The Hebrew Calendar

Part One

THE HEBREW CALENDAR

How can we know that we have possession of the true calendar? Is the "Jewish calendar" Scriptural? How can anyone go about finding the "Feasts of the Lord"—which are proclaimed as holy convocations (Leviticus 23:2)—in the calendar used by today's society?

A General Description

The Hebrew calendar is luni-solar in design. This main feature dates back to Creation—when God appointed the sun and moon to be for signs, seasons, days, and years (Genesis 1:14). While the months are lunar—being founded on the calculations of a lunar cycle—every nineteenth year the calendar returns to the same date in the solar year.

It is within this grand design that we find the following elements of the Hebrew calendar:

Year—The Hebrew calendar has two basic types of years, called "common" and "intercalary." A common year contains twelve months and may have 353, 354, or 355 days. An intercalary (embolismic or leap) year will have an additional thirty-day month and may have 383, 384, or 385 days.

The year as beginning in the month Nisan (or Abib in Exodus 13:4) is called the "Hebrew Year." The year as beginning in Tishri is called the "civil year" or "civil calendar." See page 1 of Appendix.

Month—A true lunar month is the time required for the moon to revolve around the earth. Because this orbit is an ellipse (not a perfect circle), it will vary in the time period from month to month; but the average length of time is 29 days 12 hours 44 minutes 3⅓ seconds. Since months do not have parts of days, the Hebrew calendar incorporates months of 29 or 30 days only. The word "month" means "moon." A new month begins with a new moon (See 1 Samuel 20:24–27).

The months of Nisan through Tishri have a fixed number of days. Thus, Nisan has 30; Iyar, 29; Sivan, 30; Tammuz, 29; Ab, 30; Ellul, 29; and Tishri, 30. This "fixes" the number of days from Nisan 1 to Tishri 1. Some other months may vary according to the length of the year. See page 2 of Appendix.

Day—A true day is observed from sunset to sunset (Leviticus 23:27–32). It is never exactly twenty-four hours in length, except at the times of the spring and autumn equinoxes. But for practical purposes and because the difference is only a very few minutes, the day is divided into twenty-four parts, which is the average day. In John 11:9–10, Christ shows that the daylight portion of a common (average) day is twelve hours.

Although each day begins at sunset, 6:00 P.M. is the arbitrary commencement of a new day for calendar calculations.

Hour—The hour is one twenty-fourth of an average day, which consists of both daylight and dark portions. The hour is subdivided into parts, or chalakim. One hour consists of 1,080 parts or 3,600 seconds. Parts, or chalakim, are often used for astronomical or calendar calculations as an advantage of culminating fractions.

Why the Roman Calendar Is Preferred Today

The Roman calendar, in wide use today, originated from the ancient Egyptian calendar of Thoth—almost 3,000 years B.C. That was a purely solar calendar, disregarding the movement of the moon. Every year had twelve months of thirty days each. Six days were bunched together, at the year's end, to celebrate the pagan gods of Egypt and to make the year "come out even."

This same basic plan was introduced to Roman Emperor Julius Caesar by Sosigenes, an Egyptian astronomer. Caesar's calendar, however, had an extra day added every four years—hence, the all-familiar "leap year." Again, this was a necessary feature to make the calendar "come out even." At the same time, this "Julian" calendar restored the twenty-fifth day of March to the original ancient position of the spring equinox—it had hopelessly "fallen back" into winter, due to the shorter 365-day year of Thoth. Caesar's calendar began in 46 B.C., after a long year of 445 days!

But even the calendar of 365 ¼ days would not work, for in 1582 the calendar had drifted forward ten days from the vernal equinox. This was due to the fact that a true solar year is 365 days five hours forty-eight minutes forty-six seconds, a little short of the one-fourth day as previously thought. Again, to correct this error and make the year "come out even" with the spring equinox, Pope Gregory III adjusted the Julian calendar and dropped ten days (numerically). This did not interfere with or alter the seven-day week or the Sabbath. He also proposed that leap years be omitted on a regular basis, to keep the calendar

from drifting. Even so, this present Gregorian calendar is not "perfect," and revisions have been proposed many times.

Why must man's calendar be so exact to the vernal equinox? From a practical standpoint, of course, it is to prevent the months from drifting into another season! But man is determined to have a single sign—the sun—to dictate his business, anniversaries, and religious matters. The Hebrew Calendar—with its thirteenth month, which occurs seven years out of every nineteen—would "destroy" birthdays, anniversaries, and other "important" events; it would interfere with Christmas, a day which must occur at the winter solstice in order to honor the rebirth of the sun-god, but also "must" be observed by tradition on the twenty-fifth of December!

Quoting from the book *Time*, by Goudsmit and Claiborne (p. 64): "But the three astronomical cycles establishing the year, the month, and the day are independent and incompatible: like imperfectly matched gears, they do not mesh. Men have tried gamely to divide the year in such a way that important days—holidays, vacations, ceremonies—will be in tune with the seasons year after year, century after century. Ingenious calendars have been devised but a fully accurate solution *cannot be found*, because the problem of reconciling the days, months and the year is really *insoluble*" (emphasis ours).

The Hebrew calendar not only maintains the months in their seasons, but also makes use of every sign which God ordained in heaven! (Genesis 1:14)

The Hebrew Calendar Was Preserved by the Jews

The Apostle Paul wrote, "What advantage then hath the Jew? . . . chiefly, because that unto them were committed the oracles of God" (Romans 3:1–2).

The oracles of God consisted of the Old Testament, the knowledge of the Sabbath, and the knowledge of the annual Holy Days (the Hebrew calendar).

The Hebrew calendar does not determine the Holy Days, but rather the Holy Days are an outline for the entirety of the Hebrew calendar! The Hebrew calendar "houses" the Holy Days. This is understood when one realizes that the feast days were appointed by God (Exodus 23:15); that these days must be kept in appointed times (Exodus 13:10, Leviticus 23:4); and that the appointed times begin with new moons (Psalms 104:19; 81:3). Without the Holy Days, the Hebrew calendar becomes nothing more than the ancient Babylonian calendar. The Babylonian calendar was also luni-solar—but, without God's Holy Days, there existed no regular system for inserting the intercalary months. As a result, the Babylonian

calendar did not have a clear sequence in the insertion of intercalary months.[1]* The Babylonians inserted an extra month according to their observations of the lunar crescent (new moon).

Maimonides, the Jewish calendar expert who lived nearly 1,000 years ago, declared that the Jews preserved the calendar ". . . transmitted by the Sages from one generation to another on the authority of Moses, our Teacher . . . on the basis of calculation."[2]

Calculations of the new moon are absolutely essential, for seldom do any two people seem to agree on what they see.

Note the following: ". . . a month according to *tradition*, was to commence when the new moon became visible, and this period was decided partly by *astronomical calculations* and partly by the evidence of actual witnesses. As soon as the witnesses reported to the Sanhedrin that the first streak of the young moon was visible, that day was fixed as the first day of the month, *provided it concurred with the calculations made*"[3] (emphasis ours).

Another important point is the fact that these methods of calculation were not left in the hands of the ordinary people. If they had been, how many people would have been tempted to make adjustments to suit their own desires? The intercalation of leap years was a *secret system* of the Sanhedrin, jealously guarded from both Jews and Gentiles. Not until Constantius' religious persecutions of the fourth century, during which he tried to persuade the Jews to forsake the observance of the Atonement, was the Hebrew calendar finally made accessible to the people in a *published* form by the Patriarch Hillel II (A.D. 359). Unfortunately, this publication added the Jewish traditions which had developed over the years—including the observance of two days for some festivals.[4] As a result, it is not clear to most writers where tradition ends and God's calendar rules begin.[5] It does remain clear, however, that the most important aspect of the Hebrew calendar is the system of intercalation which is used to determine the proper new moon of the year. A "second choice" will not do. God emphatically declares that His days are "holy unto the Lord your God" (Nehemiah 8:9). That the Jews did have a system, or "ordo intercalationus," has been recognized by other students of the Hebrew calendar. "The Jews must have had a system of intercalation by which the lunar calendar was brought into harmony with the natural solar year. This is implied in the law dating the Passover feast unchangeably in the middle of the first month (Leviticus 23:5) but also requiring the offering of a sheaf of the first fruits of grain (Leviticus 23:10, 11)"[6] (emphasis ours).

*See page preceding Appendix, for this and subsequent notes.

How the Hebrew Calendar Works

The Cycle of Nineteen Years

In one cycle of 19 solar years, there are 235 lunations (new moons). If we divide 235 by 19, we shall see that the result is 12 moons (months) with a remainder of 7. These extra 7 months, then, must be equally distributed throughout the 19 solar years to give 7 leap years with 13 months each.

The nineteen-year cycle is often called the cycle of Meton, after an Athenian mathematician who lived about 432 B.C. He probably borrowed the principle from Babylon, after which he introduced it into Greece. His system of distributing the seven leap years, however, caused considerable variations within the cycle. The years which he is said to have intercalated are 3, 6, 9, 12, 15, 18, and 19. This caused two leap years to be observed together, resulting in a lunar advancement of 37–38 days from the equinox in two years' time.

The Hebrew calendar has its leap years better equalized. The years which contain leap years are numbered 3, 6, 8, 11, 14, 17, and 19. The greatest variation which can occur is a twenty-eight day period[7] between the beginning of the ninth year of a cycle and the end of the sixteenth year of a cycle: a period of eight years. This results in an early Passover in the sixteenth year of a cycle and a late Passover in the eighth year of a cycle. Thus, Passover occurred March 26 in 1975 (the sixteenth year), while it occurred on April 24 in 1967 (the eighth year). See page 3 of Appendix.

The Limiting Factors

There is an early and a late Passover in every ten-year cycle. What keeps these Passovers from being too early or too late? Does the Hebrew calendar contain any built-in features to prevent the Passover from being observed on the wrong full moon?

Indeed it does! Remember that the feast days must be kept in their appointed times (Leviticus 23:4). It is interesting to note that the Bible mentions only two seasons—winter and summer (Psalm 74:17, Genesis 8:22). The winter season produces a "spring" harvest, brought about by the former rain—and the summer produces a greater "fall" harvest, as brought forth by the latter rain (Jeremiah 5:24). Notice, this verse refers to appointed weeks of harvest. While it is true that spring and fall are not "seasons" as mentioned by the Scriptures, nevertheless there are definite astronomical events (created by God) which man has named, called the spring and fall equinoxes. In Hebrew, these are referred to by the term *tekufot*, which literally means "circuit" or "course of days." It is the same word used in 1

Samuel 1:20 (see margin of KJV). All four of the recognized seasons begin with tekufot. Is there a day, then, which regulates the beginning of spring harvest—a day which must be kept in its appointed time?

The Wavesheaf Offering—The Key

The first day of spring harvest was celebrated by a special offering—the "sheaf of the firstfruits" (Leviticus 23:10–14). Israelites were forbidden to eat of the winter crop (barley harvest) until this offering was harvested and presented to the Levitical priest who, in turn, ritualistically presented it before God for acceptance.

This day was not a Holy Day or Sabbath, but a normal work day—for the harvest actually began on this day, while the appointed weeks of harvest followed (Jeremiah 5:24). Yet, this day is mentioned among all the other Holy Days of Leviticus 23:1–44. This day, then, is both a natural and a Scriptural reference point which limits how early Passover may occur. While Passover is always on the fourteenth of Nisan, the wavesheaf offering may occur only on Sunday (Leviticus 23:11)—on Nisan 16, 18, 20, or 22; but Nisan 16 may never occur before the *tekufot* of spring.[8] At present, the *tekufot* of spring (or, the spring equinox) is equivalent to the Gregorian calendar's March 20–21. If the day of the wavesheaf offering falls on Nisan 16 and on the first day of spring, Passover will fall no earlier than two days before spring.[9] The very fact that this day was most significant to the structure of the Hebrew calendar which determined the order of intercalation warrants its inclusion in Leviticus 23, even though it is not one of the holy convocations proclaimed by God.

Every common year of 354 days is eleven days short of a solar year. Two such years, when falling consecutively, retrograde the moon in relation to the equinox (or solar year) by 22–23 days. Three common years must never occur together, for this would cause a thirty-four day retrograde movement, exceeding the twenty-eight day requirement. The rule of the wavesheaf offering prevents this from occurring and keeps the feast days in their seasons.

The Pentecost Limit—A Corrective Limitation

Over the centuries, the 235 lunations of a 19 year cycle actually exceed the time of 19 solar years by 2 hours, 4 minutes, 16⅓ seconds. While this difference is very small, it amounts to about one whole day in 220 years or about 11 days in 2,520 years (7 "times"). Eventually, Pentecost would fall on a summer day during a late Passover, in the crucial eighth year of a cycle.

6

But Pentecost must be observed as a spring Holy Day, because it ends the seven weeks of the appointed harvest season (Jeremiah 5:24). Pentecost is a day of rest and commemorates the first fruits of an abundant winter harvest of grain. It must always occur before the day of the summer solstice—which is the beginning of the second Biblically recognized agricultural season (Exodus 23:16, Luke 21:29–30).

The number of days counted from the spring *tekufot*, or equinox, to the summer solstice (beginning of summer) is ninety-two days.[10]

Wavesheaf Sunday to Pentecost Monday is observed after fifty days are completely counted.

The variation of days between a late and an early Passover is twenty-eight days, as we have seen—usually with another day or two, due to the postponement rules of the *molad* (new moon of Tishri), which can give thirty days' variance overall.

This means that within the ninety-two seasonal days, the fifty-day count and the Day of Pentecost (Wavesheaf to Pentecost plus thirty days' variance) leaves only ninety-two minus eighty-one, or eleven days.

It is within this eleven-day span that a calendar adjustment was made by the Patriarch Simon III, A.D. 142. By waiting until Pentecost came as late as possible (near the beginning of summer, A.D. 142), Simon III postponed the leap year (intercalary year) in the seventh year of the cycle to the eighth year.[11] This caused all succeeding Holy Days to occur eleven days earlier, each year, in relation to the spring equinox. Although this prevented Pentecost Monday from falling *on* a summer day A.D. 161, Wavesheaf Sunday could then erroneously fall as early as three days before the beginning day of spring in the early sixteenth year of the revised cycles. Thus, in the year 150, Tishri 1 *would have fallen* on Sabbath, August 30—thereby causing Passover to fall on Wednesday, March 19 (Nisan 14), and Wavesheaf Sunday to fall on March 23 (Nisan 18), a spring day. But Nisan 16 must not occur before a spring day, by the rules of the Hebrew calendar. What could be done during those early years, then, to correct this recurring problem of the Passover's coming too early in a crucial sixteenth year of the cycle? Simply intercalate the sixteenth year and not the seventeenth year! This must have been done many times, until the next century—when the Holy Days once more began to progress away from the equinox.

This explains why some of the Jews were confused about the order of intercalation as found in Graetz's *History of the Jews*.[12] This is just one more reason why the Hebrew calendar could not have been published until as late as A.D. 359 by the Patriarch Hillel II. These critical adjustments could not have been left up to the people, or the pattern of the cycle would have been lost. God so constructed the seasons, the months, and the year, that

His Hebrew calendar could *never* have alternate choices. Only the appointed feast days of God can ever be holy! The Jews made those adjustments just as they were bound to do (Romans 3:1–2).

It should also be noted that Simon III simply postponed the numerical classifications of the leap years. He did not change the *pattern* of intercalation. Before his adjustment, leap years occurred in the years numbered 2, 5, 7, 10, 13, 16, and 18. Now, whether we number these leap years "2, 5, 7 . . ." or "3, 6, 8 . . ." is purely arbitrary. It is the *pattern* of leap years which is significant. Two common years *must* be followed by a leap year, and one leap year cannot follow another leap year. This pattern cannot be made to "fit" the astronomical events of the moon in any way other than our present orientation! In any given nineteen-year cycle, fourteen of the Paschal full moons could not be second-guessed. Three others, which otherwise *might* be second-guessed, would not then fit into the pattern requirements of cycle intercalation. The two remaining Passovers are the eighth and sixteenth years of a cycle. Because of the pattern, the sixteenth could not be changed if the eighth were, and vice versa. Finally, to change either the eighth *or* the sixteenth would, in effect, change the years of the "early" and "late" Passovers to some other years in the cycle. This would cause the need for a calendar adjustment like the one made A.D. 142, which should become necessary only every 2,500 years. Again, the fact that only one such change has been located in the year 142 demonstrates the continuance of the present cycle pattern, as well as its inspiration by God.

Truly, Nisan is "the beginning of months" (Exodus 12:2). Not just because that in this month the Israelites left Egypt, but also because it contains the wavesheaf offering day—the day regulating the proper choice for the first, third, and seventh months, which house God's Holy Days.

The Molad of Tishri

Of Nisan we read, ". . . it shall be the first month of the year to you" (Exodus 12:2). But, which day is the first of any/all months? Is there a new-moon day which is holy unto the Lord?

There is only one. A *molad* is simply the event or moment of "birth" of the new moon—as computed by the conjunction of sun, moon, and earth. The Scriptures mention only *one* new moon as a special Holy Day: the Feast of Trumpets. Compare Psalm 81:3–4 with Leviticus 23:24–25.

Why not use the *molad* of Nisan? The *first day* of Nisan is fixed at exactly 177 days before the first *day* of Tishri. Why won't it do as *the* first day of the year, from which to

8

make all Holy Day calculations? It is because, while each month must have either 29 or 30 even days, *molads* are *not* even! An average month is 29 days, 12 hours, 44 minutes, 3⅓ seconds. So, the six months from Nisan 1 to Tishri 1 would be 177 days *plus* 4 hours 24 minutes 20 seconds, calculated time, from *molad* to *molad*. This time difference could affect the outcome of the Feast of Trumpets. Moreover, because the moon actually follows an elliptical path, the mean conjunction (calculated time) varies considerably (by several hours) from the true time of conjunction during each month. By confining the calculations (mean time) to Tishri, the *other* months then have a rather wide range of variation between true conjunction time and mean time. The timing here is important—because the first day of Tishri is holy to God, while the first day of Nisan is not. This is why Nisan is not used to determine the *very day* of the Hebrew calendar's pivotal beginning. In effect, this causes the year to have "two beginnings" which we call the Hebrew year when the year begins in Nisan (spring), and the civil year when it begins in Tishri (fall). Most nations today have a traditional new year and a fiscal year, probably derived from this very same mode of reckoning. Tishri 1 is used, therefore, to determine the *very day* of the Hebrew calendar around which all other days are constructed.

The *molad* of Tishri is determined by calculation, year after year, by adding the length of one month times the number of months in the year to the exact time of the previous *molad* to Tishri.[13] A common reference point which has been used is the *molad* of 1845. On October 1, at 43⅓ seconds past 9:42 A.M., a seventh new moon occurred as computed by Lindo.[14] This same year also began a new nineteen-year cycle.

Once the *molad* of Tishri has been found, the first day of Tishri—or the Feast of Trumpets—may be located by the following rules.

The Postponement Rules of the Hebrew Calendar

The four postponement rules of the Hebrew calendar are called the *dehiyyot*, or "obstacles." These obstacles must be overcome in order for the day of Tishri 1 to be fixed from the time of the *molad*.

Rule One: Afternoon Postponement.

When the *molad* of Tishri occurs at *noon or later*, the Feast of Trumpets is postponed until the next day.

Since a day begins at 6:00 P.M., for purposes of calendar calculation, we can also say that the Feast of Trumpets may not begin more than eighteen hours before the moment of the

molad. The visibility of the thin, lunar crescent occurs between twenty and seventy-two hours after the *molad,* during the autumn season.

However, the main purpose for the use of noon as a point of calculation is because of its stable point of reference to the observer. Sunrise and sunset times vary considerably during the year—especially in higher latitudes, such as the United States and Canada. Noontime served ancient astronomers as a practical point of arbitration for the first day of the *tekufot* in spring and fall. In like manner, it also became the only logical and stable reference point to arbitrate the *molad.* Due to the *dehiyyot,* the Feast of Trumpets almost always occurs on the very day of the new moon. Occasionally, the feast occurs one day before the lunar crescent appears—but even more rarely, a day after, and *never later* than that.[15]

Rule Two: Forbidden Days.

When the *molad* of Tishri or a postponement of rule one occurs on a Sunday, Wednesday, or Friday, the Feast of Trumpets is postponed one day to a Monday, Thursday, or Sabbath (respectively).

The purpose for this rule is both practical and Scriptural. Its origin lies in the fact that God never gave us a Sabbath that we could not properly observe! With the weekly Sabbath, God gave us the *preparation day.* Compare Mark 15:42 with Exodus 16:5. In Exodus 16, God performed a miracle to illustrate the preparation day for the weekly Sabbath. Why should God act any differently regarding His *annual* Sabbaths? The preparation day mentioned in Mark 15:42 is, in fact, a preparation for an annual high day (see also John 19:31). This high day was the first day of Unleavened Bread and fell on a Thursday in that year (A.D. 31).

If the Feast of Trumpets could occur on a Wednesday, the Day of Atonement would fall on Friday, the preparation day for the Sabbath. During the same year, the Passover would occur immediately following a Sabbath, allowing no time for the physical preparations of the Passover service.

If the Feast of Trumpets could occur on a Friday, the Day of Atonement would be on a Sunday, causing the Sabbath to become a preparation day for a very important fast day.

If the Feast of Trumpets could occur on a Sunday, then also the first day of the Feast of Tabernacles—as well as the Last Great Day—would fall on a Sunday, causing the Sabbath to become a preparation day three times in one year!

In like manner, God would not require a yearly repetition of making the Sabbath a preparation day. This is a factor which everyone seems to ignore when trying to justify a Sunday Pentecost!

The only time a Sunday is ever a Sabbath is when the Feast of Trumpets occurs on a Tuesday, causing the first day of Unleavened Bread (Nisan 15) to fall on a Sunday. This very rare occurrence happens on the average of once in every ten years. Since it does not repeat often and its consequences are not serious, little effort is required of a Christian in preparing ahead of time. The reason for this rare circumstance is mentioned after rule four.

Rule Three: The Tuesday Common Year.

Any time the *molad* of Tishri occurs in a common year, on a Tuesday after 20 seconds past 3:11 A.M., the Feast of Trumpets is postponed to Wednesday—and, by rule two, again postponed to Thursday.

This rule is to prevent the common year from being one day too long. The maximum number of days for a common year is 355. Unless this rule is followed, the year will "close" with 354 days, at 12:00 noon on the Sabbath. Since this would cause a postponement, by rule one, to a Sunday—and again to a Monday, by rule two—the result would be 356 days for the common year. This would cause succeeding years to fall into chaos.

Rule Four: The Monday Common Year Following an Intercalary Year.

When the *molad* of Tishri—in a common year immediately following an intercalary year—occurs on a Monday, on or after 43⅓ seconds past 9:32 A.M., the Feast of Trumpets is postponed to a Tuesday.

This rule is to prevent the previous intercalary year from being one day too short. The minimum number of days in an intercalary year is 383. Unless this rule is followed, the previous year's *molad*—which would have had to be at 12:00 noon or later, on Tuesday—would require a two-day postponement by rules one and two, resulting in a year of 382 days. By a one-day postponement of the Feast of Trumpets following the intercalary year, the previous year ends with 383 days—the minimum acceptable number.

It should be understood that not more than two days' postponement can be permitted, or deviation from the new moon will result and the problem will be compounded every year.

Obviously, few years begin on a Monday following an intercalary year; so this rule is used very infrequently. Tuesdays, by rules three and four, are very rare for the Feast of

Trumpets. This is why Nisan 15 rarely falls on a Sunday, as mentioned earlier. Tuesdays could not have been altogether forbidden by rule two—for if they had been, Monday afternoons would then require three days' postponement, which cannot be permitted.

In conclusion, all of these rules work together to avoid, whenever possible, making Sunday a Holy Day—to prevent the Sabbath from being a preparation day. Truly, this would have been an inconvenience which the Eternal God would never place on His people who desire to keep His Holy Days in spirit and in truth.

Three Types of Knowledge

It should be pointed out that the present structure of the Hebrew calendar is based on three types of knowledge.

First, there is physical knowledge. This involves the areas of astronomy and mathematics. The heavenly cycles are fixed in place, and each one operates as God has ordained.

Second, there is Scriptural knowledge. This is information pertaining to the Holy Days and their interrelationship, as well as the heavenly signs which govern their proper times of observance.

Third, there is revealed knowledge. Knowledge of the seventh day Sabbath must be known, or the rules of postponement (*dehiyyot*) will not function. Also, the actual years of intercalation must be known—otherwise, at least five years out of nineteen in the cycle can be altered by incorrect intercalation, causing the Holy Days to be missed by one month in those years.

These areas of knowledge must be considered together, as a whole, in order to arrive at the proper understanding of the Hebrew calendar. The story thus told unfolds the meaning of each Holy day in God's plan of eternal redemption for all mankind.

How to Find God's Holy Days

First, one needs a reference point for the Feast of Trumpets. This feast—called "Rosh Hashanah" or "Jewish New Year"—can be found on a Hebrew calendar (included in many encyclopedias) and on some Roman calendars. Note carefully the first day indicated (the Jews celebrate, by tradition, two days). Once the correct day is located, be extra certain by

checking the day of the week. Trumpets must fall on Monday, Tuesday, Thursday, or Sabbath. Many calendars show phases of the moon. The new moon will be on the day of the initial phase or the day after. This day is Tishri 1—Trumpets.

All the other feast days are counted from Trumpets. The Day of Atonement is Tishri 10, nine days after the Feast of Trumpets. The Feast of Tabernacles begins on Tishri 15, the same day of the week as the Feast of Trumpets. This day begins the seven-day Feast of Tabernacles and is an annual Sabbath. The "Last Great Day" is Tishri 22, falling on the same day of the week as Trumpets. It is also an annual Sabbath.

From Tishri 1, the spring Holy Days can be calculated as follows: The first day of Unleavened Bread is always 163 days earlier than the Feast of Trumpets. By counting backwards carefully, one can easily locate this day.* The first day of Unleavened Bread is two days earlier in the week than is Trumpets; and it always falls on Sabbath, Sunday, Tuesday, or Thursday. The Jews call this the first day of "Passover," since they observe the Passover one day late by tradition. This day is Nisan 15, and the last day of Unleavened Bread is Nisan 21. Both of these days—the first and last of the seven days of Unleavened Bread—are annual Sabbaths. Nisan 15 is a full moon.

Passover is Nisan 14 and is observed in the evening. In other words, Passover is shortly after sundown on (following) Nisan 13.

Pentecost is calculated as follows: First, one must locate the weekly Sabbath within the days of Unleavened Bread—because that day precedes Sunday, the day of the wavesheaf offering. Remember that this work day begins the spring harvest of grain and can never be the annual Sabbath of Nisan 15. Having located the correct Sunday, one can correctly count Pentecost. Pentecost is the feast of "count-fifty." If one begins to number with Wavesheaf Sunday as day one, the fifty-day count will be completed on Sunday. In other words, Sunday at sundown ends the count of fifty days. Pentecost begins at the end of that count, on Monday. While Pentecost is not a fixed calendar date (which is the very reason we count it out), it is a fixed day of the week, Pentecost is always on a Monday, to allow a preparation day for its observance.

Who Are the Stewards of God's Calendar Today?

We have seen that the Hebrew calendar was originally given to the Jews, the church in the wilderness (Romans 3:2). The Jews were bound to keep the basic structure for the Hebrew calendar. They remain in staunch opposition to calendar reform. However, the traditions of the Jews have made the Holy Days of God appear to be only so much more tradition. Jesus frequently denounced this Jewish practice (Matthew 15:6, Mark 7:13).

*See pages 10–12 of Appendix.

While the calendar was given to Israel, the Jews in turn gave it to God's Church (Acts 7:38). And today, the only people, besides the Jews, who are deeply concerned with the true Hebrew calendar are God's Church. Many others, who were once a part of that church, now have only contempt for the days which God made holy, or have concocted their own calendars.

The Holy Days picture past, present, and future events in the basic plan which God has for all mankind. They therefore constitute a part of the testimony of Jesus Christ. A prophecy for the last days indicated that the law and the testimony would be bound up—sealed—in the hands of God's people (Isaiah 8:16). The true church has this testimony of Jesus Christ (Revelation 12:17). Symbolically, the church is pictured as being clothed in the sun, with the moon under her feet (Revelation 12:1). Could this be representative of the fact that all the steps or actions of God's Church are predictable by the signs of the sun and moon—by God's Holy Days?

Whether in the church in the wilderness, or in God's Church today, the Hebrew calendar has played an important part in the attitudes of God's people. In all times of history, when the people forgot about God and His Holy Days, they suffered. When national repentance took place, God's people began once again to observe the Holy Days! (Nehemiah 8:9, 17). Today, we find ourselves in a very unusual situation. Only a handful, as it were, seem to care enough to perpetuate the knowledge of God's true calendar. What a tremendous responsibility lies on the shoulders of the faithful, as inheritors of this legacy, to carry it over into the Kingdom of God!

NOTES

1. Siegfried Horn and Lyun Wood, *The Chronology of Ezra 7* (Washington, D.C.: Review and Herald Publishing Association, 1970), page 46.

2. Moses ben Maimon, "Code of Maimonides" (vol. 11, *Sanctification of the New Moon*), Yale Judaica Series, Book III, Treatise 8, edited by Solomon Gandz, Julian Oberman, and Otto Neugebauer (New Haven: Yale University Press, 1956), chapter 18, paragraph 7.

3. Heinrich H. Graetz, *History of the Jews* (Philadelphia: Jewish Publication Society of America, 1946), volume 2, page 362.

4. Ibid., pages 572–573.

5. Ibid., page 574.

6. Horn and Wood, page 54.

7. This 28-day period is counted from *molad* to *molad* and does not take into account the postponement rules of the calendar, as we shall see later. The *molad* is the "birth" of the new moon or the conjunction, and is a most critical factor in the calculation as determined in the seventh month of the Hebrew calendar.

8. Cyrus Adler, "History of Calendar," *The Jewish Encyclopedia* (New York: Funk and Wagnalls, 1907), volume 3, page 500.

9. Ibid.

10. Keith G. Irwin, *The 365 Days* (New York: Crowell Publishing Company, 1963), pages 9–10.

11. Adler, "History of Calendar."

12. Graetz, volume 2, page 433.

13. "Calendar," *Encyclopedia Britannica* (11th edition), volume 4, page 1000.

14. Ibid.

15. Adler, "History of Calendar."

Points of Observation Contained in This Paper

1. The pattern of intercalary years in the nineteen year cycle remains consistent throughout the centuries. Only variations of the same pattern are ever used or can be.

2. In each nineteen year cycle, there is both an early and a late Passover. These constitute the limitations of the calendar and the boundaries of the seasonal limits.

3. The structure of the calendar depends on three types of knowledge: physical, Scriptural, and revealed.

4. The basic design of the calendar has been preserved by the Jews.

5. The methods of calendar calculation and intercalation remained in the power of the Jewish Patriarchate until A.D. 359.

6. Wavesheaf Sunday is the late seasonal limit for the first day of spring.

7. Pentecost Monday is the late seasonal limit for the last day of spring.

8. The postponement rules are intended to prevent "preparation day" from occurring on a Sabbath.

9. The rules of the calendar allow no "second choice" guesses as to the appointed Feasts of God.

10. God's Church is a modern-day steward of the Hebrew calendar.

APPENDIX

THE SIX TYPES OF HEBREW YEARS

Month*	COMMON			LEAP		
	Regular	Deficient	Perfect	Regular	Deficient	Perfect
Tishri	30	30	30	30	30	30
Marcheshwan (Heshwan)	29	29	30	29	29	30
Kislew	29	30	30	29	30	30
Teveth	29	29	29	29	29	29
Shevat	30	30	30	30	30	30
Adar	29	29	29	30	30	30
W-Adar	-	-	-	29	29	29
Nisan (Aviv)	30	30	30	30	30	30
Ziw (Iyyar)	29	29	29	29	29	29
Siwan	30	30	30	30	30	30
Tammuz	29	29	29	29	29	29
Av	30	30	30	30	30	30
Elul	29	29	29	29	29	29
	353	354	355	383	384	385

*Modern Hebrew transliteration

HEBREW CALENDAR

Name of Month*	#Hebrew	#Civil	Begins with new moon of
Aviv, or Nisan	1st	7th	March—April
Ziw	2nd	8th	April—May
Siwan	3rd	9th	May—June
Tammuz	4th	10th	June—July
Av	5th	11th	July—August
Elul	6th	12th	August—September
Tishri, or Ethanim	7th	1st	September—October
Marcheshwan	8th	2nd	October—November
Kislew	9th	3rd	November—December
Teveth	10th	4th	December—January
Shevat	11th	5th	January—February
Adar	12th	6th	February—March

*Modern Hebrew transliteration. Please compare with that below:

The spelling given in W.M. Feldman's book, *Rabbinical Mathematics and Astronomy*, is as follows:

Nisan	Tishri
Iyar	Marcheshvan
Sivan	Kislev
Tammuz	Tebeth
Ab	Sh'bat
Elul	Adar
V'Adar	

CYCLES

YEAR	CYCLE YEAR	DAYS
2010	(14)	385
2011	15	354
2012	16	353
2013	(17)	385
2014	18	354
2015	(19)	385
2016	1	353
2017	2	354
2018	(3)	385
2019	4	355
2020	5	353
2021	(6)	384
2022	7	355
2023	(8)	383
2024	9	355

*Parentheses indicate an intercalary year

FIRST OF TISHRI

YEAR	DATE	DAY	TOTAL DAYS
2010	Sept. 9	Thursday	385
2011	Sept. 29	Thursday	354
2012	Sept. 17	Monday	353
2013	Sept. 5	Thursday	385
2014	Sept. 25	Thursday	354
2015	Sept. 14	Monday	385
2016	Oct. 3	Monday	353
2017	Sept. 21	Thursday	354
2018	Sept. 10	Monday	385
2019	Sept. 30	Monday	355
2020	Sept. 19	Sabbath	353
2021	Sept. 7	Tuesday	384
2022	Sept. 26	Monday	355
2023	Sept. 16	Sabbath	383
2024	Oct. 3	Thursday	355

NEW MOONS

2010–2011

1) 03/16/10 (Tuesday)
2) 04/15/10 (Thursday)
3) 05/14/10 (Friday)
4) 06/13/10 (Sunday)
5) 07/12/10 (Monday)
6) 08/11/10 (Wednesday)
7) 09/09/10 (Thursday)
8) 10/09/10 (Sabbath)
9) 11/08/10 (Monday)
10) 12/08/10 (Wednesday)
11) 01/06/11 (Thursday)
12) 02/05/11 (Sabbath)
13) 03/07/11 (Monday)

2011–2012

1) 04/05/11 (Tuesday)
2) 05/05/11 (Thursday)
3) 06/03/11 (Friday)
4) 07/03/11 (Sunday)
5) 08/01/11 (Monday)
6) 08/31/11 (Wednesday)
7) 09/29/11 (Thursday)
8) 10/29/11 (Sabbath)
9) 11/27/11 (Sunday)
10) 12/27/11 (Tuesday)
11) 01/25/12 (Wednesday)
12) 02/24/12 (Friday)

2012–2013

1) 03/24/12 (Sabbath)
2) 04/23/12 (Monday)
3) 05/22/12 (Tuesday)
4) 06/21/12 (Thursday)
5) 07/20/12 (Friday)
6) 08/19/12 (Sunday)
7) 09/17/12 (Monday)
8) 10/17/12 (Wednesday)
9) 11/15/12 (Thursday)
10) 12/14/12 (Friday)
11) 01/12/13 (Sabbath)
12) 02/11/13 (Monday)

2013–2014

1) 03/12/13 (Tuesday)
2) 04/11/13 (Thursday)
3) 05/10/13 (Friday)
4) 06/09/13 (Sunday)
5) 07/08/13 (Monday)
6) 08/07/13 (Wednesday)
7) 09/05/13 (Thursday)
8) 10/05/13 (Sabbath)
9) 11/04/13 (Monday)
10) 12/04/13 (Wednesday)
11) 01/02/14 (Thursday)
12) 02/01/14 (Sabbath)
13) 03/03/14 (Monday)

2014–2015

1) 04/01/14 (Tuesday)

2) 05/01/14 (Thursday)

3) 05/30/14 (Friday)

4) 06/29/14 (Sunday)

5) 07/28/14 (Monday)

6) 08/27/14 (Wednesday)

7) 09/25/14 (Thursday)

8) 10/25/14 (Sabbath)

9) 11/23/14 (Sunday)

10) 12/23/14 (Tuesday)

11) 01/21/15 (Wednesday)

12) 02/20/15 (Friday)

2015–2016

1) 03/21/15 (Sabbath)

2) 04/20/15 (Monday)

3) 05/19/15 (Tuesday)

4) 06/18/15 (Thursday)

5) 07/17/15 (Friday)

6) 08/16/15 (Sunday)

7) 09/14/15 (Monday)

8) 10/14/15 (Wednesday)

9) 11/13/15 (Friday)

10) 12/13/15 (Sunday)

11) 01/11/16 (Monday)

12) 02/10/16 (Wednesday)

13) 03/11/16 (Friday)

2016–2017

1) 04/09/16 (Sabbath)

2) 05/09/16 (Monday)

3) 06/07/16 (Tuesday)

4) 07/07/16 (Thursday)

5) 08/05/16 (Friday)

6) 09/04/16 (Sunday)

7) 10/03/16 (Monday)

8) 11/02/16 (Wednesday)

9) 12/01/16 (Thursday)

10) 12/30/16 (Friday)

11) 01/28/17 (Monday)

12) 02/27/17 (Monday)

2017–2018

1) 03/28/17 (Tuesday)

2) 04/27/17 (Thursday

3) 05/26/17 (Friday)

4) 06/25/17 (Sunday)

5) 07/24/17 (Monday)

6) 08/23/17 (Wednesday)

7) 09/21/17 (Thursday)

8) 10/21/17 (Sabbath)

9) 11/19/17 (Sunday)

10) 12/19/17 (Tuesday)

11) 01/17/18 (Wednesday)

12) 02/16/18 (Friday)

2018–2019

1) 03/17/18 (Sabbath)
2) 04/16/18 (Monday)
3) 05/15/18 (Tuesday)
4) 06/14/18 (Thursday)

5) 07/13/18 (Friday)
6) 08/12/18 (Sunday)
7) 09/10/18 (Monday)
8) 10/10/18 (Wednesday)

9) 11/09/18 (Friday)
10) 12/09/18 (Sunday)
11) 01/07/19 (Monday)
12) 02/06/19 (Wednesday)
13) 03/08/19 (Friday)

2019–2020

1) 04/06/19 (Sabbath)
2) 05/06/19 (Monday)
3) 06/04/19 (Tuesday)
4) 07/04/19 (Thursday)

5) 08/02/19 (Friday)
6) 09/01/19 (Sunday)
7) 09/30/19 (Monday)
8) 10/30/19 (Wednesday)

9) 11/29/19 (Friday)
10) 12/29/19 (Sunday)
11) 01/27/20 (Monday)
12) 02/26/20 (Wednesday)

2020–2021

1) 03/26/20 (Thursday)
2) 04/25/20 (Sabbath)
3) 05/24/20 (Sunday)
4) 06/23/20 (Tuesday)

5) 07/22/20 (Wednesday)
6) 08/21/20 (Friday)
7) 09/19/20 (Sabbath)
8) 10/19/20 (Monday)

9) 11/17/20 (Tuesday)
10) 12/16/20 (Wednesday)
11) 01/14/21 (Thursday)
12) 02/13/21 (Sabbath)

2021–2022

1) 03/14/21 (Sunday)
2) 04/13/21 (Tuesday)
3) 05/12/21 (Wednesday)
4) 06/11/21 (Friday)

5) 07/10/21 (Sabbath)
6) 08/09/21 (Monday)
7) 09/07/21 (Tuesday)
8) 10/07/21 (Thursday)

9) 11/05/21 (Friday)
10) 12/05/21 (Sunday)
11) 01/03/22 (Monday)
12) 02/02/22 (Wednesday)
13) 03/04/22 (Friday)

2022–2023

1) 04/02/22 (Sabbath)

2) 05/02/22 (Monday)

3) 05/31/22 (Tuesday)

4) 06/30/22 (Thursday)

5) 07/29/22 (Friday)

6) 08/28/22 (Sunday)

7) 09/26/22 (Monday)

8) 10/26/22 (Wednesday)

9) 11/25/22 (Friday)

10) 12/25/22 (Sunday)

11) 01/23/23 (Monday)

12) 02/22/23 (Wednesday)

2023–2024

1) 03/23/23 (Thursday)

2) 04/22/23 (Sabbath)

3) 05/21/23 (Sunday)

4) 06/20/23 (Tuesday)

5) 07/19/23 (Wednesday)

6) 08/18/23 (Friday)

7) 09/16/23 (Sabbath)

8) 10/16/23 (Monday)

9) 11/14/23 (Tuesday)

10) 12/13/23 (Wednesday)

11) 01/11/24 (Thursday)

12) 02/10/24 (Sabbath)

13) 03/11/24 (Monday)

2024–2025

1) 04/09/24 (Tuesday)

2) 05/09/24 (Thursday)

3) 06/07/24 (Friday)

4) 07/07/24 (Sunday)

5) 08/05/24 (Monday)

6) 09/04/24 (Wednesday)

7) 10/03/24 (Thursday)

8) 11/02/24 (Sabbath)

9) 12/02/24 (Monday)

10) 01/01/25 (Wednesday)

11) 01/30/25 (Thursday)

12) 03/01/25 (Sabbath)

HOW TO USE GRAPH

The total number of days from (including) Abib 1 to the end of Ellul (sixth month) is 177.

Therefore, if:

During 1978, the Feast of Trumpets (first of Tishri) falls on October 2, there would be one day of Ellul in that month—do not count October 2, because it is the first day of Tishri (seventh month). Then, looking at the graph on the opposite page, use the elapsed indicator for the end of September to the beginning of May. There are 153 days elapsed. Add this to the one day in the month of October—a total of 154 elapsed days. Subtract that number of days (154) from 177. The remainder is 23 days—the number of days you will need to deduct from April.

Now, using the graph on page 12, count the days in reverse—for either a 30 or 31-day month. Since April has 30 days, we will use the 30-day line. Counting back the 23 days, we come to the eighth of April. Counting forward fourteen days (including the new moon) from the first day of Nisan (Abib), we come to April 21—Passover for 1978, observed on the evening of April 20. This is 164 days before Tishri 1. The first day of Unleavened Bread is April 22, 163 days before Tishri 1.

The example above can be used for any other year. If the first of Tishri falls in the month of September, just use appropriate graphs to count the concluding and beginning days of the 177-day count.

TIME-ELAPSED INDICATOR

GREGORIAN MONTHS

1. January   31 Days

2. February   28 (29) Days

3. March   31 Days

4. April   30 Days

5. May   31 Days

6. June   30 Days

7. July   31 Days

8. August   31 Days

9. September   30 Days

10. October   31 Days

1. There are 177 days from Nisan1 to the end of the sixth month (Ellul).

2. See "A"

COUNTING DAYS IN REVERSE

DATES	31-DAY MONTH	30-DAY MONTH	DATES	31-DAY MONTH	30-DAY MONTH
1.	31	30	16.	16	15
2.	30	29	17.	15	14
3.	29	28	18.	14	13
4.	28	27	19.	13	12
5.	27	26	20.	12	11
6.	26	25	21.	11	10
7.	25	24	22.	10	9
8.	24	23	23.	9	8
9.	23	22	24.	8	7
10.	22	21	25.	7	6
11.	21	20	26.	6	5
12.	20	19	27.	5	4
13.	19	18	28.	4	3
14.	18	17	29.	3	2
15.	17	16	30.	2	1
			31.	1	

THE ANNUAL HOLY DAYS OF GOD

Example given is A.D. 31—See Leviticus 23

EVENT	DATE	DAY	MEANING EXPLAINED
Passover	14	Wed.	The Passover, Nisan 14, is a memorial of the sacrifice of Jesus Christ—the true Passover Lamb—for our sins. The feast, Nisan 15, commemorates the night in which God brought Israel out of Egypt and pictures our coming out of sin (Exodus 12).
The Night To Be Much Observed	15	Thurs.	
	16	Fri.	
	17	Sat.	In A.D. 31, the resurrection occurred three days later on the Sabbath just prior to sundown before the day of the Wavesheaf offering (Leviticus 23:11).
Seven-Day Feast of Unleavened Bread	18	Sun.	The seven days of Unleavened Bread show that our deliverance, from the natural tendency to commit sin, is to be complete and that we are to put sin completely out of our lives—as leaven is put out of our homes on these days (1 Corinthians 5:6-8).
	19	Mon.	
	20	Tues.	
Last Day of Unleavened Bread	21	Wed.	Pentecost, observed after a completed fifty-day count starting from the day on which the Wavesheaf was offered, is always on a Monday. It symbolizes the coming of the Holy Spirit—and thus, is a memorial of the beginning of the New Testament church on that Monday, June 18, A.D. 31.

EARLY SPRING HARVEST (of souls)

EVENT	DATE	DAY	MEANING EXPLAINED
Pentecost (Feast of Weeks or Feast of Firstfruits)	9	Mon.	The Wavesheaf offering was made on the first day of the week, Sunday. It pictured Christ's (the first of the firstfruits from the dead) being accepted by the Father before the early harvest—the Christians of these last 2,000 years—could be reaped (John 20:17, Matthew 28:9).

MEANING EXPLAINED

EVENT	DATE	DAY	MEANING EXPLAINED
Great Fall Harvest (of souls)			
Feast of Trumpets	1	Sat.	The Feast of Trumpets point forward to the sounding of the seventh trumpet, when the dead in Christ will rise to meet Him at His second coming (1 Corinthians 15:52, Revelation 11:15).
Day of Atonement	10	Tues.	The Day of Atonement pictures the day, in the future, when man will become "at one" or in complete accord with God (Leviticus 16, Acts 27:9).
SEVENTH MONTH TISHRI (September-October)			
	15	Sat.	The Feast of Tabernacles pictures the Millennium with resurrected Christians ruling the earth under Christ. At this time, all opposition to the Kingdom of God will be put down and peace will reign on the earth for 1,000 years (Zechariah 14:16–19, Revelation 20:4).
	16	Sun.	
	17	Mon.	
Seven-Day Feast of Tabernacles	18	Tues.	The Last Great Day pictures the joyous occasion, in the future, when the rest of the dead—those never having had their eyes opened to the Truth in their former life—will be resurrected to mortality after the Millennium. They will go through a time of trial and test—which is pictured in the Great White Throne Judgement of Revelation 20. Those overcoming trial and human nature will attain salvation (Revelation 20:11, 12, Isaiah 65:19, 20, John 7:37).
	19	Wed.	
	20	Thurs.	
	21	Fri.	
The Last Great Day	22	Sat.	