

The Biblical Calendar—

New Moon: Visible or Conjunction?

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The Meaning of New Moon Now and Then

LET'S FIRST DEFINE THE PHRASE *new moon*. Modern scientists regard the new moon as beginning at the conjunction (when the moon is in its dark phase and is blocked from the sun's light by the earth), while the ancient Israelites regarded it as beginning when it first appeared as a sliver or crescent. We have a clash of definitions here. The term *new moon* meant one thing to the ancient Jews as attested to by their writings, and it means something quite different to modern scientists. To properly understand Scripture, we must put ourselves in the proverbial moccasins of the ancient Jewish people and understand the concept of *new moon* from their perspective. To not do so is to violate Scripture and to take the chances of adding to the Word of Elohim and arriving at false conclusions regarding the truth of Scripture.

The Bible and the New Moon

Let's start with the Bible, the foundation of all spiritual knowledge. We are confronted with two options when determining truth: we can rely on the mind of man in an attempt to figure things out, or divinely revealed truth as recorded in the Word of YHVH. When we base our beliefs and actions on the latter, we are feeding from the tree of life; if on the former we are feeding from the tree of the knowledge of good and evil. To rely on the mind of man (i.e., secular humanism) to determine what is good and evil is tantamount to seeking spiritual truth in Babylon, which is a confused mixture of good and evil. Let's look to the Spirit of Elohim to lead and direct us into all truth as Yeshua promised (John 16:13); let us begin searching the Word of Elohim for that truth.

The first question we need to ask is what is the biblical Hebrew word for *new moon*? It is the Hebrew word **חֹדֶשׁ** / *chodesh* (Strong's H2320/TWOT 613b) meaning "the new moon, month, monthly, the first day of the month, the lunar month." It is found in the Tanakh (Hebrew Scriptures or Old Testament) 276 times and is translated in the King James Version as "month" 254 times, "new moon" (20 times), and "monthly" (1 time). We see that from these definitions that the terms "month" and "new moon" are synonymous. It has been understood for millennia that ancient Israelites began their month with the new moon.

Why was it important for the Israelites to know when the new moon occurred and when the month began? The dates of the annual biblical festivals that YHVH gave to Israel and instructed them to observe were determined based on when the new moon occurred (Lev 23:5,6,24,27,34).

The next question to answer is this: when does the biblical month begin? As we noted above, for modern astronomers the term "new moon" means something different than it did to the ancients, including those who YHVH inspired to write the Bible. Ancient calendars were determined by the moon, while modern ones are not. Some biblical expositors teach that the new moon begins when the moon is in conjunction or in line with the earth and the sun and is in its dark phase. Others believe that the month begins just after the moon has moved out of its dark phase and begins to show a sliver of light, which is called the visible or crescent new moon. Who is right?

Some Bible teachers claim that there is no place in the Scriptures that specifically states that the new moon begins at the first visible sliver after being dark for several days. Therefore, they reason, it is an assumption to say that it does (even though, as we will see below, this was the understanding of the ancient Israelites), and therefore, the new moon should be determined from its conjunction with the earth and sun while it is in its dark phase. While on the surface, this may seem like a valid argument, one important verse in the Scriptures, however, and some simple logic quickly disproves this notion. It is Genesis 1:14.

And Elohim said, "Let there be lights in the firmament of the heaven to divide the day from the night; and let them be for signs, and for seasons [*moedim*/biblical festivals], and for days, and years."

In this verse we see that the sun and the moon are “signs” for seasons, days and years. The word “sign” is the Hebrew word *owt*/ אֹת (*Strong's* H226; *TWOT* 41a) meaning “sign, signal, mark, token, emblem, signboard, standard.” In the Tanakh, *owt* describes such **visible** (not invisible) **signs** as Noah’s rainbow (Gen 9:12–13,17), Cain’s mark (Gen 4:15), circumcision (Gen 17:11), and the Sabbath (Exod 31:13,17; Ezek 20:12). In addition, *owt* is used some 80 times in the Tanakh to refer to *miraculous signs*. These include the plagues of Egypt (Exod 7:3; Deut 4:34, etc.), the sign of the virgin birth of the Messiah (Isa 7:11,14); YHVH *miraculous signs* to Gideon (Judg 6:17) and King Hezekiah (2 Kgs 20:9; Isa 38:7). In addition, Aaron’s rod that budded was a *sign* or *token* (Num 17:25). Many more examples could be given.

What do all these examples of how the Bible uses the Hebrew word *owt* have in common? They were all **a visible sign that one could see**. This is the definition of the word *owt* and how it is used in the Hebrew Scriptures. Simply stated, the visible sliver of the new moon fits the definition of *owt* as used in Genesis 1:14, while the astronomical conjunction (when the moon is in its dark phase and is invisible to the eye because the earth is between the moon and the sun) does not. Psalm 104:19 is definitive biblical proof that the moon’s purpose is to determine the biblical feasts when it says YHVH “appointed the moon for seasons [Heb. *moedim*, which means ‘appointed times’ or ‘biblical holidays’].” **The moon cannot be a visible sign to determine seasons or biblical festivals if it is hidden or dark.**

The fact that ancient Israelites determined the new moon based on the sighting with the naked eye of the moon’s sliver has been substantiated repeatedly by historians and religious scholars over the past 2000 years.

What Leading Scholars Say About the New Moon

In our research in examining secular records from over the past two thousand years, we found that the world’s leading scholars *unanimously* agree that the ancient Israelites determined the beginning of their new month (*rosh chodesh*) based on sighting the first crescent, sliver or sickle of the new moon. We could find no sources that indicated that the ancients relied on the astronomical conjunction for determining *rosh chodesh*. Here is what we found.

Modern Sources

- ☞ [T]he new moon began **when the thin crescent of the new moon was first visible** at sunset. (*Theological Wordbook of the Old Testament*, vol 1, p. 266, emphasis added)
- ☞ The ancient Greeks recognized **the visible new moon** as the beginning of the month when they celebrated the “sickle of the new moon” with offerings and meals. This was also the case with the ancient Babylonians who worshipped the new moon as the goddess Isis, and had her wearing a horns, which resembled the new moon.” (*TDNT*, vol. 4, p. 639, emphasis added.)
- ☞ The new moon festival maintained its importance in the Jewish cultus up to NT times. The time was not set by astronomical calculations but **by observation**. . . . [Jewish law] demanded that. . . as many witnesses as possible should report **the appearance of the sickle** to the appropriate authorities.” (*TDNT*, vol. 4, p. 640, emphasis added.)
- ☞ When the Temple stood, this was a festival proclaimed by the Sanhedrin in Jerusalem after witnesses testified to **observing the new moon**. (*Dictionary of Judaism in the Biblical Period*, p. 454, by Jacob Neusner, Hendrickson, 2002, emphasis added.)
- ☞ [T]he ancient Jewish calendar depended not on mathematical calculations and arrangements, but was set from month to month according to **the physical appearance of the new moon**. Witnesses who had **seen the first sign of the crescent** on the horizon after sunset were expected to report the fact to the authorities, who thereupon published throughout the country the fact that the new month had begun. (*The Pharisees*, by Louis Finkelstein, p. 601, Jewish Publication Society, 1938, Philadelphia, emphasis added.)
- ☞ **Until Hillel II instituted a permanent calendar based on calculations (ca. 360), the fixing of the new moon was determined by observation and the evidence of witnesses**. During the earlier period, the practice of adding a second day to festivals . . . was introduced for communities lying at a distance from Palestine, because it was doubtful on precisely which of the two days the new moon occurred.” (*Encyclopedia of the Jewish Religion*, p. 78; Massada-P.E.C. Press Ltd, 1965, emphasis added.)
- ☞ **The Hillel II calendar was based on fixed calculations, not on the visible new moon sighting** as the Jews

had previously done when determining the beginning of months. (*Dictionary of Judaism in the Biblical Period*, by Jacob Neusner, p. 454, emphasis added.)

- ☞ In old Israel the new moon—the day after **the crescent was first sighted in the sky**—was celebrated by sacrifices and feasting...” (*Judaism*, by George Foot Moore, professor of the history of religion, Harvard, vol 2, p. 22, emphasis added).
- ☞ **[T]he ancient Jewish calendar depended not on mathematical calculations and arrangements, but was set from month to month according the physical appearance of the new moon. Witnesses who had seen the first sign of the crescent on the horizon after sunset were expected to report the fact to the authorities**, who thereupon published throughout the country the fact that a new month had begun. The year consisted of 12 months whose limits were determined **by these observations**. But, since the lunar year consists of only 354 days, eleven less than the solar year, it was necessary from time to time to “intercalate” a thirteenth month before the Passover, to prevent its being moved back into the winter. This intercalary month was a “second Adar” and was added whenever a consideration of the sun’s position in the heavens, the state of the crops, or the new-born lambs, made it appear necessary.” (*The Pharisees*, pp. 601–602, by Louis Finkelstein, professor of theology at Jewish Theological Seminary of America; Jewish Publication Society of America, 1938, emphasis added.)
- ☞ **“The phases of the moon could easily be recognized by everybody. The new moon indicated the beginning of the month.... Though the ‘new moon’ could be observed by every individual, to prevent any mistake or doubt the duty of fixing the new month was assigned to a rabbinical council in Jerusalem.** Their decision was subject to the testimony of two reliable witnesses. As soon as their reports have been received and checked by astronomical calculation, an official message was sent out by chains of fire signals” (*The Judaic Heritage*, by Rabbi Dr. R. Brasch, pp. 22, 24, emphasis added).
- ☞ “Rosh Chodesh [is the] Hebrew term meaning ‘the beginning of a month’ applied to the religious half-holiday observed in connection with **the appearance of the New Moon**; that is, the beginning of each new month of the Hebrew calendar.” (*The New Jewish Encyclopedia*, p. 409, Behrman House Publishers, 1976, emphasis added).
- ☞ [The Jews] at the time of Jesus Christ [did not] as yet possess any fixed calendar, but **on the basis of purely empirical observation**, on each occasion they **began a new month with the appearing of the new moon...** (*History of Jewish People in the Time of Christ*, first division, vol. 2, p. 366, by Emil Schurer; Hendrickson; 2009, emphasis added)
- ☞ “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” (R. H. ii. 5-7; Sanh. 102). (**The Jewish Encyclopedia** (1901–1906 ed., s.vv. "New Moon," <http://www.jewishencyclopedia.com/>; emphasis added)
- ☞ *The Jewish Encyclopedia* (1901–1906 ed., s.vv. "History of the Calendar," <http://www.jewishencyclopedia.com/>, emphasis added):
 - “In the times of the Second Temple it appears from the Mishnah (R. H. i. 7) that the priests had a court to which witnesses came and reported. This function was afterward taken over by the civil court (see B. Zuckermann, “Materialien zur Entwicklung der Altjüdischen Zeitrechnung im Talmud,” Breslau, 1882). The fixing of the lengths of the months and the intercalation of months was the prerogative of the Sanhedrin, at whose head there was a patriarch or אֲבִיָּא. The entire Sanhedrin was not called upon to act in this matter, the decision being left to a special court of three. The Sanhedrin met on the 29th of each month to await the report of the witnesses.
 - On the evening before the announcement of the intercalation the patriarch assembled certain scholars who assisted in the decision. It was then announced to the various Jewish communities by letters. To this epistle was added the reason for the intercalation. A copy of such a letter of Rabban Gamaliel is preserved in the Talmud (Sanh. xi. 2).

The country people and the inhabitants of Babylonia were informed of the beginning of the month by fire-signals, which were readily carried from station to station in the mountain country. These signals could not be carried to the exiles in Egypt, Asia Minor, and Greece, who, being accordingly left in doubt, celebrated two days as the new moon.

Owing to the weather it was frequently impossible to **observe the new moon**. In order to remove any uncertainty with regard to the length of the year on this account, it was ordained that the year should not have less than 4 nor more than 8 full months. After the fixing of the calendar it was settled that the year should not have less than 5 nor more than 7 full months.”

R. Gamaliel II. (80–116 C.E.) **used to receive the reports of the witnesses in person, and showed them representations of the moon to test their accuracy**. On one occasion he fixed the first of Tishri after the testimony of two suspected witnesses. The accuracy of the decision was disputed by Rabbi Joshua, who was thereupon commanded by the patriarch to appear before him prepared for travel on the day which was, according to his (Joshua’s) calculation, the Day of Atonement, an order with which he most reluctantly complied.”

- One of the important figures in the history of the calendar was Samuel (born about 165, died about 250), surnamed “Yarinai” because of his familiarity with the moon. He was an astronomer, and it was said that he knew the courses of the heavens as well as the streets of his city (Ber. 58b). He was director of a school in Nehardea (Babylonia), and while there arranged a calendar of the feasts in order that his fellow-countrymen might be independent of Judea. He also calculated the calendar for sixty years. His calculations greatly influenced the subsequent calendar of Hillel. According to Bartolucci his tables are preserved in the Vatican. A contemporary of his, R. Adda (born 183), also left a work on the calendar.

Mar Samuel reckoned the solar year at 365 days and 6 hours, and Rab Adda at 365 days, 5 hours, 55 minutes, and 25 25/57 seconds.

- Under the patriarchate of Rabbi Judah III (300–330) **the testimony of the witnesses with regard to the appearance of the new moon** was received as a mere formality, the settlement of the day depending entirely on calculation. This innovation seems to have been viewed with disfavor by some members of the Sanhedrin, particularly Rabbi Jose, who wrote to both the Babylonian and the Alexandrian communities, advising them to follow the customs of their fathers and continue to celebrate two days, an advice which was followed, and is still followed, by the majority of Jews living outside of Palestine.”

Nineteenth Century Sources

☞ **The Jews calculated the month according to the phases of the moon... beginning with the appearance of the new moon...**[T]he Sanhedrin sat in the Hall of Polished Stones to receive testimony of credible witnesses that they had **seen the new moon**.” (Edersheim, *The Temple—Its Ministry and Services*, p. 156; 1994, Hendrickson, emphasis added).

☞ **The new moon was reckoned by actual personal observation, not by astronomical calculation...** So important was it deemed to have faithful witnesses, that they were even allowed, in order to reach Jerusalem in time, to travel on the Sabbath, and, if necessary, to make use of horse or mule (*Mish. Rosh ha Shana*, i. 9; iii 2). While strict rules determined who were not to be admitted as witnesses (*Mish. Rosh ha Shana*, i. 8), every encouragement was given to trustworthy persons, and the Sanhedrin provided for them a banquet in a large building specially destined for that purpose and known as the *Beth Yaazek* (*Mish. Rosh ha Shana*, ii. 5). (Edersheim, *The Temple—Its Ministry and Services*, p. 230; 1994, Hendrickson, emphasis added)

Second Century Sources

In the *Mishnah*, the book containing the late second century record of Jewish legal rulings and other religious records, we find recorded that the Jews’ religious leaders established rigorous protocols and rituals for determining when the new moon had been sighted. The following quotes are from the *Mishnah*.

“A father and son who saw the new moon...” (*Rosh Hash* 1:1a)

“Tobiah, the physician, saw the new moon in Jerusalem...” (*Rosh Hash* 1:7e)

“He who saw the new moon...” (*Rosh Hash* 1:9a)

The *Mishnah* then goes on to discuss how to examine those who claimed to have been eye witnesses of the new moon to determine if their testimony was accurate or not (*Rosh Hash* 2:6ff). One of the questions the religious leaders in Jerusalem would ask of the Jewish witnesses was, “How did you see the moon?” (*Rosh. Hash* 2:6c). The Jewish leader, Gamaliel [of Acts 5:34] actually showed pictures of the shapes of the moon to the witnesses to help ascertain the accuracy of the witnesses’ testimony (*Rosh Hash* 2:8).

From the most ancient Jewish records in existence, including the *Mishnah*, there is no hint that the Jews before, during or after the time of Yeshua (until at least the middle of the fourth century) determined the new moon in any other way than by sighting the visible sliver of the new moon! Based on these facts, we can be absolutely certain that Yeshua and his early followers (the authors of the Apostolic Scriptures or New Testament) determined the new moon's advent, the beginning of the biblical month and, hence, the biblical calendar and the biblical feasts based on the visible sighting of the new moon's crescent! We can find no evidence to the contrary that they determined the new moon in any other way.

Another ancient Jewish record that testifies to the fact that the ancient Jews looked to the visible new moon to determine the appointed times (biblical feasts) is the Old Testament pseudepigraphal *Book of Jubilees* (ca. 2nd century B.C.) that mentions “**those who will examine the moon diligently...**” (6:36, emphasis added).

First Century Sources

Philo was a Jewish historian who wrote in the first century and was a contemporary of Josephus.

“[A]t the time of the new moon, the sun begins to illuminate the moon with a light which **is visible to the outward senses**, and then she displays her own beauty to the beholders.” (*The Works of Philo*, Special Laws II, 141, p. 581, Hendrickson, 1997, emphasis added)

Conclusion

The Biblical and scholarly evidence speaks for itself; therefore, we rest our case. The ancients Israelites determined the beginning of the each month based on sighting the first crescent or sliver of the new moon after it had emerged from being dark for a day or two and so should we.

For more information on the biblical calendar, read my online teaching “The Biblical Calendar and the New Moon—Traditions of Men Versus the Word of Elohim” at http://www.hoshanarabbah.org/pdfs/new_moons.pdf.

