - an appointment given by the people themselves in Exodus 20:18-19 to interact with Yehovah at Mount Sinai following the daunting encounter with Yehovah when He spoke the Ten Commandments to them:

"And all the people saw the thunderings, and the lightnings, and the noise of the trumpet, and the mountain smoking: and when the people saw it, they removed, and stood afar off. And they said unto Moses, Speak thou with us, and we will hear: but let not God speak with us, lest we die" {Underlined emphasis added}

Additionally, any authority granted to either the Levitical Priesthood or to the children of Israel does not also grant them freedom to change Yehovah's ordained signs; a God that, on principle, does not change! Rather, just as the Levitical Priesthood meticulously carried out all of Yehovah's instructions throughout Exodus, Leviticus, Numbers and Deuteronomy, they meticulously followed Yehovah to the letter in fear of death. Aaron's sons learned this lesson when Yehovah struck them dead after not following His instructions and changed Yehovah's command in Leviticus 10:1-2:

"The Nadab and Abihu, the sons of Aaron, each took his censer and put fire in it, put incense on it, and offered profane fire before the Lord, which He had not commanded them. So fire went out from the Lord and devoured them, and they died before the Lord." {Underlined emphasis added}

Therefore, when a calendar system contradicts, adds specific rules, or creates details (such as mathematical formulas) not given within the established, written scriptures, then any claims of "authority" are dissolved. The Words of Yehovah preserved within the scriptures is the ultimate authority. To choose a calendar method by simply crying "because we say so" or "because the Jews say so" just doesn't cut it.
Carl Franklin, author of *The Calendar of Christ and the Apostles*[^6] published under the *Christian Biblical Church of God*, attempts to show that an authority was specifically given by Yehovah to calculate a calendar by citing Psalm 81:3-5[^1], which states:

> "Blow the trumpet at the time of the New Moon [chodesh 2320], at the full moon [kece’ 3677], on our solemn feast day. For this is a statute [choq 2706] for Israel, A law [mishpat 4941] of the God of Jacob. This He established [suwm 7760] in Joseph as a testimony, when He went throughout the land of Egypt, where I heard a language I did not understand."

Mr. Franklin gives meanings to the Hebrew words in these verses. The first, *chodesh* (Strong's 2320), he agrees means "occurrence of the new crescent". However, he believes this is only referring to the seventh month (crescent). The second, *kece’* (Strong's 3677) is translated *full moon* in the New King James. The third, *choq* (Strong's 2706), Franklin refers to *Brown Driver Briggs* (p. 349) who claims this word means "law of a religious festival". The fourth, *mishpat* (Strong's 4941) he says is related to the verb *chaqaq* (Strong's 2710) and means "something prescribed". Finally, *suwm* (Strong's 7760) he claims means "to compute". Franklin then concludes[^2]:

> "When we understand the meaning of the Hebrew words, it is evident that at the time of the Exodus from Egypt, God issued to Moses and Aaron 'a law of a festival' (*choq*) 2706. The festival for which this law was issued was the new moon (*chodesh*) 2320 of the seventh month. This law decreed that each year the new moon of the seventh month was to be presented for judgment (*mishpat*) 4941 by computation (*suwm*) 7760, and that a written prescription (*chaqaq*) 2710, or calendar, was to be issued."

By rearranging the words using Mr. Franklin's meanings, he pieces together a sentence - shown above - that he claims commands us from the Psalm (not within the original Torah) to calculate, or compute, our calendar. Again, even if you accept Franklin's meanings for these Hebrew words, he does not further explain how we are granted freedom to make our own rules that change Yehovah's previously ordained signs, nor does he explain how we are to base our computations on scripture. However, Mr. Franklin's meanings for the Hebrew words are not fully accurate and are modified slightly out of context. For example, *suwm* (Strong's 7760) in the Strong's Hebrew Lexicon[^3] is described as follows:

> "7760 suwm soom or siym {seem}; a primitive root; to put (used in a great variety of applications, literal, figurative, inferentially, and elliptically):--X any wise, appoint, bring, call (a name), care, cast in, change, charge, commit, consider, convey, determine, + disguise, dispose, do, get, give, heap up, hold, impute, lay (down, up), leave, look, make (out), mark, + name, X on, ordain, order, + paint, place, preserve, purpose, put (on), + regard, rehearse, reward, (cause to) set (on, up), shew, + stedfastly, take, X tell, + tread down, ((over-))turn, X wholly, work."

And in Aramaic:

> "7761 suwm soom (Aramaic) corresponding to 7760:--+ command, give, lay, make, + name, + regard, set."

Nowhere in the Strong's Lexicon is the word *compute* or the phrase *to compute* ever used to describe the Hebrew word *suwm*. There is certainly an example in Psalm 81 that we are to determine when the New Moons and Festivals are to be held and, in turn, blow trumpets to communicate their commencements, thereby setting the start of the Biblical calendar as commanded. However, this does not mean that we are granted the *liberty to change Yehovah's signs* that have already been ordained by Him; otherwise, we
would have the freedom to change any of Yehovah's appointed times (including the Sabbath from the seventh day to Sunday simply by blowing the trumpet a day later).

Even though we have already covered the Psalm 81 verse as it relates to the Biblical calendar, it's worth noting the specific word used here (as well as in Proverbs 7:20), kece'(Strong's 3677), is translated as full moon in the New King James. This word is further described in Strong's Lexicon as:

"3677 kece' keh'-seh or keceh {keh'-seh}; apparently from 3680; properly, fulness or the full moon, i.e. its festival:--(time) appointed."

And the definition of the primitive root, Strong's 3680:

"3680 kacah kaw-saw' a primitive root; properly, to plump, i.e. fill up hollows; by implication, to cover (for clothing or secrecy):--clad self, close, clothe, conceal, cover (self), (flee to) hide, overwhelm."

We can see, then, that these are referring to Festivals that take place at, or around, the moon's plumpness, under cover of the moon, or when it the moon is full (kece'). However, just to clarify, we are not given any Biblical instruction to base Yehovah's festivals on the phase of the full moon itself within this poetic book! The instructions given to us in Leviticus, the Torah, and throughout the Bible, specifically use the new moon (chodesh) to count days from - not the full moon (kece'). Therefore, we cannot assume from this one verse that any of Yehovah's Festivals must take place at the Full Moon or at the moon's fullest point, as some wish to interpret. In fact, there is no calendar method that can determine a month starting at the new moon (regardless of your definition of what is a new moon) that would then always start the 15th day of the same month on the exact day the moon is full - as the length of time from the astrological new moon to the full moon can vary between 14 and 15 whole days depending on when your day begins. By using Psalm 81 to force the new moon and full moon to always be on the first and fifteenth is not only mathematically impossible, it simply is not an actuality. Rather, this Psalm is speaking generically and in poetic context that was never written to be interpreted as law. There are no other verses that mention Festivals or calendar dates concurrently with the full moon. By claiming the Festivals must take place on the day of the full moon would contradict the direct instruction given to us to count from the new moon (chodesh) within the Torah, which we have seen begins with the crescent. However, several of Yehovah's festivals do take place on the 15th day of the month (or of the new moon) as commanded which naturally occurs around the time of the full moon as its light covers the night-time terrain.

Herbert W. Armstrong, founder of the Radio Church of God and Worldwide Church of God, wrote a letter in the Good News Magazine publication in 1940 on the calendar topic. Many splinter Church of God groups I have been involved with in the past rely heavily on the findings of Mr. Armstrong. He says (portion quoted from Bill Bratt's Web Page: How To Figure Passover):

"The true sacred calendar is no more lost than the weekly Sabbath. Then WHO HAS PRESERVED THIS TIME, this sacred CALENDAR? To whom did God give it? To whom were "the oracles of God COMMITTED"? To ISRAEL and JUDAH, of course! Israel LOST the Sabbath, LOST time, LOST even her national name and identity. But JUDAH NEVER DID. Judah has kept TIME in respect to the weekly Sabbath. The Jews rejected Christ. They apostatized in doctrine, BUT THEY WERE STRICT STICKLERS FOR THE LETTER. Would such a people have lost their CALENDAR? If so, TIME IS LOST! There is no other source thru whom God could have committed AND PRESERVED His calendar. He did COMMIT it to them. Therefore it must be thru them He has preserved it!"
The Jews never lost time, they changed it. Historical evidence of the Sanhedrin and the meticulous preservation of the written Oracles have kept the original calendar system, one based on observation! Yet Mr. Armstrong seems to miss this point. Mr. Armstrong agrees that the Jews rejected Yeshua and apostatized in doctrine, but didn’t seem to recognize that they have chosen a calculated calendar that is not based on the written Torah. There are those, however, that would be willing to change back to the original system of observation - perhaps even preferred - but the Jewish view of authority, which they believe will be restored with the arrival of the Messiah, keeps them from doing so.

Herbert W. Armstrong was correct in that the Oracles were preserved, but the Orthodox Jews do not act upon those written Oracles due to man-made traditions! These man-made traditions are what continues to survive today and has been continued into the many Churches of God that Herbert Armstrong originally founded. But even Armstrong was, at least at one time, aware of the original observational traditions that were more relevant to scripture and the earlier use of the new moon crescent to determine months. He quotes in God’s Sacred Calendar for the Worldwide Church of God for 1986-1987 after citing Exodus 12:2 that:

"The beginning of this month and of all God’s months basically correspond with the appearance of the first faint crescent of the new moon in the west just after sundown. (Traditionally observed from Palestine.) The astronomical new moon calculated for the United States is, in general, a day or two earlier." {Underlined emphasis added}

But Mr. Armstrong never explains why the Jews no longer base their calendar on the appearance of the "first faint crescent" and, possibly, believed that the Hebrew calendar still utilized the crescent somehow in its calculated formulas. He even goes as far as making the distinction between the new crescent and the astronomical new moon of conjunction. However, the final conclusion made is to utilize the calculated Hebrew calendar on, what appears to be, a mathematical bias to maintain order and unity. For example, he states in his Good News letter:

"Research reveals two basic points on this question, 1st, GOD DID NOT RECORD IT IN THE BIBLE, which gives us absolutely NOTHING more to go on that I have stated above. 2nd, History is vague on the subject, shedding little light that can be asserted and trusted. Yet we know God
gave HIS PEOPLE a FIXED RULE for calculating TIME PERIODS, and for figuring WHEN to hold the Festivals of Jehovah. Otherwise, the prophecies, so full of definite time-periods, can never be understood. Otherwise God's people could not obey Him!” {Underlined emphasis added}

He later states in the same letter:

“In conclusion, unless God has preserved His sacred calendar thru the Jew, then WE DO NOT KNOW how to figure Passover or ANY of the holy days this year. For there is NO AUTHORITY for any other day.... There is NO BIBLE AUTHORITY WHATSOEVER for (for example) figuring the 1st day of the month from the new moon NEAREST the spring equinox!” {Underlined emphasis added}

Notice the concepts Mr. Armstrong uses here: "a fixed rule" to "calculate" time periods, "figuring" (or computing) Passover or the holy days. He throws in the spring equinox as a contributing factor to determining "the Festivals of Jehovah". All of these so-called requirements are assumed because he is biased toward mathematics and a specific authority that spells it out mathematically. Because no mathematical formulas are found anywhere in the Bible, this bias appears to have affected Armstrong's decision on choosing a calendar method. He understood the need for an intercalated year by adding a 13th month to keep the Festivals of Yehovah in their seasons - but he then abandons this concept immediately by assuming the answer to be calculated using the 19-year cycle rather than the looking for the new moon of the Aviv barley. He also seems to forget that the terms month and new moon convey the same meaning (cognates) even though he explained this in his 1986-1987 calendar article (see illustration above underlined in red). By observing the new moon crescent (or faint crescent as Armstrong called it), counting the number of days from that new moon crescent to determine Festival dates, and starting the first month of the year with the first new moon crescent of Abib, we are then able to follow Biblical instruction (with the scriptures serving as that authority)! By repeating this process through observation, the intercalary calculation of adding a 13th month is resolved naturally by observing the new moon crescent of Abib - the ripened barley! The ambiguities within the 19-year average cycle of Abib harvests is resolved by witnessing the actual event occur (especially when we have full access to the Holy Land). But instead of heeding what we are told in scripture, Armstrong dismisses these differences entirely and seems to submit, instead, to the authority of the modern Orthodox Jewish calculation. Only when we let go of our mathematical bias (and turn away from man-made rules and calculations) can we begin to see directly from the Bible how to experience the Passover when it arrives - along with all of the other Holy Days every year. What's the drawback? We cannot calculate these events months or years in advance - but that is not a requirement of Yehovah! Rather, it is having faith in Him to show us when the time comes!
WHAT WOULD JESUS DO?

History has shown strong evidence of many calculated calendars that were created thousands of years before the time of Jesus (Yeshua), the Messiah - including Babylon. However, the mere existence of calculated calendars does not prove that God (Yehovah) intended on their usage. Even if the Jewish community switched to a calculated method, it does not prove that the method was ordained by Yehovah. When searching this subject, many change their focus from what is Biblically instructed and, instead, turn to what they perceive Yeshua Himself observed. After all, as Christians, He is the example that should be followed. The idea of asking "What Would Jesus Do?" is often a type of argument for a particular calendar system, such as the calculated Hebrew Calendar, in hopes that specific recorded events of Yeshua's life can be correlated with a particular formula.

This approach usually starts with finding scriptures that indicate a particular day of the week when a dated event took place within the gospels. Then, if the Hebrew Calendar, for instance, places that date on the same day of the week then it must be proof! But, there is one primary flaw in this logic: since there is no documented evidence of the current Hebrew Calendar existing prior to the fourth century CE, all of these arguments are purely conjecture and merely create a hypothesis to fit the outcome. In other words, the Hebrew Calendar itself could have been created to match the days of the week given in the Bible since its documented existence was not until after the documented events of Yeshua actually took place. Additionally, you must also disprove whether another calendar method cannot possibly have the same result as another method could have landed on the same day of the week, as well. As we have already seen with the Hebrew calendar that, given the Rules of Postponement and the timing of the moon's conjunction, the visible crescent and the start of the calculated month can occur on the same day. There are also other problems to consider in that the Hebrew Calendar, as we have seen, has accuracy issues - including a drift in the Molad that places its usage well outside of Israel at the time of Yeshua. These known drifts must be recognized and taken into account.

Additionally, in order to disprove observation of visual celestial signs that have taken place in the past, you must assume that their movements, along with any constant state of change, remained exactly as they are today. Additionally, any modern references to calendar dates (such as using NASA statistics), must also be translated into days of the week, which would require an additional conversion to the Julian calendar. The reason is that there are historical changes made to our current calendars that must be taken into account; for example, Pope Gregory XIII dropped 10 days from the month of October in 1582 (hence the name Gregorian Calendar) in order to better align the calculated calendar with the solar year that occurred during the of the Council of Nicea\[15]\). Furthermore, the use of calculation models specify the moon's phases mathematically at a given point (such as the conjunction) and cannot determine when the moon's crescent is first visible - the best you can do is determine a day when the crescent should have appeared (barring any possible change in their movements over the past 2000 years). Finally, multiple scenarios must be considered before disproving an observational method. Just as it is impossible to predict future dates using the observation method (as we have learned), this same problem exists when calculating past results without any supporting documentation of when the Biblical signs (including barley crops) were actually observed. Even with using a calculated formula method, many find themselves using complex computer models in order to take into account the many variables needed to make a claim as being mathematically accurate. Comparing these two methods is much like comparing apples to oranges - but we'll give it a try.
One example comes from the Living Church of God where a minister, Mr. John Ogwyn, cites three primary events described in the New Testament that he claims prove the Hebrew Calendar. His reasoning is that these events occurred on a specific day of the week:

1. The crucifixion in 31 A.D. occurred on a Wednesday afternoon.
2. The Last Great Day in 30 A.D. occurred on a weekly Sabbath.
3. The Last Day of Unleavened Bread in 29 A.D. occurred on the weekly Sabbath.

1) The first of these three events places Passover (the 14th of the 1st month) on a Wednesday in order for Yeshua to fulfill the prophecy that He would be in the grave for a full three days and three nights before his resurrection the following Sabbath at even. By referring to the 70-Weeks Prophecy and assuming a 3 1/2-year ministry of Yeshua, Mr. Ogwyn places the crucifixion in 31 A.D. He points out that the Hebrew Calendar happens to coincide with this scenario along with celestial evidence of a lunar eclipse occurring on the same day as the crucifixion.

However, when you compute the likely phases of the moon in 31 A.D., you will also find that mathematical calculations support that an observed new moon crescent was possible on the same day as the Hebrew Calendar's calculated first month that year, causing both methodologies to begin at the same time. This excludes the Hebrew Calendar as being the only methodology possible. In fact, John Ogwyn agrees with the crescent calculations and states that[18]:

"it is true that the observable new moon of Nisan would have also been seen on Thursday, April 12."

But, Mr. Ogwyn attempts to discredit the method of observation by stating:

"The equinox was March 23 at that time, and there would have certainly been some ripe grain for the priests to offer on the day of the Wavesheaf."

But, as we have learned, the equinox is not a variable given in scripture and does not come into play using the observational method. Mr. Ogwyn is merely assuming that barley would have been available at the time of the equinox. But the previous new moon prior to April 12th did not begin on March 23rd as the equinox does not control when the month begins, but rather the new moon crescent does! The prior new moon crescent that year would have occurred no earlier than March 13th - ten full days prior to the spring equinox date given by Mr. Ogwyn. Ripened barley would have had to have existed at the time of the crescent in order to begin the year - otherwise a 13th intercalary month would have been observed and the first month would not have begun until April. Mr. Ogwyn makes the assumption that the existence of barley must have arrived early. But as we have proven, there are instances where barley may not appear ripened until after the spring equinox occurs and can vary depending on numerous variables such as weather.

Additionally, the use of calculated lunar eclipses to coincide with Biblical Festival dates is irrelevant. Many attempt to use the description of darkness covering the land during the time of the crucifixion (Matthew 27:45) as coinciding with a calculated lunar or solar eclipse. But this event is described as taking place on Passover (the 14th of the month) from around noon ("sixth hour") until around 3:00pm ("ninth hour"). A solar eclipse would be impossible (as this only occurs around the moon's phase of conjunction) and a lunar eclipse would have only been visually noticeable when the nearly full moon could be seen in the sky (which would not have risen until around sundown). A full moon cannot be seen at 3:00pm ("sixth hour"), much less noon. A lunar eclipse also would not have caused any noticeable darkness for an extended period of time - especially during the day and one lasting three hours as
described in scripture. Unless what is being described took place in another part of the world at the same
time as the crucifixion, which is the only possible scenario, it is impossible that the author of a gospel
record witnessed both events. Nor does a lunar eclipse taking place half-way around the world carry any
significance to the crucifixion. Finally, there are two to three lunar eclipses that take place every eleven
months on, or around, the 15th day of the lunar month. The likelihood that Passover, which also takes
place mid-month, happens to correlate with a calculated eclipse is not as rare of an event as it sounds. It
would be pure speculation, and not a very good one at that, to look for lunar eclipses as the basis of
choosing a particular year as being significant.

2) The second of these three events is based on New Testament testimony given in John 7 & 8. Starting in
John 7:37-38\[1], we are told the following documented event took place:

"On the last day, that great day of the feast, Jesus stood and cried out, saying, 'If anyone thirsts,
let him come to Me and drink. He who believes in Me, as the Scripture has said, out of his heart
will flow rivers of living water.'" {Underlined emphasis added}

We are then given a narrative of comments and questions that were made of Yeshua at this time until the
day comes to an end. We are told in the next verse, John 8:2\[1]:

"Now early in the morning He came again into the temple, and all the people came to Him; and
He sat down and taught them."

When you continue to follow the events that took place at the temple in John 8:2 - 9:14, you find that this
morning was also a weekly Sabbath when the Jews later condemn Yeshua on this same day for healing a
blind man. Hebrew calendar supporters claim that the events starting in John 8:2 are both the Weekly
Sabbath and the Last Great Day (the eighth day) - an event supported by today's Hebrew Calendar
calculations in 30 CE (with no postponement rules being applicable). The observed new moon crescent,
that year, would have most likely been witnessed in that area two days later placing the Last Great Day on
Sunday evening into Monday.

This claim, however, requires that the events first mentioned in John 7:37, where Yeshua was teaching in
the Temple, would have occurred on the evening of the Last Great Day (or Friday night). We see from
scripture, however, specific details between these two events in John 7:53 & 8:1\[1]:

"And everyone went to his own house. But Jesus went to the Mount of Olives."

Given the traditional history of Jerusalem at this time of year, a very large number of people would have
been visiting Jerusalem for the Feast of Tabernacles from all over Israel and other regions. Travelling
from their homes would have been a longer journey than simply an overnight trek. We are given a
narrative of this journey in John 7:8-10 where Yeshua and the disciples travelled to the Feast in Jerusalem
from their home in Galilee before the Festival week began. Today, we observe the Feast of Tabernacles
every year while dwelling in booths (or temporary dwellings). But this verse tells us very plainly that
every man went unto his own house suggesting the Festival had completed. We are also told that Yeshua
left Jerusalem to go up to the Mount of Olives instead of returning to Galilee. We saw earlier that the City
Gates of Jerusalem were shut on the Sabbath, from evening to evening, to avoid business transactions
from taking place. It is not likely that anyone, including Yeshua Himself, would have been going in and
out of the Jerusalem gates by night - especially if that evening were both the weekly Sabbath and the High
Sabbath - The Last Great Day. It is more likely that the Feast, including the Last Great Day, had
completed and everyone visiting Jerusalem exited and returned home on Monday evening (if this is
indeed describing the Feast of 30 CE) before events in John 8:2 began, which was a Saturday morning.
The United Church of God ignores this issue by stating in their Summary of Hebrew Calendar paper:\(^{[4]}\):

"We find that Christ doesn't return to His dwelling, but rather chooses to go out to the Mount of Olives. We can only speculate as to what He does that evening. Possibly He spends the evening in prayer and meditation. We simply don't know. But we do know that early the next morning He returns to the temple." \((\text{Underlined emphasis added})\)

Indeed it is speculation as to why Yeshua went to the Mount of Olives, but it is also speculation that he only spent time there overnight and returned the next morning. Although a few translations of John 8:2 state that Yeshua entered into the temple the next day, most state it was simply early in the morning. A literal translation of John 8:2 from the Greek text is simply (Young's Literal Translation\(^{[2]}\)):

"And at dawn he came again to the temple."

This infers that the next time Yeshua entered the Temple at Jerusalem, it was dawn. The scripture does not emphatically state that it was the very next day. There is no clear explanation on how many days Yeshua was at the Mount of Olives before he entered the temple again at dawn. In fact, there is no measure of time given here whatsoever between these two events. Therefore, the only certainty we have from scripture is that the events starting in John 8:2 began on a weekly Sabbath and occurred sometime between "that last great day of the feast" (starting in John 7:37) and the very next identified event in John 10:22\(^{[2]}\):

"And the dedication in Jerusalem came, and it was winter"

Obviously the Feast of Dedication does not occur the very next day following the Last Great Day, either. With the earlier mention of everyone returning to their own homes, there is an obvious break given here in the timeline that provides no definitive link to the events in John 8:2 regardless of which calendar method you use. Additionally, what would be the point of describing such an occurrence other than to signify the Feast had ended?

3) The third of these three events is once again based on New Testament testimony of a weekly Sabbath in 29 A.D. Special focus is given to Luke 6:1\(^{[1]}\) that states:

"Now it happened on the second Sabbath after the first that He went through the grainfields."

The phrase "second Sabbath after the first" is cited by Hebrew Calendar supporters that this Weekly Sabbath was also the Last Day of Unleavened Bread - a scenario supported by today's Hebrew Calendar calculations in 29 CE. This is assumed since the Last Day of Unleavened Bread is the Second High Sabbath of the year. Once again, though, computer-generated models also make this scenario possible for an observed calendar if green-eared barley were seen a month prior to the Hebrew calendar (which would have intercalated a 13th month in 29 CE). Regardless of this fact, when we investigate Luke 6:1 further, we find that the argument using the phrase "second Sabbath after the first" is very weak because it is based on the translation of an unusual Greek term "en sabbato deuteroproto".

Mr. T.C. Skeat (author of Scribes and Correctors of the Codex Sinaiticus) convincingly conjectures that the original copyist-publishers (or scribes) incorrectly interpreted this Greek phrase into what would be considered today a typo (smudge or blunder) of the original manuscript creating what is coined as a "ghost-word" (or a word which never had any real existence). When investigating this Greek phrase further, you will find that this is the only place in scripture - or in generally-accepted documentation
What Would Jesus Do?

Mathematical Bias and the Biblical Calendar

(including the Septuagint) - where this specific phrase is used. Barnes New Testament Notes[13] discusses this Greek word in Luke 6:1 and says:

"the word occurs nowhere else. It is therefore exceedingly difficult of interpretation."

Even the same event of this Weekly Sabbath described in Matthew 12:1 and Mark 2:23 (where the Festival Day is never mentioned) do not use this same Greek term nor does any Hebrew term or phrase relate. The generally accepted translation of the Greek word in Luke is "second-first" Sabbath. But without a secondary witness of this word being used anywhere in literature, we will never be able to adequately confirm its meaning within this context and is just as possible that this should be translated as being the second Sabbath in the count of seven Sabbaths to Pentecost.

CONCLUSION) None of these three cited events at the time of Yeshua, as we see, can be used to definitively determine the day of the week that coincides exclusively for one calendar method over the other. When we look to secular and Jewish history, however, we find that the Sanhedrin Court system of observation was still in effect during Yeshua’s time on Earth and would likely have been the same method that Yeshua, the Messiah, kept. Any other method would have certainly caused concern for Yeshua’s actions from the members of the Sanhedrin and claims against Him would have been far beyond simply breaking the Sabbath and Rabbinical laws with miraculous acts.
TODAY'S OBSERVATIONAL CALENDARS

We have already seen historical documented proof of calendars that were based on pure observation - including the Babylonian and Sumerian calendars. In fact, when you study any historical calendar, you will find they all originated with a repeating observation and analysis of the heavenly bodies. It is only over the course of time that man established calendar systems, using mathematics, to create repeating cycles of timetables. Although some of these mathematical calendars eventually become very impressive based on their overall accuracy, it’s really apparent in our more recent history that we have grown accustomed to relying on these man-made calculations in lieu of simply looking to the sky - especially in determining when specific annual events take place. This has created a mathematical bias in our overall thinking of time itself. Today, this mathematical thinking is so ingrained into our everyday lives that it can take some time to readjust back to the concept of keeping calendars solely based on observation. Our first notion is to believe that observation cannot be consistent and could cause discrepancies.

Even though it may be true that a single observer could be in error, multiple participants dramatically reduce any mistakes that can be made. More often than not, any mistake that is made is in how the observer interprets what is seen and how it should apply to scripture. Whereas mathematical discrepancies can range widely when you attempt to build a repeating formula based on averages. Not to mention, fixed formulas don’t allow for any variance for the many variables involved - including the moon, sun, curvature of the atmosphere, crops, cloud formations, rainfall, temperature, altitude, longitude, latitude, and the mountains blocking one’s view. Even if you were able to accurately calculate just one of these variables within a calendar formula, meshing all of them together into a single formula that can be used by any one person universally around the globe is, quite frankly, impossible for man to accomplish accurately on their own. The truth is that men rely on mathematics in order to feel that they are in control. Relinquishing that control to Yehovah's creation can be unsettling unless they also rely on Him for everything else in their lives.

But are we too late? Has math replaced all known civil calendars today? Knowing that observation is best when you have multiple participants, can we go back to the simplistic method of watching the skies and still function in a mathematical world? Can even a small group of people still function on a calendar that is based solely on observation? Yes. In fact, there are several groups of civilized people that still use such a method today. One of two very strong examples includes the Islamic calendar. Many Christians (and Jewish Orthodox) would stop right here. How can you consider an Islamic belief system when it comes to a Biblical Calendar? If you're thinking the same thing, then I ask that you just bear with me for a moment.

The Islamic calendar has been established as an orderly method throughout Islamic history. Even today, this calendar is established using observation of the moon to begin its months every cycle - starting when the new moon crescent is sighted anywhere in the world as the sun goes down! The Wikipedia Encyclopedia further explains the Islamic calendar history:

"Each month has either 29 or 30 days, but usually in no discernible order. Traditionally, the first day of each month is the day (beginning at sunset) of the first sighting of the hilal shortly after sunset. If the hilal is not observed immediately after the 29th day of a month (either because
clouds block its view or because the western sky is still too bright when the moon sets...), then the day that begins at that sunset is the 30th. Such a sighting has to be made by one or more trustworthy men testifying before a committee of Muslim leaders.” [Underlined emphasis added]

And what is the hilal? The Wikipedia Encyclopedia[21] explains:

“Hilal is an Arabic term, meaning crescent moon, first developed in pre-Islamic Arabia. The very slight crescent moon that is first visible after a new moon. Muslims look for the hilal when determining the beginning and end of Islamic months, but they don’t worship it.” [Underlined emphasis added]

Sound familiar? This method of establishing months is exactly what we just read from the Bible! In fact, Islamic history closely correlates with Christian and Jewish history from the time of Abraham. Much of today’s Muslim faith is also founded upon Biblical text. But, just as mainstream Christianity believes the New Testament has abolished much of the Old Testament (instead of the Old serving as the foundation for the Covenant that the New advocates), Muslims have also changed or ignored portions of the original laws established by Yehovah in the Torah in favor for the Quran (along with portions of the New Testament). They believe that older texts have not been properly preserved and have become invalid over time. Because of this, the Islamic belief system has retained certain truths while others have been lost or replaced. Their calendar is no exception. Although Islamic tradition does not recognize the Abib harvest to begin its years, it instead measures years on a repeating 12-month lunar cycle. This places the start of the Islamic year on a constant drift earlier from the season in which it was last established - making their New Year fall at anytime during the solar year. However, they continue to observe and announce the sightings of new moon crescents every month and determine their annual festivals on such sightings. They begin each month geographically from where the moon was first sighted and use a system of eyewitness testimony (similar to the Sanhedrin system).

Even though the Islamic calendar is merely an example, many will immediately brush it aside. This is mainly due to a perceived matter of authority and the fact that the oracles were left with the Jews and, consequently, select the Hebrew Calendar. But, as we have read, not all Jews follow the Hebrew Calendar system. The Karaite Jews have used an observed calendar within their history, and continue to do so today, which they have derived from the scriptures (or the Torah). Karaite Jews trace their origins back to the Middle Ages and believe to have come from the Sadducees of Yeshua’s time (while the Pharisees became known as Rabbis). This also makes the Karaites a member of the Judah tribe whom were entrusted with the living oracles. A group named Karaite Korner explains this history[27]:

“Then in the 8th century a last glimmer of hope appeared in the form of a shrewd leader named Anan ben David. Anan organized various non-Talmudic groups and lobbied the Caliphate to establish a second Exilarchate for those who refused to live according to the Talmud’s man-made laws. The Muslims granted Anan and his followers the religious freedom to practice Judaism in the way of their ancestors. Anan himself was not a Karaite; although Anan rejected the Talmud he used similar irrational methods of interpreting Scripture as the Rabbis, such as intentionally taking words out of context. Anan’s followers became known as Ananites and this group continued to exist down until the 10th century. On the other hand, those Jews who continued to practice the Tanach-based religion of their ancestors became known as Bnei Mikra (“Followers of Scripture”) which was also abbreviated as Karaim (“Scripturalists”), in English “Karaites”. This name derived from the old Hebrew word for the Hebrew Bible: Mikra, Kara. The name Karaim, meaning “Scripturalists”, distinguished these Jews from the camp of the Rabbis who
called themselves Rabaniyin ("Followers of the Rabbis") or Talmudiyin ("Followers of the Talmud")."

The Karaite Jews, by rejecting the Rabbinical teachings and reverting back to Biblical scriptures, eventually regressed back to an observed calendar. We see here that the Karaite movement started in the 8th century - about the same timeframe secular history claims the current Hebrew calendar was starting to be established in its current form. Because the calculated Hebrew calendar was introduced by a Rabbinical authority, the Karaite Jews rejected the Orthodox Jewish traditions that contradict scripture. These included specifically the calculating of an intercalation cycle in the calendar (the 19-year cycle), using the Molad calculation of the moon (instead of the new moon crescent) and instituting calendar postponements. The Karaite Jews also believe that the Biblical signs of the new moon crescent and green-earred barley must be observed to establish a calendar - but specifically from Jerusalem.

As we have discussed earlier, forcing a fixed "timeline" through Jerusalem is not strictly instructed within the Bible. But Karaite Jews believe that an observation method was originally utilized by the Sanhedrin at the Temple. Since the temple was originally located in Jerusalem, they continue to practice their observations from this location. Karaite Jews publish reports of sightings from Jerusalem regularly. Even though the Karaite's provide an excellent example of Jewish peoples following a calendar method based solely on observation, many organizations in the Western World ignore this fact. The United Church of God uses the belief of a Jerusalem "dateline" as a basis for its rebuttal of using such a calendar concept. In their article "Does God Give a Calendar?", they state[52]:

"Does the Bible tell us that we should use Jerusalem? No, it does not. Jerusalem was of no importance until the time of David. Yet the Holy Days were being kept before his time. Also, a calendar existed and the Holy Days began to be revealed to Moses while he was still in Egypt."

"Which point on earth was used for the precise moment of the new moon while Israel was in Egypt? Which point did Israel use prior to the establishment of Jerusalem as capital of Israel? Which point should the Church use today? Does the Bible answer any of these questions for us? No, it does not. Therefore, those who reject the Hebrew calendar have no biblical authority for the site they select for the occurrence of the new moon. They must rely only on their own authority for choosing whatever site they believe is correct."

This is a valid argument against Jerusalem as a dateline. Yet, as we have already learned in this paper, even the Hebrew Calendar uses Jerusalem specifically in its Rules of Postponement to determine when the month of Tishri begins before or after the noon hour (the calendar United Church of God supports). We have already discussed the mathematical bias that is used when applying a mathematical "dateline" using Jerusalem or any other location (which the Bible does not give), but all other aspects of the Karaite calendar serve as excellent examples of Biblical scripture. It is simply the Jewish view of establishing law that causes them to use Jerusalem to be tied to the Biblical calendar. It should be noted that not all Karaite Jews use the Jerusalem dateline and is considered a "gray area" to the Karaite community.

Both of these calendar examples support a continuous history of calendars based on pure observation still intact today. With the exception of a Jerusalem "dateline" being applied to the Karaite calendar and the Islamic calendar ignoring the start of the year with the month of Abib, these two calendars provide excellent examples of Biblical concepts. Therefore, we can see that this concept does work and it is certainly not a new idea that has been recently concocted by self-appointed calendar "experts" as some groups would have you believe. An observation-based calendar is not only historically established, we have also seen that it is Biblically required! It is not a random method made up by men attempting to interpret the Bible and randomly create a calendar method for themselves. There are certainly different
versions of observed calendars today that are based on different beliefs (i.e. Christian versus Jewish views on Jerusalem) and that still apply a mathematical bias (such as the spring equinox or use of the conjunction), but all are genuinely concerned with following the instruction given in the Bible, which is clearly not the Hebrew calendar.

Finally, there are an ever-increasing number of groups keeping Festival dates based on a calendar of observation rather than calculation. A list of some of these groups is listed in the appendix. Although some variances do exist between the groups, many attempt to be in line with Biblical instruction. Hebrew calendar supporters will often reference the fact that there are so many variations of observable calendars as a reason to reject observation all-together. Although it is true that many variations exist, they primarily boil down to different view points on very few items. One is the specific phase of the moon that should be used (waxing crescent, conjunction, new moon and some waning crescents), second is the start of the year (using aviv barley, the spring equinox - with the new moon either closest to or immediately following) and, finally, whether observation can take place globally or limited to Israel (defined either by modern day or Biblical borders). All of these points have been discussed earlier in this paper.
There are several arguments against using an observational calendar, but most are based on an incomplete understanding of observation or an inability to let go of the comforting mathematical bias. Many don’t even attempt to use scripture to disprove observation even though many already use observation of the Sun to begin the Sabbath Day. Obviously the sun and moon move differently in relation to an observer on the Earth's surface, but watching for these signs are very similar and no one can use scripture that shows one sign should be observed and the other calculated. But it is with specific instructions given in scripture to blow trumpets at the New Moon, to gather together for a sacrificial meal, and to begin our months based on the Abib harvest that we find direct Biblical support of an observed calendar! But there are other concerns that are a common thread when discussing the Biblical Calendar. We will now begin to take a look at some of these concerns.

Some will claim that the Abib barley harvest in Jerusalem can span over several months in length and cannot, therefore, refer to only one specific month. By utilizing observable signs, including that of the Abib harvest, you cannot begin monthly and daily accounts until after the sign has appeared. You cannot go back in time and pretend the sign existed nor is it a Biblical principle to predict when it will arrive in the future. Therefore, once the Abib harvest is ready to harvest (regardless of how long the harvest itself lasts), the sign has appeared. You cannot then go back to the previous new moon and claim that it contained the Abib harvest because you did not see the Abib sign when the month began. By consistently applying the same logic of observing signs, you would then start the year after sundown where the new moon crescent is confirmed (either by sight or from hearing trumpet blasts) and after the Abib harvest has been identified.

Another concern is that there is no clear direction to keep New Moons specifically as a Festival day or as a Sabbath day and they are not listed in Leviticus 23. We have seen, though, the keeping of a New Moon day supported throughout the Bible. It is true that New Moon days are not listed as a Sabbath or Holy Day in Leviticus 23 (nor should they be treated as such), but just because they are not ordained as a Sabbath day does not mean we should not be keeping them as instructed - they still exist in the Bible and in the Torah! The gathering together for a meal did serve a purpose outside of temple worship and is also supported in the Jewish traditions of Rosh Chodesh.

This leads to the belief that since the sacrifices are no longer required, due to the destruction of the Temple and the dissolution of the Levitical Priesthood or Yeshua's crucifixion, that the references to a New Moon day are also no longer required. However, the days mentioned in the Bible for us to observe are not done away with and will be kept in the future Kingdom - including the New Moon (Isaiah 66:23). There is no reason to believe we should not be keeping them now and, at a minimum, communicating to one another when the Biblical signs appear (this would also fulfill the requirement of a trumpet). Finally, this is no excuse to believe that the Biblical signs, ordained by Yehovah Himself, are no longer required or recognized for their intended purpose.

The shape of the crescent moon, as a symbol, can often be found in Pagan-related idols and practices. Because of this, many will negate the new moon crescent as being Biblical because they believe it is, instead, a Pagan symbol. Pagan practices, however, utilize the entire lunar cycle and follow traditional practices that correlate with each phase of the moon (new, waxing, full, waning, dark and eclipse) - not just at the time of the crescent. Pagan practices, however, that involve the moon do not make the moon itself Pagan any more than Pagan's worshipping the Sun god negate observing the sun to begin the Biblical Sabbath. This is a fickle argument that would require the elimination of any reference of the moon to determine times and seasons (including the Hebrew calendar). Furthermore, many of these symbols usually portray the crescent as being illuminated on the left side of the disc with its points
pointing to the right (this is a portrayal of the waning crescent as seen in the eastern horizon just before sunrise in the northern hemisphere). The new waxing crescent, though, is seen in the western sky and the bottom right portion of the moon's disc is illuminated with the points generally pointing upward or to the left. Many Islamic traditions are also attributed to be a mixture of moon-god worship that was referred to as *Allah*. It is true there are Pagan practices associated with the name *Allah*[^55], but not all references are directed to the Pagan deity directly. Even mainstream Christianity has adopted practices of sun-god worship and use the title "Lord" that happens to be a transliteration of the Pagan god *Bal*[^53] - replacing Yehovah's actual name within the Biblical text. Similarly, Jews also replace Yehovah's spoken name with the term *Adonai*, a term transliterated from the god *Adonis*[^54]. By not using Yehovah's actual name, much ambiguity and confusion often exists within religion. At best, *Allah* is now a generic term used by many Arab peoples in the same way English now uses "God" or "Lord" as Yehovah's name. Remember, Islam and Judeo Christianity come from the same genetic roots adopting Pagan practices along the way. But to ignore the sign of the moon to begin the Biblical month based on this correlation is just as illogical as ignoring the sign of the sun to begin the Sabbath. Finally, whether you observe the signs or base your calculations on them, it does not change the fact that the Bible references them to indicate *times and seasons*.

Some organizations turn to modern writings. For example, many *Church of God* groups will refer to the teachings of Herbert W. Armstrong. We read some of his material earlier that showed Mr. Armstrong accepted the Hebrew Calendar in his Good News letter written in 1940. You find that many Festival-keeping organizations use Armstrong's viewpoint to establish doctrine (rather than scripture). Although Mr. Armstrong, I believe, was a strong follower of Yehovah's ways and established a solid foundation for the current-era *Churches of God*, he was still just a man capable of errors just as much as anyone. There is even historical evidence seen of his errors in regard to the annual Festivals when the *Worldwide Church of God* rectified Pentecost from a Monday observance to Sunday in 1974. Before keeping Mondays, Mr. Armstrong personally observed Pentecost on the fixed-day of Sivan 6 (the third month of the Hebrew calendar). Obviously when Armstrong recognized his errors he made a change, but there is no reason to believe that he was perfect in his doctrinal beliefs before his death (and neither should any of us). In the end, we all need to be able to defend our faith before the judgment throne as judgment begins with the House of Elohim (1 Peter 4:17). If you place your faith in the opinions of men, you may find yourself in serious trouble when that day comes for you.

Another primary concern is that of communication and consistency that mathematics provides. Today, we have the modern conveniences of telephones, faxes, email, etc. for near-instant communication around the globe. Since these methods of communication were not around during the time of the Sanhedrin or earlier, how would people living long distances away from Jerusalem, such as pilgrims, know that the new months had begun if they missed the sign? This would mean that people around the world would possibly keep different days (or even a different month). Therefore, many assume mathematics resolves this problem. But, regardless of the methodology you believe was originally instituted during the time of the Sanhedrin (calculation or observation or both), the challenge of communication throughout the Diaspora remains the same! Since any calculation that may have been used is not documented, a form of communication would have had to been relied upon to spread the mathematical findings of those entrusted to have obtained such calculations. As we covered earlier, many believe the calculations of the Hebrew calendar were held secret by a Yehovah-chosen group of individuals. Obviously, any possibility of inconsistency remains the same. The exception is if the Sanhedrin used secret calculations, they would not have needed to institute a method of witnesses and observing Feast of Trumpets for two days. This makes this argument moot for either method. Modern conveniences would, though, reinforce the accuracy of an observational method through communication whereas the consistency a mathematical table provides would only cause everyone to be correct or everyone to be wrong.
We have also discussed that people who lived in Biblical times were *agrarian* in nature - living directly off the land - and were highly aware of their natural surroundings (including crops and the movements of heavenly bodies). Geographically speaking, areas outside of Israel - including Egypt - were not very far away and rarely required travel beyond a few weeks' time. Many would have allowed for any such variance. We have seen communication historically taking place through the use of signal fires and messengers to more quickly spread the word. However, in most cases, those living great distances away from the Temple and from the Sanhedrin courts would still be able to observe Yehovah's signs locally and most would have aligned themselves with those in Jerusalem. Even though it is possible some could be off by a day, they would be immediately corrected upon local eyewitness accounts or at the next cycle along with the majority.

For individuals that may keep a Festival day on the wrong date (without knowledge otherwise), there is no reason to believe Yehovah would not recognize their efforts. Surely we are blessed when we attempt to keep Yehovah's holy festivals. Do we question whether those in the *Churches of God* that celebrated Pentecost on Mondays were not blessed? Yet they saw fit to modify their determination of the Holy Day to a Sunday and corrected their path when they realized they were astray. This is where the calendar becomes a process of faith - a faith in Yehovah to show us His *signs* and for us to look narrowly and search for them attentively rather than become complacent with mathematical averages.
CONCLUSION

You have now seen the Biblical perspective of an observational-based calendar and the specific instructions given for telling times and seasons. This Biblical Calendar is based on the perceived visible signs ordained by Yehovah Himself of the sun, moon and of the harvest season. It is a system that does not predict future dates, but rather relies on Yehovah to present such signs to the observer as He deems fit - putting Him in full control of times and seasons that He appoints for Festivals throughout the year. Beyond counting every seven days to keep His Sabbath, we are given instructions to blow trumpets over peace offerings (or meals) and at the beginning of our months - or at each renewed moon. The people of Israel were expressly told to refer to the renewed moon of the Abib harvest to begin their years. The Bible refers to detailed events, including the Festivals, based on the number of days from a specific renewed moon or the number of renewed moons from the start of the harvest year. This same method of counting days and months from particular events (or signs) is also used for referring to definitive years throughout the Bible (such as the establishment of Kings). This is the calendar as represented by the Bible.

The Hebrew Calendar, generally used by groups such as the Churches of God and others in the Western World, ignores nearly every Biblical aspect of signs and instruction outside of days and the Weekly Sabbath starting around sundown. Instead, this system creates a mathematical 19-year timetable of average occurrences of barley harvests, a timetable of days to establish fixed-length months with the exception of one month that refers to the calculated Molad (an average of the moon's unseen conjunction) once a year to establish the Feast of Trumpets. Its man-made rules institute a noon-hour cutoff time in Jerusalem to determine the start of the lunar cycle and postpones the Feast of Trumpets by another entire day depending on the Day of the Week. By relying on mathematics, the blowing of trumpets is no longer required (or recognized) by many church organizations, a burnt offering (or meal) is ignored and grouped into a temple requirement that is no longer required even though it is prophesied that we will gather together at the New Moon in Yehovah's coming Kingdom. The Yehovah-given name of Abib is completely ignored in favor of Babylonian names based on Pagan gods. Any discrepancies from actual events are ignored based on a supposed authority given to the Rabbinical leadership once fought on principle by Yeshua Himself. Finally, an overall ignorance of the Hebrew Calendar's history seems to be instilled in the Western World with a belief that the Jews perceive their own calendar as being preserved throughout the ages and from the time of Moses when, in fact, the calendar has been a topic of hot controversy for centuries following the crucifixion of Yeshua. Today's Orthodox Jews consider the Hebrew Calendar a temporary solution until the Messiah arrives or the temple is re-established within Jerusalem where a method of observation would most likely return. Even today, many Jews that follow the Torah of Moses keep an observed calendar, rejecting the Hebrew calendar, and have done so going back for centuries.

These issues regarding the Hebrew Calendar continue to be ignored by many today. A clear level of conflict exists between the written scriptures and the man-made construct based on rules and mathematics. But modern society's use of mathematical calendars has created a bias toward the Hebrew Calendar and has created a false sense of insecurity of relying on Yehovah to show us His signs based on observation.

This is certainly an issue that needs to be addressed by many church organizations! But many are afraid to ask their church leadership for answers. In fact, it is these organizations that have gone as far as to criticize individuals who attempt to even question today's Hebrew calendar. Mr. John Ogwyn of the Living Church of God agrees. He states:
"Does God expect individual Christians to determine His calendar for themselves? Many self-appointed calendar experts each claim that their calendar is the right one. Did God intend the calendar to be proclaimed by an authoritative body? Or is it "every man for himself"? Increasingly, we see people simply doing what is right in their own eyes."

Time and time again, especially in more recent history, individuals have been spiritually abducted or taken away in their dreams by God and given a revelation of a new calculated formula that holds the secret key to understanding times and seasons. Generally what follows is a future prediction of when Jesus Christ will return to the Earth in either a secret rapture or at the battle of Armageddon. But Yeshua explained that no man will know the day and hour, not even Yeshua Himself. Instead, we are told to be watchful of signs like that of a fig tree, not to predict dates using math. Only by watching for signs are we actively anticipating and yearning for Messiah's return and can have a full understanding when that season finally arrives without being caught unaware. The Biblical Calendar of observation reinforces the faith we should place in Yehovah - the Heavenly Father who is in control of the ultimate destiny for all mankind. By ignoring the Biblical instruction and principles He gave us for a calendar, we are only left with man's devices filled with various computations and theories utilizing the primary bias of mathematics (often so complicated that only computers can keep it all straight). Suddenly the topic becomes overwhelming - it's no wonder so many turn back to the long-established fixed Hebrew Calendar that gives reassurance and convenience of knowing that the majority of followers have the same mathematical result and that Festivals can be predicted years, even centuries, in advance. For these people, the Biblical instruction is no longer significant because it just does not provide enough detail to achieve this same result.

But there are those who are turning to the one authority they know to be true - the Bible itself! They can see that the current Hebrew calendar simply cannot be supported by scripture. In fact, nearly all of those whom Mr. Ogwyn above calls "self-appointed" experts are turning elsewhere for answers because their own churches won't provide any support for the Hebrew Calendar from scripture themselves. It is only when we turn solely to the Bible for answers on the calendar topic (or any other topic) that we are then submitting to the authority of Yehovah - not "self-appointing" ourselves as experts or "doing what is right in our own eyes". Although it is true there are individuals that attempt to add more man-made rules and mathematics in their own attempts to create an alternative to the Hebrew Calendar, their failure comes in relying on mathematics that simply are not in scripture. The United Church of God also recognizes the various groups struggling with this topic:

"Several people and organizations have addressed this subject in recent years and have reached various conclusions. There are several interpretations currently being taught by various groups or individuals on this matter. Obviously, they cannot all be correct."

They continue in their Doctrinal Summary Paper, though, fully accepting the Hebrew Calendar as the best option:

"While there are some important considerations and legitimate questions about the Hebrew calendar, it does serve as a tool which has been preserved by the Jews. Its origin is impossible to determine. The origin of the rules of postponement is also impossible to know with any degree of certainty. It is therefore impossible to prove that Hillel II created the rules of postponement during the fourth century. We simply don't have enough information to substantiate that claim."

We see here an acknowledgment that they simply do not know the answers! Most continue to search for the origins of the mathematical concepts within scripture. Too many organization's simply do not teach on this subject because they don't rely on the Biblical answers to backup their conclusions and cannot let go.
of their mathematical bias! The United Church of God’s Doctrinal Summary Paper does indicate numerous issues regarding the various viewpoints on the calendar - both Biblical and Rabbinical. But, even their doctrinal paper does not cover all of the reasons to support their decision to use the Hebrew Calendar. They state\(^{110}\):

"While there will be no attempt to address all these issues in this brief paper, each one is worthy of addressing. It is hoped that, over the course of time, papers and articles can be written to more fully explain what we know of each of these basic issues."

However, the United Church of God’s Doctrinal Summary Paper\(^{41}\) is dated February 1997. It will soon be two decades since the Council of Elders made their decision to follow the Hebrew Calendar. Yet, there are still no widely distributed materials supporting their decision, no booklets, no telecasts, no regular sermons and nothing that addresses any of the various issues identified in their own paper. When confronted with the topic again in January 2010, their response (from Cecil E. Maranville in an email dated January 12, 2010) is:

"As for the argument for observation over calculation, we discuss this issue in the paper titled 'Hebrew Calendar Summary.' From your comments, you may have already read this material, but in light of your question, we recommend that you read it again. If you still disagree with us after reading what the paper says, we will have to agree to disagree on this issue."

Why can't they defend their decision for choosing the Hebrew Calendar that is Biblical and not just practicing what is right in their own eyes? They can't because, even as the Council of Elders proclaim, there is no Biblical support. There are a growing number of people that have turned away from the Hebrew calendar because it simply is not supported by scripture! They have followed the instruction to PROVE ALL THINGS because no one else will. They are sheep looking for answers that their Earthly shepherds will not direct them toward by using scripture.

UPDATE: The United Church of God has since release a revised doctrinal paper on the subject of the calendar. However, the content gives no additional information for their decision to follow the Jewish calendar. In fact, their sole foundation from scripture is based on the New Testament reference of Romans 3:1-2 where they claim the calendar was preserved by the Jews within the Oracles and, whether wrong or not, should be followed for that reason. The arguments against observation continue to be based on a Mathematical bias stating:

"Someone has to make a decision about the calculation of the calendar."

Again, calculation MUST be used! And based on the Romans verse, their belief is that the Jews are the ones to calculate it.

Yet, somehow, they understand that the Weekly Sabbath is not based on calculation:
"The Sabbath is not determined by mathematical calculation. It occurs every seventh day. The seven-day cycle is not a factor when calculating the calendar. Dates in the month can fall on any day of the week. The Holy Days are observed on days of the year, based on a calendar."

This is the crux of the issue that I hope has been made clear within this paper. The Holy Days are based on the renewed moons (chodesh) and cycle based on the Abib barley within the holy land. They are NOT based on calculation any more than the Weekly Sabbath is. One positive note that is made within the Doctrinal Paper, though, is this statement:

"The Bible does not provide us the complete means for calculating a calendar. There are no calculations provided in the Scriptures. The Bible clearly indicates that there were the components of a calendar in existence almost from the beginning: hours, days, months, seasons, and years are all mentioned. These are the essential elements of any calendar."

This begs the question, if the essential elements of a Biblical Calendar exist, shouldn't they be used? Shouldn't they support whatever calendar is chosen to follow? Finally, do the scriptural elements support the calculations of the Hebrew Calendar? The answer still remains: no!

This topic should be just as important as teaching the Holy Days themselves! Without a calendar, you cannot know when to keep the Festivals! But that calendar is not mathematical. Just as many of us had to retrain our thinking in determining the weekly Sabbath based on sundown, we need to continue to retrain our minds on the remaining aspects of the calendar. We also need to hold to the belief, as followers of Yeshua, that the Holy Days are an outline of Yehovah's overall Plan of Salvation for mankind! We must remember that the Holy Days are special Sabbaths, High Sabbaths, that Yehovah gave His people to rejoice and to learn His law. The Holy Days are sacred, and therefore, so is His calendar! By changing Yehovah's sacred calendar to simplified mathematical timetables that institute "simple" leap-days and rules as we do our day-to-day calculated calendars, we begin to treat Yehovah's appointed times as Holidays rather than Holy Days!

Meanwhile, church organizations hold on to the convenience a calculated calendar provides them in determining future dates. Simple observation is simply dismissed because you cannot, with any level of certainty, predict the exact day Feast of Tabernacles (for example) will be held the following year. Instead, they continue to print their pocket calendars and plan extravagant Feast sites years in advance. The comfort that comes from consistent mathematics, which is based on man-made rules (conjunctions, time zones, datelines, leap adjustments, postponements, etc.), has fooled them into believing it must be correct. Math changes our conceptions and forces us to find that one specific moment (by one-trillionth of a second) when the Sabbath begins, for example, so that we can be as mathematically accurate as possible until we eventually lose sight on what is really important (the Sabbath day itself). Our salvation will not depend on whether we start the Sabbath a few seconds too late or miss the new moon due to clouds in the sky. But if our hearts are centered on the mathematics rather than the inspired instruction within the Torah, then we have lost the true focus. Scripture cannot be ignored, nor can we go against the principles contained therein! Certainly math can be used as a tool in preparing our day-to-day lives of this world and even help prepare for the Feast of Tabernacles by narrowing down its arrival within a few days (especially once the year begins with green-eared barley in the fields). However, if we are not ultimately relying on Yehovah Himself to show us His ordained signs by which He appoints the Festivals, then we (not time) are the ones that are lost!
I urge you, the reader, to seriously study this topic, let go of your mathematical bias and opinions of earthly shepherds. Look to the Heavenly shepherd to guide you through the scriptures of the Bible. Do not be discouraged by accepting the criticism that you are doing what is right in your own eyes. We are told in I Thessalonians 5:21:\footnote{1}:

"Test all things; hold fast what is good." \textbf{[Underlined emphasis added]}

We are given an example of how to test all things in Acts 17:11:\footnote{1}:

"These were more fair-minded than those in Thessalonica, in that they received the word with all readiness, and searched the Scriptures daily to find out whether these things were so." \textbf{[Underlined emphasis added]}

Finally, we need to prove to ourselves truth through scripture worthy to present to Yehovah. II Timothy 2:15\footnote{1} explains:

"Be diligent to present yourself approved to God, a worker who does not need to be ashamed, rightly dividing the word of truth." \textbf{[Underlined emphasis added]}

Therefore, we should be doing what is right in the eyes of Yehovah! Look to His Word; the answer is there, we just need to see it! Don't take my word for it, prove this to yourself and let the Spirit of Yehovah direct you. Stay on the path to always better yourself in serving Him. May Yehovah bless and keep you on your journey.
REFERENCES

10. "Examination of Mr. Armstrong's 1940 Good News Letter," from How to Figure the Passover, Bill Bratt http://www.zoomnet.net/~bbratt/hwa-pass.html
43. "Why Do We Use the Hebrew Calendar?," Ronald L. Dart - Born to Win Ministries, http://www.borntowin.net/newsite/LearningCenter/DisplayTemplate.aspx?who=e&id=64
44. "Comprehensive Hebrew Calendar (revised)," Arthur Spier, p. 1, View on Amazon.com
56. "Shulchan Aruch," Orach Chayim 2:4
60. Orthodox Jewish Bible, https://www.bible.org/bible/130/psa.81.omb
63. Domestication of Plants in the Old World: The Origin and Spread of Cultivated Plants in West Asia,


APPENDIX

Supporting reference material:
http://www.escapeallthesethings.com/biblical-calendar-aviv-barley.htm
http://www.friesian.com/calendar.htm

Observable calendars as documented by encyclopedia:
http://en.wikipedia.org/wiki/Hebrew_calendar#Karaite_calendar
http://en.wikipedia.org/wiki/Islamic_calendar

Some groups that keep observed calendars/feasts:
http://www.assemblyofyahweh.com/
http://www.cscog7.org/
http://www.churchlight.net/
http://www.karaite-korner.org/kknmr.shtml
http://www.aroodawakening.tv/
http://www.truthontheweb.org/
http://www.congregationyhwhpc.com/
http://www.eliyah.com/
http://www.ourfathersfestival.net/
http://www.yrm.org/calendar.htm
http://www.newmoonreport.org/whylook.html
http://www.belovedofgod.org/
http://www.isawthelightministries.com/newmoons.html
http://www.truthontheweb.org/
http://yahwehsnewportassembly.blogspot.com/
http://twoyya.homestead.com/

ADDITIONAL RESOURCES

Calculated vs. Observed Times and Seasons - A response to John Ogwyn; Shawn Richardson - http://www.shawnrichardson.com/Calculation-vs-Observation.htm

Biblical Calendar of Observation vs. Calculation - A response to United Church of God; Shawn Richardson - http://www.shawnrichardson.com/ResponseUCOG.htm

Keeping God's Appointed Feasts; Shawn Richardson - http://www.shawnrichardson.com/Kee.pyingGodsFestivals.htm

Testimony of Timekeeping Within Dual Torahs; Yavonne Hinton - http://www.shawnrichardson.com/TestimonyofTimekeeping.htm

Mathematical Bias and God's Ordained Calendar (Original Version) by Shawn Richardson