



The Biblical Calendar

For many decades the majority of Church of God organizations have used the Calculated Jewish Calendar for determining the dates of the annual Holy Days. It is widely recognized by history that the current Calculated Jewish Calendar can be traced back to Hillel II in 359 CE. However, a common COG teaching is the assertion that the Israelites had used this same calculated calendar going back to the time of Moses and that Hillel II simply made the rules of the calculated calendar publicly available in 359 CE. This teaching asserts that God gave Moses the rules of the calculated calendar at Mount Sinai, and it was passed down through history by the Levitical Priesthood and then finally made public by Hillel II. While this is a common COG assertion, it is not what history records nor is it the opinion of scholars of Jewish history. History records that during the Biblical period of history Israel used a calendar based on observation of the moon and the calculated calendar did not come into common use until well after the destruction of the temple in 70 CE. Below is a compilation of numerous sources that all indicate that Israel used a calendar based on observation prior to the destruction of the temple.

The Jewish Encyclopedia <http://www.jewishencyclopedia.com> -- Calendar, History of

“The history of the Jewish calendar may be divided into three periods -- **the Biblical**, the Talmudic, and the Post Talmudic. **The first rested purely on the observation of the sun and the moon**, the second on observation and reckoning, the third entirely on reckoning.” (emphasis added)

International Standard Bible Encyclopedia Online
<https://www.internationalstandardbible.com/> -- Calendar

The Hebrew or Jewish calendar had three stages of development: **the preexilic, or Biblical**; the postexilic, or Talmudic; and the post-Talmudic. **The first rested on observation merely**, the second on observation coupled by calculation, and the third by calculation only. In the first period the priests determined the beginning of each month by the appearance of the new moon.....**After the exile more accurate methods of determining the months and seasons came**

into vogue, and calculation was employed to supplement and correct observations and the calendar was regulated according to the Babylonian system, as is evidenced by the names of the months which are derived from it. It later times the calendar was fixed by mathematical methods. (emphasis added)

The New Bible Dictionary by Merrill Tenney – Page 182

“During the Bible period, time was reckoned solely on astronomical observations.” (emphasis added)

The Comprehensive Jewish Calendar by Arthur Spier – Page 1

“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 moon. The new months were sanctified and their beginnings announced by the Sanhedrin.” (emphasis added)

The Jewish Encyclopedia <http://www.jewishencyclopedia.com> -- Calendar

“For practical purposes, however, the months are reckoned by the full days and set in with the beginning of night. They contain either 29 or 30 days: in the first case the month is ‘haser’ (deficient) by half a day; in the second (‘male’, over full) by half a day. The first appearance of the new moon determines the beginning of the month. At first a small and faint arc, like a sickle, can be seen by those endowed with good sight, from spots favorable for such an observation. It may, therefore, happen that in different places the reappearance of the moon is noticed on different days. In order to prevent possible confusion to the central religious authority, the chief of the Sanhedrin, in conjunction with at least two colleagues, was entrusted with the determination of New-Moon Day for the whole nation. Although the Jewish calendar was thus regulated by direct observation, the members of the court seem to have been in possession of a recognized system, called “Sod ha-’Ibbur”—(“Ibbur” is the intercalation of a day in a month, making it thirty days, and of a month in a year. The principal object of the calendar was to regulate these two points)—which enabled them to test the accuracy of the evidence of the eye-witnesses, and which was probably resorted to on exceptional occasions (R. H. 20). There were times of persecution when the president and the Sanhedrin could not exercise their authority; times of trouble and war when neither witnesses nor messengers could travel in safety. On such occasions calculation had to be relied upon. The substitution of calculation for observation became gradually permanent, helping to maintain the religious unity of the nation, and insuring the uniform celebration of “the seasons of the Lord,” independently of the vicissitudes of the times, as well as of the distance of Jewish settlements from Palestine. A permanent calendar, still in

force, was introduced by Hillel II., nasi of the Sanhedrin about 360. **It is uncertain what the calendar of Hillel originally contained, and when it was generally adopted. In the Talmud there is no trace of it.**” (emphasis added)

The History of the Jewish People in the Age of Jesus Christ by Emil Schurer
– Page 366

“But unless all indications are deceitful, they did not in the time of Jesus Christ possess as yet any fixed calendar, **but on the basis of a purely empirical observation**, on each occasion they began a new month with the appearing of the new moon.” (emphasis added)

The Temple: Its Ministry and Service by Alfred Edersheim – Page 156

“The Jews calculated the month according to the phases of the moon, each month consisting of either twenty-nine or thirty days, and **beginning with the appearance of the new moon...If the new moon had appeared at the commencement of the 30th day—which would correspond to our evening of the 29th**, as the Jews reckoned the day from evening to evening—the Sanhedrin declared the previous month to have been one of twenty-nine days, or ‘imperfect.’ Immediately thereon men were sent to signal-stations on the Mount of Olives, where beacon-fires were lit and torches waved, till a kindling flame on the hill in the distance indicated that the signal had been perceived.” (emphasis added)

Britannica CD-rom -- Calendar, Ancient and Religious Calendar Systems

“In the religious calendar, the commencement of **the month was determined by observation of the crescent New Moon**, and the date of the Passover was tied in with the ripening of the barley. The actual witnessing of the New Moon and observing of the stand of crops in Judea were required for the functioning of the religious calendar.” (emphasis added)

In addition, the Mishnah and the Babylonian Talmud both contain statements that directly contradict elements of the Calculated Jewish Calendar. The Mishnah is a compilation of commentaries on the Torah by various Jewish sages that was compiled around 200 CE. This compilation contains judgments from sages long before the temple was destroyed in 70 CE. The Babylonian Talmud is similar to the Mishnah, but it was compiled around 500 CE. The Calculated Jewish Calendar contains postponement rules that delay the starting of the year under certain circumstances and prevent tandem Sabbaths occurring during the Fall Holy Days (i.e. a Holy Day and the weekly Sabbath

falling on consecutive days). However, both the Mishnah and the Babylonian Talmud contain statements that clearly indicate tandem Sabbaths occurring.

The Mishnah by Herbert Danby – Page 508-509

“They burnt the dishes [of frankincense] and the loaves were shared among the prides. If the Day of Atonement fell on a Sabbath the loaves were shared out at evening. If it fell on a Friday the he-goat of the Day of Atonement was consumed at evening. The Babylonians used to eat it raw since they were not squeamish.”

The Babylonian Talmud, Volume 1 -- Page 147

“When the Day of Atonement fell on a Friday the shewbread was baked on a Thursday.”

The Babylonian Talmud, Volume 4 -- Page 615

“If it were of immediate importance, the shebath would have been permitted. But in any case when the Day of Atonement falls on a Friday, the vegetables, even if trimmed, cannot be cooked.”

If the Calculated Jewish Calendar was being used by Israel during this time period, then there would be no logical reason for the statements above to have been made. If Israel had been adjusting the calendar at this time so that the Day of Atonement and a weekly Sabbath could not occur on consecutive days, there would have been no reason for addressing how they would handle various issues in the event that the Day of Atonement and the weekly Sabbath occurred on consecutive days.

Does The Bible Define A Calendar?

Clearly history does not support the common COG assertion that the Calculated Jewish Calendar was delivered by God to Moses at Mount Sinai and then passed down by the Levitical Priesthood throughout history and was simply made public by Hillel II in 359 CE. So, the question we need to ask is does the Bible give us the principles necessary to construct a calendar and, if so, does the Calculated Jewish Calendar follow these principles?

The Bible tells us that God created the sun and the moon to be used as tools for defining the elements necessary for a calendar. In other words, God designed the physical universe so that His calendar was hard wired into His creation.

Gen 1:14-19

¹⁴ 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**; ¹⁵ and let them be for lights in the firmament of the heavens to give light on the earth"; and it was so. ¹⁶ 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. ¹⁷ God set them in the firmament of the heavens to give light on the earth, ¹⁸ 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. 19 So the evening and the morning were the fourth day.

Ps 104:19

¹⁹ **He appointed the moon for seasons**; The sun knows its going down.

These verses also reveal to us that one of the purposes of the moon is to be a tool to reveal to us the timing of God's Holy Days. When we think of the English word "seasons" what we normally think of is spring, summer, fall, and winter. However, that is not the meaning intended in these verses. The Hebrew word translated as "seasons" in these verses is "moed" (Strong's # 4150). The Complete Word Study Dictionary of the Old Testament by Warren Baker and Eugene Carpenter defines this word as:

Moed (Strong's # 4150) – "A masculine noun meaning an appointed time or place. It can signify an appointed meeting time in general, a specific appointed time, **usually for a sacred feast or festival**." (emphasis added)

These verses are telling us that God created the moon to be hard wired to His Holy Days and thus it can be used as a tool to help us know the proper time to observe these days.

Days And Weeks

Genesis 1 tells us that a day is defined as "the evening and the morning" (Gen 1:5; 1:8, 1:13, 1:19, 1:23). The Hebrew words used for "evening" and "morning" in these verses can have broad meanings and thus context can be very important in determining their intended meaning. However, the context in which they are used in Genesis 1 clearly indicates that "evening" is meant as a reference to "night" and "morning" is meant as a reference to "day". So, a single day is defined as beginning with the night portion of the day followed by the daylight portion of the day. Sunset (the sun disappearing under the horizon) is the end of one day and the beginning of another day.

The Genesis account also defines for us the weekly cycle. Genesis 1 tells us that in 6 days God completed His creation of the earth, the animals, and man and then He rested on the 7th day and declared it to be the Sabbath.

Gen 2:1-3

¹ Thus the heavens and the earth, and all the host of them, were finished. ² And on the seventh day God ended His work which He had done, and He rested on the seventh day from all His work which He had done. ³ Then God blessed the seventh day and sanctified it, because in it He rested from all His work which God had created and made.

This cycle of 7 days with the 7th day being the Sabbath is repeatedly confirmed throughout the Bible. In Exodus 16 God established a system of feeding the Israelites with a daily portion of manna for 6 consecutive days and then no manna on the 7th day because it was the Sabbath. Regularly keeping the weekly Sabbath was also included in the Ten Commandments (Exodus 20:8-11) confirming that God built a regular weekly cycle consisting of 7 days into His calendar.

The Moon Defines The Months

So, we can see that the Bible clearly defines for us the definition of a day and a week but what about a month? The Hebrew word most often translated as “month” in the Bible shows us that we should look to the moon for the definition of a month. The Hebrew word most often translated as “month” in our English Bibles is “hodesh” (Strong’s # 2320). The Complete Word Study Dictionary of the Old Testament by Warren Baker and Eugene Carpenter defines this word as:

Hodesh (Strong’s # 2320) – “A masculine noun meaning new moon (first day of the lunar month), month. Its use can be put into two categories: (1) the new moon, the day when the crescent moon is once again visible.....(2) month; a time marked by thirty days normally.”

The definition of this word tells us that the Bible defines a month in reference to the cycles of the moon. It also defines the first day of the month as the day of the new moon. Scripture also directly indicates this as well. God instructed the Israelites to perform specific sacrifices on the day of the new moon and also refers to the day of new moon as “the beginnings of your months”. In addition, the sacrifices He commanded Israel to perform on the Feast of Trumpets included the sacrifices for the new moon. The fact that the Feast of Trumpets is defined as occurring on the first day of the

seventh month confirms for us that the first day of the month is the day of the new moon.

Num 28:11-15

¹¹ **'At the beginnings of your months** you shall present a burnt offering to the LORD: two young bulls, one ram, and seven lambs in their first year, without blemish; ¹² three-tenths of an ephah of fine flour as a grain offering, mixed with oil, for each bull; two-tenths of an ephah of fine flour as a grain offering, mixed with oil, for the one ram; ¹³ and one-tenth of an ephah of fine flour, mixed with oil, as a grain offering for each lamb, as a burnt offering of sweet aroma, an offering made by fire to the LORD. ¹⁴ Their drink offering shall be half a hin of wine for a bull, one-third of a hin for a ram, and one-fourth of a hin for a lamb; this is the burnt offering for each month throughout the months of the year. ¹⁵ Also one kid of the goats as a sin offering to the LORD shall be offered, besides the regular burnt offering and its drink offering.

Num 29:1-6

¹ **'And in the seventh month, on the first day of the month**, you shall have a holy convocation. You shall do no customary work. For you it is a day of blowing the trumpets. ² You shall offer a burnt offering as a sweet aroma to the LORD: one young bull, one ram, and seven lambs in their first year, without blemish. ³ Their grain offering shall be fine flour mixed with oil: three-tenths of an ephah for the bull, two-tenths for the ram, ⁴ and one-tenth for each of the seven lambs; ⁵ also one kid of the goats as a sin offering, to make atonement for you; ⁶ **besides the burnt offering with its grain offering for the New Moon**, the regular burnt offering with its grain offering, and their drink offerings, according to their ordinance, as a sweet aroma, an offering made by fire to the LORD.

Since we know that the first day of the month is the day of the new moon, now we just need a definition for “new moon”. The moon has a regular orbit around the earth that can be visibly observed with the naked eye. It begins as a thin crescent which steadily becomes larger until the moon is fully illuminated in the sky and appears as a round ball. This stage is commonly referred to as the “full moon”. It then begins to reverse this cycle becoming less and less illuminated until it disappears from sight for a period of a couple of days. During this time period where the moon is not visible from earth it reaches a point that is referred to as the conjunction. The conjunction is the point in the moon’s orbit where the earth, moon, and sun are all in direct alignment with one another. The reason the moon is not visible from the earth at this time is because the moon reflects the light from the sun. When the moon is directly aligned in front of the sun no light is reflected from the moon and thus it is not visible from earth. The

conjunction is a precise moment in time, but the moon is not visible from the earth for approximately a day prior to the conjunction and approximately a day after the conjunction. After this the moon reappears again as a thin crescent and repeats the cycle. This cycle takes an average of 29.53 days but can vary by a number of hours due to the fact that the moon's orbit around the earth is elliptical. However, these variations are measured in hours and not days. The average time of a lunar cycle is 29.53 days, but some months it can be closer to 29 days and some months it can be closer to 30 days.

Today modern astronomy uses the conjunction as the definition of the “new moon” but is this the definition that was used in Biblical times? This paper began with citing numerous quotes that all agreed that in Biblical times Israel used a calendar that was based on observation of the moon. This indicates that the definition of the “new moon” used in Biblical times was the day when the new crescent moon was first visible as the conjunction is not something that one can observe with the naked eye. Notice the following quote from the Mishnah.

Mishnah Tractate Rosh Hashannah 1:7

If a father and a son have seen the new moon, they should both go [to Jerusalem], not that they can join together as witnesses but so that if one of them is disqualified the other may join with another witness. Rabbi Shimon says that a father and son and all relatives are eligible to testify to the appearance of the new moon. Rabbi Yoshe said: There was an incident with Toviyya the doctor. When he saw the new moon in Jerusalem, he and his son and his freed slave all went to testify. The priests accepted him and his son as witnesses and disqualified his slave, for they ruled stringently that the month may be sanctified only on the basis of the testimony of those of Jewish lineage. And when they came before the court, they accepted him and his slave as witnesses and disqualified his son, due to the familial relationship. (emphasis added)

Notice the Mishnah speaks about people testifying that they had witnessed the new moon with the naked eye. Also notice that this quote speaks of “the priests” and “the court” separately. “The priests” is a reference to the Sadducees and “the court” is a reference to the Pharisees. So, both of these groups had a practice of hearing witness testimonies of visual sightings of the new moon. If Israel had been using the conjunction as the definition of the new moon at this time it would not have been possible for them to confirm this by observation and, thus, they would not have had a system in place to accept witness testimonies for sightings of the new moon. In addition, the moon is not visible for a couple of days around the time of the conjunction. So simply observing the fact that the moon was not visible would not have nailed down

when the day of the new moon was. Israel had to be using the first sighting of the new crescent moon as the definition of the “new moon”.

The new crescent moon will begin reflecting the sun’s light again approximately 18 hours after the conjunction. If this occurs during daylight hours the minimal illumination of the moon will cause it to not be visible to the naked eye as there is not enough contrast for the eye to see it. The time it will be visible will be soon after sunset and it will be visible for typically less than an hour before disappearing under the horizon. If not enough time has elapsed between the time of the conjunction and the time of sunset immediately following the conjunction for the moon to start reflecting light again, then the new crescent moon will be visible soon after sunset the following evening. This means the day of the new moon is always 1 or 2 days after the conjunction. The precise moment of the conjunction can occur at various times throughout the day. So, if one uses this exact point in time to divide one month from another it results in partial days being attributed to each month. However, using the first observation of the crescent moon as the method for determining the new moon results in a month either being 29 full days or 30 full days in spite of the fact that lunar cycles vary and can be anywhere from 29 to 30 days with the average being 29.53 days. This is because the first crescent moon is visible soon after sunset which is the natural dividing line between days. The first crescent moon is not visible in the middle of the day or the middle of the night.

The Start of The Month Is Determined From Jerusalem

Determining the start of the month through visual observation of the moon can result in different locations on the earth seeing the new moon on different nights due to weather and other atmospheric factors. As previously explained, a lunar cycle is an average of 29.53 days but is no longer than 30 days at the most. So, a Biblical month cannot be longer than 30 days. Biblical months are always either 29 days or 30 days. If the new moon is not sighted on the evening after the end of the 29th day of the month (the night beginning the 30th day) then by default the new month will begin the following evening at the end of the 30th day (the night beginning the 1st day of the new month).

However, weather and other atmospheric factors can result in months where some locations on the earth see the new moon at the end of the 29th day while other locations see the new moon at the end of the 30th day. In these cases which new moon sighting should be considered the correct one to use when determining when to observe the Holy Days? To answer this question all we need to do is look at how ancient Israel addressed this issue. The Mishnah records that once the sighting of the new moon was declared in Jerusalem a system of signal fires was used to communicate this decision not only all throughout the nation of Israel but also throughout the surrounding nations to get the word out to all the Jews in the Diaspora.

Mishnah Tractate Rosh Hashannah 2:3

Initially, after the court sanctified the new month they would light torches on the mountaintops, from one peak to another, to signal to the community in Babylonia that the month had been sanctified. After the Samaritans [*Kutim*] corrupted and ruined this method by lighting torches at the wrong times to confuse the Jews, the Sages instituted that messengers should go out to the Diaspora and inform them of the start of the month. The mishna asks: How would they light the torches during that earlier period? They would bring items that burn well, e.g., long poles of cedar, reeds, pinewood, and beaten flax, and tie them together with a string. And someone would then ascend to the top of the mountain and light the torch on fire with them, and wave it back and forth and up and down, until he would see his colleague doing likewise on the top of the second mountain. In this manner he would know that the next messenger had received the message and passed it on. And similarly, the second torchbearer would wait for a signal from the one on the top of the third mountain, and so on. In this manner the message would reach the Diaspora. And from which mountains would they light the torches? **They would transmit the message from the Mount of Olives in Jerusalem** to Sartava, and from Sartava to Gerofina, and from Gerofina to Havran, and from Havran to Beit Baltin. And from Beit Baltin they would not move to light torches in any other predetermined location. Rather, the one who was appointed for this task would wave the torch back and forth and up and down, until he would see the entire Diaspora before him alight like one large bonfire, as they would light torches to continue transmitting the message from place to place all the way to the farthest reaches of the Diaspora. (emphasis added)

Notice that the new moon was sighted in Jerusalem and then all other locations watched for the signal fires so that they would be in sync with Jerusalem as to when the month began. This method kept everyone on the same page regarding when to keep the Holy Days. Staying in sync with Jerusalem is the only logical reason why there would be any need to use signal fires in the first place. If each location had started the month based on when they had sighted the new moon in their location, then they would have simply watched for the new moon and not bothered to watch for the signal fires. The only reason they would have watched for the signal fires was because they looked to Jerusalem for the declaration of the start of the month.

This makes total sense given that the Israelites were commanded to come to Jerusalem three times a year to observe the Holy Days (Ex 23:14-17; Deu 16:16). If the Israelites had determined the months based on the new moon sightings in their various locations, they would have inevitably experienced years where different locations saw the new moon on different nights. This would have inevitably resulted in debates among the groups regarding which day was the correct day to observe as the Holy Day when they all arrived at Jerusalem. Using Jerusalem as the sole location for

determining the month avoided these debates and ensured that the keeping of the Holy Days was done in peaceful and orderly manner without debates over which day was the correct day (1 Cor 14:33, 40).

Defining A Year

We have discussed the Biblical definition of a day, a week, and a month, but what about a year? Does the Bible tell us how many months there are in a year? And, if so, when does the year start. The Bible most often refers to the months of the year numerically. In other words, it refers to them as the “first month”, “second month”, “third month”, etc. Scripture clearly indicates there are at least 12 months in a year (Lev 23:5; Num 9:11; 2 Chr 31:7; Jer 52:6; Num 33:38; Ezek 8:1; Gen 8:4; 1 Kings 12:32; Ezra 10:9; Gen 8:5; Deu 1:3; 2 Kings 25:27). However, a year consisting of 12 lunar months is approximately 11 days shorter than a solar year (the time it takes for the earth to make a complete rotation around the sun). If this difference is not accounted for over time the lunar months will begin occurring earlier and earlier in the solar year which will result in these months being out of alignment with their proper seasons. To keep the months in the proper alignment with the seasons, a 13th month has to be added to the calendar approximately every 3 years.

So, does the Bible mention this 13th month? The Bible does not directly mention a 13th month, but it does appear to make inferences to it. 1 Kings 4:7-19 gives a list of 12 governors who were each responsible for collecting provisions for King Solomon for one month each year. Each governor was assigned a geographic region of Israel, and he was responsible for collecting the provisions for King Solomon from his region on the month his region was assigned. However, verse 19 mentions a 13th governor and then makes the comment that “he was the only governor who was in the land”. John Gill’s Exposition Of The Bible offers the following explanation for this statement:

John Gill’s Exposition Of The Bible – 1 Kings 4:19

“...it seems best what other Jewish writers say, that this was another officer appointed for the intercalated month; when there were thirteen months in the year, there was an officer in the land fixed for that month to make provision out of the land; perhaps any where, where he pleased, being not limited to any certain place.”

Now let’s address the question of when the year begins and how do we know when to add in a 13th month to the year. The Bible directly tells us which month to use as the beginning of the year.

Ex 12:1-2

¹ Now the LORD spoke to Moses and Aaron in the land of Egypt, saying, ² **"This month shall be your beginning of months; it shall be the first month of the year to you."**

The context of Exodus 12 makes it clear that the first month of the year is the month when the Passover and the Feast Unleavened Bread occur and the month in which Israel made their journey out of Egypt. The Bible also repeatedly refers to this month as "the month of the Abib" (or Aviv depending on which Bible translation is referenced).

Ex 13:3-4

³ 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. ⁴ On this day you are going out, **in the month Abib.**

Ex 23:14-16

¹⁴ "Three times you shall keep a feast to Me in the year: ¹⁵ 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; none shall appear before Me empty); ¹⁶ and the Feast of Harvest, the firstfruits of your labors which you have sown in the field; and the Feast of Ingathering at the end of the year, when you have gathered in the fruit of your labors from the field.

Ex 34:18

¹⁸ "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 month of Abib**; for **in the month of Abib** you came out from Egypt.

Deu 16:1

¹ **"Observe the month of Abib**, and keep the Passover to the LORD your God, **for in the month of Abib** the LORD your God brought you out of Egypt by night.

The above scriptures are quoted from the New King James Version of the Bible. Most English translations of the Bible do not include the fact that in every one of the above scriptures the word "Abib" is preceded by the definite article "ha" which in English

is “the”. So, these verses should read “the month of the Abib”. To understand what is meant by “the month of the Abib” we have to first understand the Hebrew term abib (or aviv). The Theological Workbook of The Old Testament by R. Laird Harris gives the following definition for the Hebrew word abib.

The Theological Workbook of The Old Testament by R. Laird Harris

“This noun refers to barley that is already ripe, but still soft, the grains of which are eaten either rubbed or roasted.”

This definition can be confirmed by scripture. Exodus 9 describes the plague of hail that God brought upon the Egyptians. The Biblical account of this plague explains that the barley crop in Egypt was destroyed by the hail because it was in the abib stage of ripeness.

Ex 9:31-32

³¹ Now the flax and the barley were struck, for the barley was in the head [abib] and the flax was in bud. ³² But the wheat and the spelt were not struck, for they are late crops.

To fully understand this reference, it is important to have a basic understanding of how grain develops. In Mark 4, Christ briefly explained how grain develops while using grain to make an analogy regarding the Kingdom of God.

Mark 4:26-29

²⁶ And He said, “The kingdom of God is as if a man should scatter seed on the ground, ²⁷ and should sleep by night and rise by day, and the seed should sprout and grow, he himself does not know how. ²⁸ For the earth yields crops by itself: **first the blade, then the head, after that the full grain in the head.** ²⁹ But when the grain ripens, immediately he puts in the sickle, because the harvest has come.”

As Christ mentioned in Mark 4:28, grains (barley, wheat, etc) start out as a blade of grass that later develops a head and then in time the full grain develops in the head. When grain is in the blade of grass stage it is very flexible. However, as the head develops and later the full grain, it becomes more stiff and rigid and less flexible. This is why Exodus 9:31-32 mentions that the barley was destroyed by the hail storm, but the wheat and spelt survived the storm because they are later crops and were still very flexible. Leviticus 2 provides further details on the definition of abib.

Lev 2:14

¹⁴ If you offer a grain offering of your firstfruits to the LORD, you shall offer for the grain offering of your firstfruits green heads of grain [abib] roasted on the fire, grain beaten from full heads [karmel].

This verse explains that both abib and karmel grains can be used in a firstfruits grain offering to God. Notice that this verse explains that abib grain must be roasted in fire but karmel grain is simply beaten. Karmel grain is fully ripe and is simply beaten or ground into flour. However, abib is not quite fully ripe and has a higher moisture content thus it has to first be roasted in fire to remove the excess moisture before it can be ground into flour. When grain first develops a head, it has fluid inside that later develops into grain that can be used to make flour. Prior to the abib stage of ripeness, if you roast the heads in fire the internal liquid will just evaporate and there will be nothing left to make flour with. However, once it has reached the abib stage of ripeness it can be roasted in fire to remove the excess moisture and the remaining grain can be ground into flour. So, the abib stage of ripeness is the point where grain can be harvested and used for making food. It is also the earliest stage of ripeness when the grain can be harvested and used as a firstfruits grain offering to God.

The term “green heads” used in the NKJV for this verse is actually a poor translation, because abib barley is not green. It is a light yellowish color. If you take barley with “green heads” and roast it in fire you will not have any useful grain left that can be used for food or for a grain offering. This is because it has not yet matured to the stage of abib and is still in too much of a liquid state. The heat from the fire will cause this liquid to evaporate and there will be nothing left that is useful.

The connection between barley in the abib stage of ripeness and the first month of the Biblical year is due the instructions God gave Israel regarding the wave sheaf offering.

Lev 23:9-14

⁹ And the LORD spoke to Moses, saying, ¹⁰ “Speak to the children of Israel, and say to them: ‘When you come into the land which I give to you, and reap its harvest, then you shall bring **a sheaf of the firstfruits of your harvest** to the priest. ¹¹ He shall wave the sheaf before the LORD, to be accepted on your behalf; on the day after the Sabbath the priest shall wave it. ¹² And you shall offer on that day, when you wave the sheaf, a male lamb of the first year, without blemish, as a burnt offering to the LORD. ¹³ Its grain offering shall be two-tenths of an ephah of fine flour mixed with oil, an offering made by fire to the LORD, for a sweet aroma; and its drink offering shall be of wine, one-fourth of a hin. ¹⁴ You shall eat neither bread nor parched grain nor fresh grain until the same day that

you have brought an offering to your God; it shall be a statute forever throughout your generations in all your dwellings.

As these verses explain, the wave sheaf offering was a firstfruits grain offering from the barley harvest which is the first grain harvest of the year. As we previously saw in Leviticus 2:14, the barley had to be in either the abib or karmel stages of ripeness to be used as a firstfruits grain offering. So, the wave sheaf offering could not take place if there was not barley that had reached the abib stage of ripeness. In addition, the barley harvest could not begin until the wave sheaf offering had been done.

Deu 16:9 -- NRSV

⁹ You shall count seven weeks; begin to count the seven weeks **from the time the sickle is first put to the standing grain.**

Josephus, Antiquities of the Jews, book 3, chapter 10

“And while they suppose it proper to honor God, from who they obtain this plentiful provision, in the first place, they offer the first-fruits of their barley....And **after this it is that they may publicly or privately reap their harvest.**” (emphasis added)

Babylonian Talmud: Tractate Sanhedrin 11b

“If the grain is already ripe, however, the extra month would simply prolong the period during which the grain may not be eaten due to the prohibition of the new crop, as **the new crop may be harvested and eaten only after the sacrifice of the omer offering....**” (emphasis added)

The barley that Israel would have been harvesting when these instructions were originally given is referred to today as wild barley. It naturally grows up all over Israel similar to weeds in the United States. However, the domestic barley that farmers typically grow today in Israel has a genetic mutation that allows it to stand in the field for longer periods of time without shattering. Wild barley has to be harvested as soon as it becomes ripe because if it is left standing in the field and becomes overly ripe the heads will either shatter on their own or they will shatter due to the impact of a sickle hitting the stalk while being harvested. This will result in large amounts of grain being scattered on the ground and lost rather than being harvested. So, for the barley harvest to be successful it was very important for wave sheaf Sunday to fall when the barley was first reaching the stages of ripeness for harvesting so that the harvest could begin, and crop was not lost.

This is why the first month of the year is defined as “the month of the Abib” because it is the month where the barley would reach the abib stage of ripeness and the status of the barley was used by the Israelites to determine whether or not a 13th month would be needed. At the end of the 12th month, the Israelites would assess the status of the barley and if the barley would be ready for harvest by the middle of the following month (when wave sheaf Sunday would occur) then they would declare the following month as the first month of the new year (the month of the Abib). However, if the barley was going to need more time to be ready for harvesting then they would add a 13th month to allow more time for the barley to ripen. If the barley was not going to be abib by wave sheaf Sunday, then they would not be able to perform the wave sheaf offering and by Biblical definition it would not be “the month of the Abib”.

This is why God instructed the Israelites to pay close attention to when the “month of the Abib” occurred so that they would know the proper time to keep the Passover.

Deu 16:1

¹ **“Observe the month of Abib,”** and keep the Passover to the LORD your God, **for in the month of Abib** the LORD your God brought you out of Egypt by night.

The Hebrew word translated as “observe” in this verse is “samar” (Strong’s 8104). The Complete Word Study Dictionary of the Old Testament by Warren Baker and Eugene Carpenter defines this word as:

Samar (Strong’s # 8104) – “A verb meaning to watch, to keep, to preserve, to guard, to be careful, to watch over, to watch carefully over, to be on one’s guard.....**The Hebrew word means to maintain or to observe something for a purpose and is followed by another verb indicating the purpose or manner....**” (emphasis added)

By paying attention to when the “month of the Abib” occurred the Israelites would not only know when to keep the Passover, but this would also ensure that the annual Holy Days and the harvests in Israel stayed in sync with one another. As we have already seen, God instructed the Israelites to begin the barley harvest exactly on wave sheaf Sunday and that they could not harvest or eat the new grain until after the wave sheaf offering had occurred (Deu 16:9; Lev 23:14). This correlates with the meaning of the wave sheaf offering because it pictures Christ, and He is the First of the Firstfruits (Ex 23:19; Ex 34:26; 1 Cor 15:20-23; Rev 3:14). The barley harvest in Israel typically lasted about 7 weeks which directly correlates with the count from wave sheaf Sunday to Pentecost (Lev 23:15-16). This means the Israelites would be finishing up the barley harvest just in time to switch gears and focus on the wheat harvest in time for Pentecost

(Ex 34:22). The two wave loaves offering on Pentecost was also a firstfruits grain offering (Lev 23:17). So, it needed to happen at the beginning of the wheat harvest. These facts illustrate that keeping the annual Holy Days and the agricultural harvests in Israel in sync with one another was a critically important issue.

Numerous historical sources also confirm that the ripeness of the barley harvest was the criteria Israel used in determining whether or not a 13th month should be added to the year.

The Encyclopedia of Judaism -- Page 145

"The Jewish calendar is based on a lunar year of 12 months, each month of 29 or 30 days. The year lasts approximately 354 days. Since the biblical festivals relate to the agricultural seasons of the 365-day solar year, the shortage of 11 days between the lunar and solar years has to be made up. To overcome this problem, a 13th month is added in certain years. **In Temple times this was done periodically, after examining the agricultural situation at the end of the 12th month.** In a later period the additional month was introduced automatically seven times in a lunar cycle of 19 years." (emphasis added)

The code of Maimonides: Book Three, Treatise Eight, Sanctification of the New Moon by Moses Maimonides -- Page 17

"Intercalation of the year depended upon the following three criteria: The tekufoth, **the barley harvest**, and blooming of the tree fruits. Namely, if the court had ascertained by calculation that the tekufoth of Nisan would fall on the 16th of Nisan, or later, it intercalated the year and declared the Nisan of this year to be a Second Adar, so that Passover might fall in the season of the barley harvest. This criterion alone was sufficient to rely upon for the intercalation of the year, and no attention was paid to any other criteria. Similarly, **if the court found that the barley crop was not yet ripe, being retarded**, and that such tree fruits as usually sprout during the Passover season had not yet produced buds, it took these two conditions as a criterion and proceeded to intercalate the year even if the tekufoth was to take place prior to the 16th day of the Nisan **in order that the barley crop might be available for the offering of the Sheaf of Waving.**" (emphasis added)

Babylonian Talmud: Tractate Sanhedrin 11b

The Sages taught in a *baraita* (*Tosefta* 2:2): The court may intercalate the year for three matters: For **the ripening of the grain**, if it is not yet time for the barley to ripen; for the fruit of the trees, if they have not yet ripened; and for the equinox, i.e., to ensure that the autumnal equinox will precede *Sukkot*. If two of these

concerns apply, the court intercalates the year even if the third factor does not apply; but for only one of them the court does not intercalate the year.

The *baraita* continues: **And when the ripening of the grain is one of the concerns, everyone is happy.** Since the grain is not yet ripe, the people do not mind waiting an extra month for Nisan. If the grain is already ripe, however, the extra month would simply prolong the period during which the grain may not be eaten due to the prohibition of the new crop, as the new crop may be harvested and eaten only after the sacrifice of the *omer* offering on the sixteenth of Nisan (see Leviticus 23:14). Rabban Shimon ben Gamliel says: For the equinox. The Gemara seeks to clarify this statement: A dilemma was raised before the Sages. When he said: For the equinox, did he mean this is the reason that everyone is happy, or did he mean that only for the equinox may the court intercalate the year? The dilemma shall stand unresolved.

The Sages taught in a *baraita* (*Tosefta* 2:2): The court may intercalate the year for three regional lands of Eretz Yisrael, meaning that the court considers the agricultural situation in three regions: Judea, and Transjordan, and the Galilee. If there is a concern about two of them, the court intercalates the year even if the third region does not need it, but if there is a concern about only one of them the court does not intercalate the year. **And when Judea is one of them, everyone is happy, because the omer offering comes only from Judea.** If the court therefore ensures that the crops in Judea ripen just before the *omer* is brought, the crops will certainly be ripe in the other regions as well, and there will be no complications with the prohibition of the new crop. (emphasis added)

Maimonides and the Babylonian Talmud reveal that the Jews added other criteria that they considered in addition to the ripeness of the barley when determining if a 13th month was needed. However, please note that the Babylonian Talmud points out that “everyone was happy” when the ripeness of the barley was the basis for this decision. This is because there were various sects among the Jews (Pharisees, Sadducees, etc.) that disagreed on various things. However, the one criteria that all of them could agree on was whether or not the barley had reached the abib stage of ripeness because this criteria came directly from scripture.

The Abib vs The Spring Equinox

Another common argument regarding the criteria for determining the start of the Biblical year is the idea that the vernal (or spring) equinox should be used as the criteria for determining the start of the Biblical year rather than looking at the ripeness of the barley in Israel. In other words, the idea that the start of the year should be the first new moon that occurs after the vernal equinox. Those that support this theory cite Genesis 1:14 as scriptural support of this theory. This verse states that the sun and moon were

both established “for signs and seasons, and for days and years”. However, there is no mention of the equinox in this verse or in any other verses in the Bible. Some argue that the Hebrew word “tekufah” which appears in the Bible four times (Ex 34:22; 1 Sam 1:20; 2 Chr 24:23; Ps 19:6) is referring to the equinox. Hebrew scholar Nehemia Gordon states the following regarding this Hebrew word:

Is the equinox (Tekufah) mentioned in the Tanach (Hebrew Bible)?

https://www.karaite-korner.org/abib_and_tekufah.shtml by Nehemia Gordon

“The claim has been made by proponents of the equinox calendar theory that the word equinox actually appears in the Tanach. They are referring to the word Tekufah or Tequfah which appears in the Hebrew Bible four times. Tekufah is in fact the post-Biblical word for "equinox", however, it never has the meaning of "equinox" in the Tanach. In Biblical Hebrew, Tekufah retains its literal meaning of "circuit", that is something which returns to the same point in time or space [from the root Nun.Quf.Pe. meaning "to go around"]. To claim that Tekufah means equinox in the Tanach, just because it had this meaning in later Hebrew, is an anachronism. This would be like saying that there were handguns in ancient Israel because the word EKDACH, the post-Biblical Hebrew word for handgun, appears in Isaiah 54:12. Let us consider another example of this anachronistic use of language: Before the invention of the electronic computer during World War II, the word "computer" referred to a man who sat at a desk calculating (computing) mathematical equations. Imagine if we found an 18th century document mentioning "computers" and proclaimed to the world that there were really electronic computers in the 18th century. This is exactly what the equinox-followers are doing with the word Tekufah.”

Nehemia’s comments are consistent with how Biblical Lexicons define this word. The Complete Word Study Dictionary of the Old Testament by Warren Baker and Eugene Carpenter defines this word as:

Tequpah (Strong’s # 8622) – “A feminine noun indicating a turning around; a circuit. It indicates the completion of a yearly cycle (Ex 34:22; 2 Chr 24:23); the gestation period of a child (1 Sam 1:20). It is used to describe the circuit or passage of the sun across the sky (Ps 19:6).”

The fact that the Hebrew word “tekufah” did not have the meaning of “equinox” at the time the Bible was written shows that there is simply no mention of the vernal equinox in scripture. To conclude that the vernal equinox should be used as a criteria for determining the start of the year requires one to engage in interpretation and speculation as there are simply no scriptures one can turn to that state that the vernal

equinox is a Biblical criteria for the start of the year or that make any reference to the vernal equinox whatsoever. However, connecting the start of the Biblical year to the barley in Israel being at the abib stage of ripeness is a very easy connection to make from scripture. The Bible defines the first month of the Biblical year as the month that occurs when the barley is in the abib stage of ripeness by directly referring to it as “the month of the Abib” six times (Ex 13:3-4; Ex 23:15-16; Ex 34:18; Deu 16:1).

As previously demonstrated in this paper, history records that looking to the ripeness of the barley in Israel was the criteria ancient Israel used for determining when to start the year. In addition, history also records that using the vernal equinox as the criteria was specifically introduced as a way to move people away from following the Biblical criteria for starting the year.

History clearly records what is today referred to as the “Quartodeciman Controversy”. The Quartodeciman Controversy was a debate that occurred from at least the 100 ADs through the 300 ADs between those that wanted to continue keeping the Passover on the 14th of Nisan versus those who instead wanted to observe Easter Sunday. Those that believed in keeping Easter Sunday initially determined the date of their Easter Sunday observance by designating it as the Sunday that followed the 14th day of Nisan (Passover). To do this they depended on the Jewish community to tell them when Passover occurred as the exact date of the 14th of Nisan is determined by the Biblical calendar and not the Julian Calendar. Over time some abandoned this method for determining the date of Easter Sunday while others retained this method. This created controversy over how to determine the date of Easter Sunday.

In 325 AD Constantine called a meeting that is known today as the Council of Nicaea to address the Passover versus Easter controversy along with several other issues. At this meeting Constantine decreed that the “orthodox” practice going forward would be to keep Easter Sunday rather than Passover and that determining the date of Easter Sunday would be based on the vernal equinox rather than depending on the Jewish community to tell them when Passover occurred according to the Biblical Calendar. After this meeting Constantine sent out a letter explaining the decrees made at this meeting. Below is an excerpt from this letter.

Life of Constantine by Eusebius of Caesarea -- Page 122-124

“At this meeting the question concerning the most holy day of Easter was discussed, and it was resolved by the united judgment of all present, that **this feast ought to be kept by all and in every place on one and the same day.** For what can be more becoming and honorable to us than that this feast from which we date our hopes of immortality, should be observed unfailingly by all alike, according to one ascertained order and arrangement? And first of all, it appeared **an unworthy thing that in the celebration of this most holy feast we should follow the practice of the Jews,** who have impiously defiled their hands with enormous sin, and are, therefore, deservedly afflicted with blindness

of soul. For we have it in our power, if we abandon their custom, to prolong the due observance of this ordinance to future ages, by a truer order, which we have preserved from the very day of the passion until the present time. **Let us have nothing in common with the detestable Jewish crowd**; for we have received from our Saviour a different way. A course at once legitimate and honorable lies open to our most holy religion. Beloved brethren, let us with one consent adopt this course, and withdraw ourselves from all participation in their baseness. **For their boast is absurd indeed, that it is not in our power without instruction from them to observe these things**. For how should they be capable of forming a sound judgment, who, since their parricidal guilt in slaying our Lord, have been subject to the direction, not of reason, but of ungoverned passion, and are swayed by every impulse of the mad spirit that is in them? Hence it is that on this point as well as others they have no perception of the truth, so that, being altogether ignorant of the true adjustment of this question, **they sometimes celebrate Passover twice in the same year**. Why then should we follow those who are confessedly in grievous error? Surely we shall never consent to keep this feast a second time in the same year.....it is most fitting that all should unite in desiring that which sound reason appears to demand, and in **avoiding all participation in the perjured conduct of the Jews**. In fine, that I may express my meaning in as few words as possible, it has been determined by the common judgment of all, that **the most holy feast of Easter should be kept on one and the same day**. For on the one hand a discrepancy of opinion on so sacred a question is unbecoming, and on the other it is surely best to act on a decision which is free from strange folly and error.”

Notice that Constantine states that the Jewish community boasted “that it is not in our power without instruction from them to observe these things”. This was because the Jewish community in Constantinople depended on messengers from Israel to inform them of when the barley in Israel was found to be abib so they would know when the new year would start. Given that this was the criteria for determining the beginning of the year it meant that those that were using the date of Passover to determine when to keep Easter also had to depend on the reports from these same messengers to know when they should keep Easter. This is also the reason for Constantine’s criticism that the Jews would “sometimes celebrate Passover twice in the same year”. If the messengers arrived late in the month and the Jews discovered that they had already kept Passover a month too early (because a 13th month had to be added to the previous year to allow time for the barley to ripen) they would keep Passover again at the correct time the following month thus keeping Passover “twice in the same year”.

Constantine’s solution for solving the disputes regarding the keeping of Passover versus Easter Sunday was to not only dictate the observance of Easter Sunday but to also dictate that the criteria for determining the date of Easter Sunday would be to make

Easter Sunday the first Sunday that occurs after the first full moon that occurs on or after the vernal equinox. Using the equinox as the criteria for determining the date of Easter Sunday enabled Constantine to lead the people to totally abandon the Biblical method for determining the start of the year.

A Very Simple Calendar

So, we can see that the Bible does define all of the elements needed for a calendar. It defines a day, a week, a month, and a year. A day is measured from sundown to sundown. A week is simply a cycle of seven days. A month is one lunar cycle and is measured from new moon to new moon. A month can vary between 29 or 30 days, but simply watching for the appearance of the new moon (the first sighting of the crescent moon) will reveal whether the month is 29 or 30 days long. A year is at least 12 months long but is periodically 13 months long. The criteria that determines if a 13 month is needed is examining the barley in Israel at the end of the 12th month to see whether or not it will reach the stage of abib by wave sheaf Sunday. This is a very simple formula that an ancient agrarian society could easily follow. It did not require them to be astronomers or advanced mathematicians. All they had to do was know that after 29 days they needed to start watching for the new moon to appear soon after sundown and if they didn't see it after the conclusion of day 29 then by default the next night (after the conclusion of day 30) would be the night the new moon would be visible. At the end of 12 months all they needed to do was examine their barley crop to see if it would reach the stage of abib ripeness by wave sheaf Sunday and they would know when to start the new year. The calendar was literally hard wired into nature and all they had to do was pay attention to nature.

Does The Calculated Jewish Calendar Follow These Principles?

Now that we know the Biblical elements for a calendar, the question we need to ask is does the Calculated Jewish Calendar follow these Biblical principles? We saw earlier that the Bible defines the first day of the month as the day of the new moon. We also saw from recorded history that Israel determined the day of the new moon from visual sightings of the new moon. This means Israel had to be using the first sighting of the new crescent moon as the definition of the new moon rather than the conjunction as the moon is not visible to the naked eye for several days around the time of the conjunction.

The Calculated Jewish Calendar bases its calculations on what is called the molad. The molad is the average time between conjunctions. Today our modern technology can measure the exact moment of the conjunction, but in 359 CE when Hillel II developed his calendar the average time between conjunctions was as precise as one could get in determining the timing of the conjunction each month. Hillel II used this average figure to estimate the timing of the conjunction and then used the day of the

conjunction as the definition of the “new moon” when he made his calendar. As a result, the Calculated Jewish Calendar places the “new moon” on average 1 to 2 days prior to the time that the new crescent moon is visible from earth. This causes the dates for this calendar to be off by 1 to 2 days most of the time (as compared to the visual observation calendar).

The Calculated Jewish Calendar is calculated based on first determining the 1st day of the 7th month and then counting backwards to determine the 1st day of the 1st month. It also contains postponement rules that delay the start of the year under certain circumstances. The postponement rules are as follows:

The Comprehensive Jewish Calendar by Arthur Spier – Page 219

“When the molad Tishri occurs on a Sunday, Wednesday, or Friday, Rosh Hashanah is postponed to the following day. When the Molad Tishri occurs at noon (18h) or later, Rosh Hashanah is postponed to the next day. If the next day is a Sunday, Wednesday or Friday, the day will be postponed another day, for a total of 2 days. When the Molad Tishri of a common year falls on Tuesday, 204 parts after 3 am, i.e., 3d 9h 204p or later, Rosh Hashanah is postponed to a Wednesday, and, because of Dehiah 1, it is postponed to a Thursday. When, in a common year succeeding a leap year, the molad Tishri occurs on Monday morning 589 parts after 9 am, i.e., 2d 15h 589p or later, Rosh Hashanah is postponed to the next day.”

The second postponement rule prevents tandem Sabbaths (i.e. the weekly Sabbath and an annual Holy Day occurring on successive days) from occurring during the Fall Holy Days. As previously demonstrated in this paper, the Mishnah and the Babylonian Talmud both record the fact that tandem Sabbaths occurred during the Fall Holy Days during the Second Temple Period (the time period of Christ’s ministry). So, this was obviously something that was added to the calendar after the time of Christ. In addition, we have previously seen that the moon and the Holy Days are hard wired to one another (Gen 1:14-19; Ps 104:19). For example, the Feast of Trumpets is defined as the 1st day of the 7th month which is also the day of the new moon (Num 29:1-6). So, one cannot decide to delay the Feast of Trumpets by two days for personal convenience and think that the date they have decided to declare to be the Feast of Trumpets is the correct date. One can declare a day to be the Feast of Trumpets but, if the day in question is not the day of the new moon, then by definition that day is in fact NOT the Feast of Trumpets. The moon will not cooperate with administrative decisions made by human beings. The moon will demonstrate by its actions what day is the day of the new moon and all that humans can do is follow the direction the moon demonstrates. Humans cannot dictate the moon’s actions.

Another issue to consider is the issue of whether or not a 13th month needs to be added to the year. As we saw previously, the Bible repeatedly refers to the 1st month of the year as “the month of the Abib” (Ex 13:3-4; Ex 23:14-16; Ex 34:18; Deu 16:1). In other words, the month when the barley will reach the abib stage of ripeness in time for the harvest to begin on wave sheaf Sunday. We also saw from history that Israel would make the determination regarding whether or not a 13th month needed to be added to the year by examining the barley in the fields at the end of the 12th month and if the barley would not be abib by wave sheaf Sunday then they would add a 13th month to the year to allow the barley more time to ripen. If they found that the barley would be abib in time for wave sheaf Sunday, then there was no reason to add a 13th month and the year would only have 12 months.

The Calculated Jewish Calendar addresses this issue by adding a 13th month to the year at set intervals. They add a 13th month to 7 out of every 19 years by adding a 13th month to the 3rd, 6th, 8th, 11th, 14th, 17th, and 19th years. In other words, this calendar totally ignores the question of whether or not the barley has reached the state of abib and thus it does not factor in “the month of the Abib”. As a result, it periodically gets the Holy Days and the harvests in Israel out of sync by an entire month. For example, this occurred recently in 2016, 2019, and again in 2024.

Clearly the Calculated Jewish Calendar does not follow the principles the Bible lays out for constructing a calendar. The calendar the Bible describes, and that Israel followed during the ministry of Jesus Christ, was a calendar based on visually observing the new moon and examining the barley in Israel to determine if it was abib and thus whether or not a 13th month was needed. This is a very simple process to follow and one we can follow today.

Today, there are a number of individuals that watch for the new crescent moon every month in Jerusalem and provide photographic evidence of new moon sightings online. In addition, with modern technology the majority of the time it is possible to accurately calculate when the new moon will be visible over Jerusalem in advance. For example, CHC Publications has developed a computer program that accurately predicts when the new crescent moon will be visible over Jerusalem. This program can be downloaded at: [Central Highlands Christian Publications Web Site \(chcpublications.net\)](http://chcpublications.net). This program has been proven to very accurately predict when the new crescent moon will produce enough light to be visible to the naked eye over Jerusalem. However, computer programs are not able to predict weather conditions. So, this still allows for a one day variable (i.e. whether the month will be 29 days or 30 days), but if one uses this program in conjunction with online visual sighting reports from Jerusalem, the exact start of the month can be clearly determined.

There are also individuals that perform yearly abib inspections in Israel and provide photographic and video evidence of their findings online. In this author's opinion, the most accurate source to get abib inspection results is from www.AbibOfGod.com. This site is run by Brian Convery who is a COG member and has

provided abib reports for over 20 years. By tracking and charting the results each year and correlating abib results with other supporting Biblical criteria such as the ripening of figs and grapes and the migration of birds through Israel (Songs 2:11-13; Matt 24:32; Mark 13:28; Luke 21:29-30), Brian has developed methods of predicting the Abib in advance for many years but not all years.

For example, from charting the yearly results for several decades he has learned that if the new crescent moon will be visible over Jerusalem before March 5th, then a 13th month will always need to be added. This is because the barley never reaches the stage of abib that early in the year. Additionally, if the new crescent moon will be visible over Jerusalem after March 15th, then a 13th month will definitely not need to be added because the barley will always be abib in time for wave sheaf Sunday if the new moon is that late in the year. If the new crescent moon is visible between March 5th and March 15th then it is not possible to accurately predict in advance whether or not the barley will be abib in time for wave sheaf Sunday. So, for many years the month of the Abib can be accurately predicted in advance. Clearly, we today can follow the calendar described in the Bible in spite of the fact that we do not live in Israel.

Common Arguments For Using The Calculated Jewish Calendar

There are two popular arguments commonly used today by Church of God organizations to justify using the Calculated Jewish Calendar. One common argument is the belief that the Calculated Jewish Calendar was included in the "oracles of God" that were given to the Jews and thus it essentially carries the same authority as scripture. The "oracles of God" are mentioned four times in the New Testament.

Rom 3:1-6

¹ What advantage then has the Jew, or what is the profit of circumcision? ² Much in every way! Chiefly because **to them were committed the oracles of God.**

³ For what if some did not believe? Will their unbelief make the faithfulness of God without effect? ⁴ Certainly not! Indeed, let God be true but every man a liar. As it is written: "That You may be justified in Your words, And may overcome when You are judged." ⁵ But if our unrighteousness demonstrates the righteousness of God, what shall we say? Is God unjust who inflicts wrath? (I speak as a man.) ⁶ Certainly not! For then how will God judge the world?

Heb 5:12-14

¹² For though by this time you ought to be teachers, **you need someone to teach you again the first principles of the oracles of God;** and you have come to need milk and not solid food. ¹³ For everyone who partakes only of milk is unskilled in the word of righteousness, for he is a babe. ¹⁴ But solid food

belongs to those who are of full age, that is, those who by reason of use have their senses exercised to discern both good and evil.

1 Peter 4:7-11

⁷ But the end of all things is at hand; therefore be serious and watchful in your prayers. ⁸ And above all things have fervent love for one another, for "love will cover a multitude of sins." ⁹ Be hospitable to one another without grumbling. ¹⁰ As each one has received a gift, minister it to one another, as good stewards of the manifold grace of God. ¹¹ **If anyone speaks, let him speak as the oracles of God.** If anyone ministers, let him do it as with the ability which God supplies, that in all things God may be glorified through Jesus Christ, to whom belong the glory and the dominion forever and ever. Amen.

Acts 7:37-40

³⁷ "This is that Moses who said to the children of Israel, 'The LORD your God will raise up for you a Prophet like me from your brethren. Him you shall hear.'
³⁸ "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,** ³⁹ whom our fathers would not obey, but rejected. And in their hearts they turned back to Egypt, ⁴⁰ saying to Aaron, 'Make us gods to go before us; as for this Moses who brought us out of the land of Egypt, we do not know what has become of him.'

The above scriptures clearly demonstrate that the term "oracles of God" is a reference to God's instructions for mankind that are recorded in scripture. However, if the "oracles of God" also included the instructions for the Calculated Jewish Calendar then this would mean that God would have had to have instructed Moses on these rules at Mount Sinai. If this were the case, then Israel would have been following this method for determining their calendar from that point in time forward throughout their history. However, this is simply not what history tells us. As previously demonstrated in this paper, history clearly and consistently records that the Israelites used a calendar that was based on observing the new crescent moon to determine the beginning of the month rather than using the conjunction as the definition of the new moon. History also clearly records that during the second temple period tandem Sabbaths occurred which the postponement rules of the Calculated Jewish Calendar do not allow. So, clearly the Calculated Jewish Calendar is not the method that the Israelites have used since the time of Moses.

In addition, if the Calculated Jewish Calendar was delivered to Moses by God at Mount Sinai, then we would have to conclude that by the time of the second temple period (the time of the ministry of Jesus Christ) the Israelites had stopped using the

“correct” method for determining the calendar. The New Testament is clear on the fact that Christ kept the Holy Days on the same days that the Jews of His time kept them, and He never made any mention of the Jews observing the Holy Days on the wrong day. So, if the Jews of His time had abandoned the “correct” method of determining the calendar then this would mean that Christ would have participated in observing the Holy Days on the wrong day. Clearly Christ would not have participated in observing the Holy Days on the wrong day. So, the Jews in Christ’s time must have been keeping the Holy Days on the correct day which further proves that the Calculated Jewish Calendar was not given to Moses by God as part of the “oracles of God”.

The other common argument used by Church of God organizations to support the use of the Calculated Jewish Calendar is the belief that the Pharisees had the authority to change the calendar and, because they are the sole possessors of this authority, the Calculated Jewish Calendar is the method that must be used for determining when to observe the Holy Days. This is a common belief in the Jewish world today. It is commonly recognized in modern Judaism that the Calculated Jewish Calendar was not the method that Israel used for determining the calendar for the majority of their history. It is also commonly believed among Jews today that when the Messiah comes (they don’t accept Christ as the Messiah) they will return to using the Biblical method of visually observing the new moon for determining the calendar. Their rationale for not doing this today is the argument that only the Sanhedrin can make this change since it was the Sanhedrin that instituted using the Calculated Jewish Calendar. This argument is based on the belief that the Sanhedrin (the governing body of the Pharisees) sits in the “seat of Moses” and thus they have the same authority as Moses. There is not a recognized Sanhedrin functioning today in the Jewish world and as a result they believe they are commanded to continue following the previous decision of the Sanhedrin to institute the Calculated Jewish Calendar and that only an officially recognized Sanhedrin would have the authority to reverse this decision.

Hebrew scholar Nehemia Gordon explains the Pharisees’ belief that they had the authority of Moses in his book *The Hebrew Yeshua vs The Greek Jesus*.

The Hebrew Yeshua vs The Greek Jesus” by Nehemia Gordon page 3

“The metaphorical interpretation of “Moses Seat” as Mosaic authority seems likely. It is a basic Pharisaic doctrine that the Rabbis have the authority of Moses. This is expressed in the well-known Mishnaic account about the dispute between Rabban Gamaliel II and Rabbi Joshua. These two rabbis disagreed about when Yom Kippur was to fall in a certain year, but Rabban Gamaliel sat on the Rabbinic court, and hence Rabbi Joshua was compelled to accept his ruling even though he knew it to be factually wrong. Rabbi Dosa explained to Rabbi Joshua that he must give in to Gamaliel’s ruling because:

If we go and challenge Rabban Gamaliel’s court, we must also challenge each and every court that has presided since the days of Moses until

now....each and every set of three Rabbis that preside as a court over Israel are equivalent to the court of Moses. (Mishnah, Rosh Hashannah 2:9).

So, the Rabbis really believed they preside in the place of Moses!"

In the New Testament Christ mentions the concept of the Pharisees sitting in the seat of Moses.

Matt 23:1-3

¹ Then Jesus spoke to the multitudes and to His disciples, ² saying: "**The scribes and the Pharisees sit in Moses' seat.** ³ 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.

When we read this verse in English it appears that Christ is validating the idea that the Pharisees have the same authority as Moses and, as a result, we are bound to follow their teachings. However, if we look at the original Hebrew (the book of Matthew was originally written in Hebrew and later translated into Greek) we find that this is actually the opposite of what Christ actually said. Hebrew scholar Nehemia Gordon explains this in his book *The Hebrew Yeshua vs The Greek Jesus*.

"The Hebrew Yeshua vs The Greek Jesus" by Nehemia Gordon pages 47-48

"As already mentioned, the King James Translation of the Greek reads:

Matt 23:2-3

2 The scribes and the Pharisees sit in Moses' seat: 3 All therefore whatsoever they bid you observe, that observe and do; but do not ye after their works: for they say, and do not.

But when I went to look in the Hebrew text of Matthew I found something quite different:

2 The Pharisees and sages sit upon the seat of Moses, 3 Therefore, all that **he** says to you, diligently do, but according to their reforms and **their** precedents do not do, because they talk but they do not do.

In the Hebrew Mathew, Yeshua is telling his disciples not to obey the Pharisees. If their claim is that they sit in Moses' seat, **then diligently do as Moses says!**

To understand what happened, we must compare the Hebrew with the Greek. In the Greek, the disciples were commanded to obey “all that they (the Pharisees) say”, but in the Hebrew, Yeshua told his disciples to obey “all that he (Moses) says.” 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 vav is one of the smallest letters in the Hebrew alphabet, really just a single stroke! The addition of this tiny letter changes Yeshua’s message from an instruction to obey Moses (“all that he says”) to a commandment to obey the Pharisees (“all that they say”). In contrast, in Greek the difference between “he says” (eipei) and “they say” (eiposin) is a much larger difference. This suggests that the Greek translator misread the Hebrew text as containing that extra vav. Maybe this Greek translator did not even understand who or what the Pharisees were all about!” (emphasis added)

In the original Hebrew Christ was telling his followers that they should NOT follow the teachings of the Pharisees. Throughout the rest of Matthew 23 Christ goes on to describe the Pharisees as hypocrites, fools, blind guides, serpents, a brood of vipers, and whitewashed tombs full of dead men’s bones. Christ also stated that their doctrines were leaven (Matt 16:5-12) thus equating them with sin and that they set aside the commandments of God and taught as doctrines the commandments of men (Matt 15:1-9). Clearly this is not a group whose teachings Christians should follow. In addition, chapters 4 and 5 of the book of Acts record accounts where the Sanhedrin commanded the Apostles to stop teaching the people about Jesus Christ. The Apostles did not recognize the Sanhedrin as having the authority to do this. Their response to the Sanhedrin was “We ought to obey God rather than men” (Acts 5:29). Clearly, they did not see the Sanhedrin as possessing the authority of Moses and or having the authority to make binding commands that contradict the instructions of scripture. We today should follow the Apostles example and look to God’s instructions in scripture for determining the calendar rather than following a calendar that the Pharisees instituted centuries after the time of Christ.