

The Context for Ezra's Use of a Fall-To-Fall Calendar

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Introduction

In the present paper I trace the use of a fall-to-fall calendar through a number of Old Testament documents and other sources. The reason why it is important to discuss this topic is that the royal decree of Artaxerxes in Ezra 7:12-26 provides an objective starting point for two important time prophecies--the seventy weeks of Dan 9 and the 2300 days of Dan 8.¹ Unfortunately the timeframe for the above decree can be interpreted in more than one way depending on how we understand Ezra's calendar. As nearly as possible such matters must be approached by the modern exegete in the same framework as that available to the original writer. Thus, in the present paper I seek to understand the dates contained in Ezra 7:7-9 by first understanding the calendar that produced them.¹

Different Types of Calendars

The Gregorian calendar, used throughout much of the world today, is not at all the same as Ezra's. One special point of difference is when the year begins. In our modern calendar it begins at a time close to the winter solstice. This, however, is just one alternative among many. There is also a summer solstice and apart from the two solstices there are two equinoxes. Any of these four transitions from one season to another could be used as a natural starting point for the year. Calendars used by Jews began the year in close association with an equinox rather than a solstice. This much is clear. But there is a question which equinox. The question is a good one, because at different times in fact both types of calendar were used.

Spring-to-spring religious calendar

Jewish writers most frequently referred to months by number instead of by name and the beginning point for the series of month numbers was established by Moses as corresponding to the time of the Exodus, or Passover. Passover of course comes in early spring.

(1) The Lord said to Moses and Aaron in Egypt, (2) "This month is to be for you the first month, the first month of your year. (3) Tell the whole community of Israel that on the tenth day of this month each man is to take a lamb for his family, . . . (Exod 12:1-3)

By establishing the convention of numbering months from the Exodus, the Jewish religious calendar was differentiated from that of the Egyptians.² The Egyptian worldview as well as its homeland had to be left behind.

¹ This paper has been extensively revised and I am confident that mistakes remain. If you find them before I do, please let me have your feedback. FWH

Fall-to-fall civil calendar

The unusual climate of Canaan provides one reason why the civil Jewish calendar began in the fall. Rain and moderate growing weather in that region occur during winter rather than summer.³ Grains thrive there but the summer months are too hot and dry for them. They are matured during the cooler months and harvested in the spring, with wheat coming in slightly later than barley. Fruits such as olives and grapes, however, can survive the summer heat and are harvested much later in the fall. Thus, barley was gathered before summer and grapes, olives, and other fruits after summer. There were two main harvests. Jews in the time of Moses and Joshua would be inclined to think of the year as beginning when the agricultural cycle repeated itself and the cycle could not repeat itself until it had first come to an end, i.e., until after the last of the harvests was over in the fall. The facts of agriculture in Canaan would therefore predetermine some features of the temporal worldview of anyone living there.

Even in the series of annual feasts there was a tension between spring-to-spring reckoning and fall-to-fall reckoning, because the year which started with Passover in the spring ended with the Day of Atonement in the fall, close to the last of the harvests. The religious festivals did not occupy a whole year but half a year and there is a question whether Jews living during the period under discussion would most readily think of the cycle as beginning again in the spring with another Passover or in the fall after the Day of Atonement. Actually it would be possible for one's concept of an autumn New Year to be reinforced rather than weakened by the religious festivals, even though the first of them comes in the spring, because both the religious year and the agricultural year end together in the fall.

Winter-to-winter Julian calendar

For the modern reader to understand ancient Jewish, Babylonian, and Persian dates they must be stated in terms of a more familiar calendar. In doing this a number of facts should be borne in mind. First, the Julian calendar, which scholars use for such purposes,⁴ is not identical with our Gregorian calendar. The Julian calendar has a leap year every four years without exception, while the Gregorian calendar avoids overcorrecting in this way by omitting the leap year at distant intervals--more specifically in years that are evenly divisible by 100 but not evenly divisible by 400.⁵

Second, the Julian calendar is solar and the ones with which it is being related are lunar, or more correctly lunisolar. In a solar calendar months can be of arbitrary length. The important thing is that they total 365 or 366 days.⁶ In a lunar calendar, on the other hand, each new month begins at first lunar visibility. In a purely lunar calendar there is no fixed relationship between the months and the seasons. The Islamic world uses such a calendar.⁷ Jews, on the other hand, adapted their lunar calendar to the seasons periodically by adding, or intercalating, a thirteenth month every two or three years.

Third, because Jews related months to seasons it is reasonable to speak not only of a first month of the year, but also a first season of the year. The lunisolar Babylonian year, adopted later by the Persians, began in the spring--in close but not exact association with the vernal equinox. For Jews, with only a few notable exceptions, the year began in the fall--in close but not exact association with the autumnal equinox. Thus, in the Babylonian calendar spring was the first season, while in the Jewish fall-to-fall calendar autumn was the first seasons. For the Romans, and for us, winter is the first season.

Thus, for a number of reasons the calendars discussed below and the one we must use as a point of reference are dissimilar. For the period up to 626 B.C. a simple table of month equivalents can be used, which shows in general what time of year the ancient writer had in mind. See table 1.

Table 1
Approximate Julian Month Equivalents
in Fall-To-Fall Sequence

Num	Name before Exile	Name after Exile	Julian Equivalent
7	Ethanim	[Tishri]	September/October
8	Bul	[Marcheshwan]	October/November
9		Kislev	November/December
10		Tebeth	December/January
11		Shebat	January/February
12		Adar	February/March
1	Abib	Nisan	March/April
2	Ziv	[Iyyar]	April/May
3		[Sivan]	May/June
4		Tammuz	June/July
5		[Ab]	July/August
6		Elul	August/September

Note: Only four pre-exilic Hebrew month names are attested in the Old Testament. For discussion see *The Seventh-day Adventist Bible Commentary*, 7 vols. (Washington, D.C.: Review and Herald, 1953-57), 2: 109-22.

Notice a number of points in regard to table 1. First, the months of the Jewish year were always numbered from a starting point in the spring (see Exod 12:1-2).⁸ For this reason the first half of the civil calendar, which began in the fall, consisted of months 7-12 and the second half consisted of months 1-6. Although the numbering began in the spring to commemorate the Exodus, for secular purposes the year still began in the fall. The questions of how long it persisted and who used it at what times in history are discussed below.

Second, Julian equivalents of Semitic month names are generally given in pairs, e.g., the Julian equivalent of Tishri is September/October. The reason for this has to do with the mixed lunisolar nature of the Semitic calendar. A lunisolar calendar is a lunar calendar with periodic seasonal adjustments, while the Julian calendar, like the later Gregorian calendar that we use, was strictly solar. In the one case a month begins only when the crescent could first be seen;⁹ in the other case months begin at set intervals without reference to lunar visibility. Thus, the two systems do not directly correspond and each pair of Julian month names should be interpreted as a range within which the ancient Semitic month would normally begin. To take one example, if Tishri began during October in a given year it would normally end in November, but the Julian equivalent of Tishri is still given as September/October because that is the range within which Tishri would normally begin. The information in table 1 is a general guide to be used in the absence of more detailed information.

Third, the Jewish and Babylonian calendrical systems at any given time were not necessarily the same.¹⁰ Below I argue that one important difference between the Jewish and

Babylonian calendars was that, as mentioned earlier, the Jewish secular year began in the autumn, while the Babylonian year began in the spring.¹¹ There were other differences also,¹² but this is the most important one for our purposes.

It has been pointed out that the Jewish calendar was not strictly lunar, but lunisolar. A thirteenth month had to be added every two or three years to keep the months in line with the seasons. In Babylon similar adjustments were made to the calendar. The reason why Babylonians added a thirteenth month was to keep the time for New Year fairly constant in relation to the equinox. The reason why Jews did so was to make Passover come at the same time as barley harvest. The Babylonian system was the more sophisticated of the two. Originally in Babylon the extra month was added as the need arose and sometimes on short notice.¹³ But by 367 B.C. Babylonian astronomers had established a regular pattern in which seven additional months were dispersed over a nineteen year period. Thus, after 367 (or possibly 383) a second Adaru was added in years 3, 6, 8, 11, 14, and 19 of each nineteen year cycle and a second Elul was added in year 17. The result was highly accurate: "235 lunar months almost exactly (within an hour or two) equal 19 solar years."¹⁴

Some equivalent of the above cycle was surely used by Jews from earliest times.¹⁵ Apart from keeping the date for Passover reasonably constant in relation to barley harvest, which was of local interest only, a well defined cycle would have the advantage of making the time for Passover predictable. This second consideration would be especially important after the exile when Jews were dispersed over a wide geographical area. Those living in Babylon and elsewhere would have long distances to travel and scheduling such trips would make it necessary to know whether a given year would have a second Adar or not. Thus, both the need to establish the date for Passover in advance and the means of satisfying that need came at approximately the same period in history. When Jews went to Babylon they were simultaneously made distant from their homeland and made aware of advanced Babylonian concepts and methods of calendation. Exactly when and in what ways they availed themselves of such information is a separate matter, but it can be expected that soon after the Babylonian nineteen year cycle became fixed Jews were aware of the methods used and adapted them to their own purposes.

In the discussion below I give all Julian equivalents for Jewish dates following 626 B.C. according to the tables of Parker and Dubberstein, adjusting only for a difference in the time of New Year as needed. This approach is useful in the absence of more adequate information, but one should realize the nature of the assumptions being made.¹⁶ Reasoning from the Babylonian calendar to the Jewish calendar always involves uncertainties.

Fall-to-Fall Reckoning in the Time of Moses

The tension referred to earlier between a fall-to-fall and spring-to-spring calendar among Jews, even from a religious point of view, is evident in two passages from Exodus. The first of these is Exod 23:15-16.

(15) "Celebrate the Feast of Unleavened Bread; for seven days eat bread made without yeast, as I commanded you. Do this at the appointed time in the month of Abib [later Nisan], for in that month you came out of Egypt. No one is to appear before me empty-handed. (16) Celebrate the

Feast of Harvest with the firstfruits of the crops you sow in your field. Celebrate the Feast of Ingathering at the end of the year [*b^ʿšēṭ haššānâ*], when you gather in your crops from the field." (Exod 23:15-16)

The order of feasts here is: "Feast of Unleavened Bread" (associated with Passover, vs. 15), "Feast of Harvest" (or Pentecost, vs. 16a), and finally the "Feast of Ingathering" (associated with the Day of Atonement, vs. 16b). Thus, spring festivals are mentioned before fall festivals but notice that the "end of the year" in vs. 16 refers to the Feast of Harvest, which took place in the fall. Hebrew *b^ʿšēṭ haššānâ* means literally "at the going out, or coming forth, of the year." The sense has been accurately conveyed by the NIV translators because if the year ends in the fall one must also say it begins in the fall. The second passage to consider is Exod 34:22.

"Celebrate the Feast of Weeks with the firstfruits of the wheat harvest, and the Feast of Ingathering at the turn of the year [*t^ʿqûpat haššānâ*]." (Exod 34:22)

Here again Pentecost ("the Feast of Weeks") is mentioned before the Feast of Ingathering, but the fall Feast of Ingathering or Tabernacles occurs "at the turn of the year" (*t^ʿqûpat haššānâ*). The word *t^ʿqûpâ* comes from *qôp*, which means "head."¹⁷ A natural interpretation of the term in this context would be "starting point." Thus, using *šēṭ* or *t^ʿqûpâ*, autumn is said to be the starting point for the year.

Fall-to-Fall Reckoning in the time of Solomon

Building the temple

A clear example of fall-to-fall reckoning is found in the biblical account of how long it took for Solomon to build the temple. The time involved is given in two different forms which can be compared. On the one hand we know the beginning and ending points for the work, and on the other hand we know the amount of time that elapsed between them. It might seem that knowing the one set of facts automatically implies knowing the other, but this conclusion follows only if there is a body of commonly held ground rules for doing the calculation. Here it is the nature of the ground rules that is in question and so having the relevant information in both forms is crucial to the argument. Two passages are involved.

In the four hundred and eightieth year after the Israelites had come out of Egypt, in the fourth year of Solomon's reign over Israel, in the month of Ziv, the second month, he began to build the temple of the Lord. (1 Kgs 6:1)

(37) The foundation of the temple of the Lord was laid in the fourth year, in the month of Ziv. (38) In the eleventh year in the month of Bul, the eighth month, the temple was finished in all its details according to its specifications. He had spent seven years building it. (1 Kgs 6:37-38)

The temple was begun in the second month of the fourth year of Solomon's reign (1 Kgs 6:1) and was finished in the eighth month of the eleventh year of his reign (1 Kgs 6:38).¹⁸ The time in between the second month of the fourth year and the eighth month of the eleventh year

is said to be seven years. If Solomon's court historians were using a spring-to-spring calendar, the period would not be seven years as stated but eight years. Compare figs. 1 and 2.

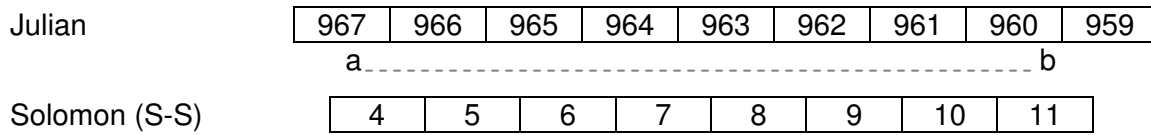


Fig. 1. Construction time (ab) for the temple of Solomon as a period of seven years and seven months, or eight years inclusive, using a spring-to-spring calendar.

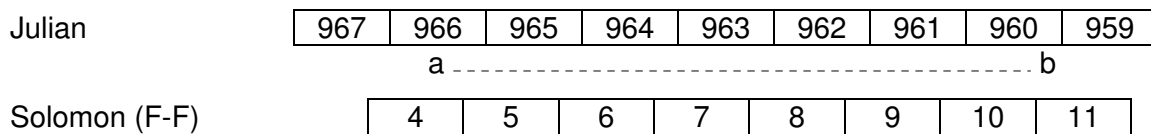


Fig. 2. Construction time (ab) for the temple of Solomon as a period of six years and seven months, or seven years inclusive, using a fall-to-fall calendar.

Using either calendar the fourth year of Solomon must include the fall and winter months of 967/66. The question is whether the spring and summer of the fourth year came in 967 (fig. 1) or 966 (fig. 2). If Solomon used a spring-to-spring calendar, then construction began in April/May 967 and we would count eleven months before New Year 966/65,¹⁹ plus six whole years, plus eight months after New Year 960/59,²⁰ for a total of seven years and seven months. If Solomon used a fall-to-fall calendar, then construction began in April/May 966 and we would count five months before New Year 966/65, plus six whole years, plus two months after New Year 960/59, for a total of six years and seven months.

Discussion

Above I have effectively calculated the period of construction by totaling the number of months and dividing the result by twelve. Any fraction of a year is then taken to be a whole year. This is one way to interpret the principle of inclusive reckoning.²¹ But every second or third year a thirteenth month would have to be added to keep Passover close to barley harvest, so the total number of months in the year would not remain constant over a seven year period.²² Inclusive reckoning was certainly ingrained in the thought of those who wrote and first read the account under discussion.²³ But there is a question whether people reckoned elapsed time inclusively by totaling the number of months or seasons and dividing by an appropriate number. We return to the question of how Jews calculated periods of elapsed time below. Here the point is merely that when the temple was finally complete, Solomon "had spent seven years building it" (1 Kgs 6:38). This fact is consistent only with a fall-to-fall reckoning of the dates involved.

Gezer calendar

The following supporting evidence is extra-biblical. In 1908 R. A. S. Macalister discovered an inscribed tablet at Gezer, about 20 miles west and north from Jerusalem. What it contained was a calendar. The text of this document is quoted below.

His two months are (olive) harvest, (tricolon, 2:2:2)
 His two months are planting (grain),
 His two months are late planting;
 His month is hoeing up of flax, (tricolon, 3:3:3)
 His month is harvest of barley,
 His month is harvest and feasting;
 His two months are vine-tending, (bicolon, 2:2)
 His month is summer fruit.²⁴

The Gezer calendar has been dated variously,²⁵ but Albright places it "in or about the third quarter of the tenth century--about 925 B.C. in round numbers."²⁶ Thus, according to Albright's informed estimate of the tablet's age, it dates to about the time of Jeroboam's revolt which in 931/30 B.C. made permanent the already latent rift between Israel in the north and Judah in the south.²⁷ If Albright is correct, this small calendar represents perhaps the oldest original document in the Hebrew language yet discovered.²⁸

The most interesting thing about the Gezer calendar for our purposes, however, is not the time when the document was written down but the time of year when the calendar on it begins. The first event listed is the autumn olive harvest. "The berries borne by the olive ripened in the early autumn, and were harvested towards the end of November."²⁹ This illustrates the practice, which Israel followed along with their Canaanite neighbors, of beginning the yearly cycle in association with or soon after the autumnal equinox.³⁰ In Mesopotamia, by contrast, there had been a shift to a year that began in the spring--at or near the vernal equinox.³¹

Spring-to-Spring Reckoning in Israel

For all the above reasons it is not the fall-to-fall system used in Judah that requires explanation below, but the spring-to-spring system used in Israel. As Edwin R. Thiele reconstructs the history of the divided monarchy, after Jeroboam's rebellion in 931/30 B.C. a spring-to-spring calendar was introduced in the northern kingdom of Israel, while the older fall-to-fall civil calendar was retained in the southern kingdom of Judah.³² Thiele's position is certainly correct. The challenge is not generally to the idea that Israel, as opposed to Judah, used a spring-to-spring calendar, but to the idea that Judah used a fall-to-fall calendar.³³ I maintain, however, that the system representing a change was the system introduced by Jeroboam, and that it is the system whose use requires explanation. The first question then is why Jeroboam should make any innovations in regard to his new nation's official calendar.

Independently of the question concerning calendars we know that Jeroboam was an innovator in a number of areas and we know some of the reasons that motivated him.

(26) Jeroboam thought to himself, "The kingdom will now likely revert to the house of David. (27) If these people go up to offer sacrifices at the temple of the Lord in Jerusalem, they will again give their allegiance to their lord, Rehoboam king of Judah. They will kill me and return to King Rehoboam." (28) After seeking advice, the king made two golden calves. He said to the people, "It is too much for you to go up to Jerusalem. Here are your gods, O Israel, who brought you up out of Egypt." (29) One he set up in Bethel, and the other in Dan. (1 Kgs 12:26-29)

There were therefore ample reasons why Jeroboam should want to make significant changes in the worship habits of his subjects. And Jeroboam introduced not only new places for worship but new times as well.

(32) He instituted a festival on the fifteenth day of the eighth month, like the festival held in Judah, and offered sacrifices on the altar. This he did in Bethel, sacrificing to the calves he had made. And at Bethel he also installed priests at the high places he had made. (33) On the fifteenth day of the eighth month, a month of his own choosing, he offered sacrifices on the altar he had built at Bethel. So he instituted the festival for the Israelites and went up to the altar to make offerings. (1 Kgs 12:32-33)

The fifteenth day of the eighth month is one month to the day after the Feast of Tabernacles (Lev 23:33). As an innovator Jeroboam was not particularly imaginative. The time for his new festival was transparently based on the older Judahite model. But this does not mean that the change was inept. It was the new king's purpose to offer his subjects a substitute for the worship carried on in Jerusalem that would be different from it without being entirely dissimilar.

As regards Jeroboam's calendrical reforms in particular, consider the following additional information. Jeroboam was once "one of Solomon's officials, an Ephraimite from Zeredah, . . ." (1 Kgs 11:26). Toward the end of Solomon's reign Hadad the Edomite (vs. 14) and Rezon from Zobah (vs. 23) rebelled against Solomon, and so did Jeroboam (vs. 26). At this Solomon tried to kill his former official, but he fled to Egypt. As stated earlier, the Egyptian calendar had no leap years. It was always exactly 365 days long and for this reason the Egyptian year began one day earlier every four years. Over a period of 1460 (365 x 4) years every day of the Julian year would have corresponded at some time to the Egyptian New Year. Thoth 1 did not remain constant relative to other calendars until the time of Augustus, when a leap year was artificially added and Thoth 1 was made to correspond permanently to August 29.³⁴ During the time of Jeroboam, however, the first day of the first month in the Egyptian calendar came in mid-April, not far from the vernal equinox.

Jeroboam apparently used the Egyptian calendar as a starting point when establishing a civil calendar for his kingdom. It was not taken over as a whole, but broadly interpreted from a native Israelite point of view, i.e., in terms of a lunar rather than solar year. Both Jeroboam and his subjects were accustomed to thinking of time in terms of equinoxes. The wandering New Year of the Egyptians was entirely foreign to their thinking. But at the time of Jeroboam's self-imposed exile in Egypt the New Year celebrated there was close enough to the vernal equinox that it is easy to see how this fact could have influenced his thinking. The reason for adopting the vernal equinox instead of the autumnal equinox as a general point of reference for the new calendar of Israel was the same as that which had been at work in his decision to make the religious festival at Bethel and Dan one month later than the last of its counterparts in

Judah--i.e., to dissociate the two systems in the minds of his subjects while keeping them at the same time broadly comparable.

Fall-to-Fall Reckoning in Judah

Evidence for the continued use of a fall-to-fall calendar in the southern kingdom of Judah is provided by two passages in the books of Kings. The first is the account of Josiah's reforms in 2 Kgs 22-23. The second deals with the regnal years of Zedekiah and Nebuchadnezzar in 2 Kgs 24:18 and 25:8 when Jerusalem is finally destroyed by the Babylonians.

Josiah's reforms

Temple repairs ordered in eighteenth year. Two facts about the period of Josiah's reforms are of special importance. First, we know that the reforms of 2 Kgs 22-23 were brought about by an event that happened while the temple was being repaired and that those repairs were commissioned during Josiah's eighteenth regnal year.

(3) "In the eighteenth year of his reign, King Josiah sent the secretary, Shaphan son of Azaliah, the son of Meshullam, to the temple of the Lord." He said: (4) 'Go up to Hilkiah the high priest and have him get ready the money that has been brought into the temple of the Lord, which the door-keepers have collected from the the people.'" (5) Have them entrust it to the men appointed to supervise the work on the temple. . . . (2 Kgs 22:3)

After the needed repairs had gotten under way Hilkiah the high priest found a long-neglected copy of "the Book of the Law" (22:8) inside the temple. He told Josiah about the scroll that had been found and had it read before him (22:10). Its contents moved Josiah deeply and he ordered that any articles in the temple which were associated with the worship of other gods besides Yahweh must be taken out and destroyed (23:4-6), and furthermore that any shrines dedicated to other gods in and around the city of Jerusalem must be torn down (23:7-15).

Among the items destroyed were a shrine for male cult prostitutes inside the temple compound (23:7), a number of unidentified shrines located at the city gates in various parts of Jerusalem (vs. 8), and an altar in the Valley of Ben Hinnom where people occasionally burned their children as a sacrifice to Molech (vs. 10). Josiah removed from a court of the temple of Yahweh a stable of horses that previous kings had dedicated to the sun (vs. 11). He pulled down pagan altars located on the roof of the temple and in another of its courts (vs. 12). He desecrated a number of high places on the hill opposite the city which had been dedicated to Ashtoreth of Sidon, Chemosh of Moab, and Molech of Ammon (vs. 13).

"Even the altar at Bethel, the high place made by Jeroboam son of Nebat, who had caused Israel to sin--even that altar and high place he demolished. He burned the high place and ground it to powder, and burned the Asherah pole also." (2 Kgs 23:15).

Reforms completed in eighteenth year. Josiah's culminating act of reform was not a negative measure directed against other gods but a positive measure designed to restore the worship of

Yahweh in an unforgettable manner. He planned and executed a more elaborate and impressive Passover than any that had been seen since the days of the Judges (vs. 22). This Passover was celebrated during Josiah's eighteenth regnal year, i.e., during the same year as his command to repair the temple.

"But in the eighteenth year of King Josiah, this Passover was celebrated to the Lord in Jerusalem." (2 Kgs 23:23)

The year of this Passover is the second significant fact referred to above. Because Passover always occurred on Nisan 14 (Lev 23:5),³⁵ and because the Babylonian spring New Year occurred on Nisan 1, there were only two weeks between New Year and Passover under the assumption that Josiah used a spring-to-spring calendar with a Nisan 1 New Year. In this case he would have had fourteen days or less in which to order repairs to the temple, discover and read the book of the law, demolish architectural monuments to idolatry spanning some 300 years, and plan the most elaborate Passover to be seen in more than 700 years.

In all fairness the list of reform measures in 2 Kgs 23 should be compared with the corresponding list in 2 Chron 34. When this is done it is clear that 2 Kgs 23 contains some events from Josiah's twelfth year in addition to some from his eighteenth year. But even after we remove all the events corresponding to 2 Chron 34:3-7, which the chronicler assigns to Josiah's twelfth year, those corresponding to 2 Chron 34:8-33 still remain. Two weeks are all the time allowed by a spring-to-spring calendar for whatever reforms we eventually assign to Josiah's eighteenth year. This amount of time is not enough for either the long list of 2 Kgs 23 or the short list of 2 Chron 34. If all Josiah did was order repairs to the temple, find and read the scroll, and plan his historic Passover--which was elaborate enough that Ezekiel dates his first oracle from the era that starts at this point--he still could not have done it all in two weeks.³⁶ The spring-to-spring calendar hypothesis must be rejected not only on the basis of 2 Kgs 22-23 but also on the basis of 2 Chron 34. Josiah used a fall-to-fall calendar.

The fall of Jerusalem

According to 2 Kgs 24:18 Zedekiah, the last king of Judah, reigned eleven years. Thus, the fall of Jerusalem occurred in his eleventh regnal year. Zedekiah came to the throne on or about Adar 2, 597, one month before the Babylonian spring New Year. Thus, using a spring-to-spring calendar, his accession year was one month long and his first regnal year began Nisan 1, 597. If this is the case, then his last regnal year began Nisan 1, 587 and we would expect the fall of Jerusalem to have occurred during the summer of 587.

According to 2 Kgs 25:8 the city was finally entered by the Babylonian army on "the seventh day of the fifth month, in the nineteenth year of Nebuchadnezzar king of Babylon, . . ." We have very good evidence that Nebuchadnezzar came to the throne of Babylon on Elul 1, 605, just before the Jewish fall New Year.³⁷ In the spring-to-spring system of his own country, his reign began Nisan 1, 604. Thus, his nineteenth year began Nisan 1, 586. Using a spring-to-spring calendar for both Zedekiah and Nebuchadnezzar the eleventh year of Zedekiah would be 587/86 and the nineteenth year of Nebuchadnezzar would be 586/85. The two years do not correspond. It is impossible to apply a spring-to-spring calendar to Zedekiah's date in 2 Kgs 24:18.

If the king's court historian was using a fall-to-fall calendar, as appears evident, then Zedekiah's first regnal year began Tishri 1, 597 and his eleventh year began Tishri 1, 587. In

this case Jerusalem was finally overrun by the Babylonians during the summer of 586. It is immaterial whether a spring-to-spring or fall-to-fall calendar was used for Nebuchadnezzar's reign in this passage. The result is the same either way. His nineteenth year is 586/85 spring-to-spring or 587/86 fall-to-fall. In either case the summer months of Nebuchadnezzar's nineteenth year were those of 586.

From the above line of reasoning two things are clear. First, the city of Jerusalem fell to the Babylonians in 586 and not 587.³⁸ And second, when 2 Kgs 24:18 and 25:8 are compared it is necessary to conclude that the Jewish historian who compiled the account was using a fall-to-fall calendar.

Eighth Century Prophets

Overview

Five writing prophets lived during the eighth century. These are summarized in table 2 according to which kings reigned during the time of their ministry.

Table 2
Eighth Century Prophets

Prophet	Kingdom	Kings Contemporary with Prophet			
Jonah	Assyria	N/A			
Amos	Judah	Uzziah			
	Israel	Jeroboam II			
Isaiah	Judah	Uzziah	Ahaz	Jotham	Hezekiah
Hosea	Judah	Uzziah	Ahaz	Jotham	Hezekiah
	Israel	Jeroboam II			
Micah	Judah		Jotham	Ahaz	Hezekiah

Note: The "Kingdom" column in this table refers to the location of any contemporary kings mentioned and not necessarily to the prophet's place of activity. According to 2 Kgs 14:25 Jonah was a contemporary of Jeroboam II.

Isaiah

Of the prophets who lived during the eighth century and who are also known to have written some part of the Old Testament, only Isaiah gives a specific date and he has only one.³⁹

In the fourteenth year of King Hezekiah's reign, Sennacherib king of Assyria attacked all the fortified cities of Judah and captured them. (Isa 36:1)

The fourteenth year of Hezekiah's sole rule was 702/01 and since warfare was generally conducted during the dry summer months the Assyrian attack on Jerusalem can be narrowed to 701. If Isaiah was using a spring-to-spring calendar the text shows that the attack came no earlier than March/April. If, on the other hand, Isaiah was using a fall-to-fall calendar, the text shows that the attack came no later than September/October.⁴⁰ Unfortunately the corresponding Assyrian account is not detailed enough to allow any useful conclusions to be drawn as to the

nature of Isaiah's calendar. A prophet living in Judah before the exile could be expected to use a fall-to-fall calendar, but Isaiah provides no internal evidence to confirm or deny this possibility.

Seventh Century Prophets

Overview

Four prophets lived during the seventh century who wrote documents now included in the Old Testament. See table 3.

Table 3
Seventh Century Prophets

Prophet	Kingdom	Kings Contemporary with Prophet			
Nahum	Assyria	N/A			
Habakkuk	Judah	N/A			
Zephaniah	Judah	Josiah			
Jeremiah	Judah	Josiah	Jehoiakim	Jehoiachin	Zedekiah
	Babylon	Nebuchadnezzar			

Note: The "Kingdom" column in this table refers to the location of any contemporary kings mentioned and not necessarily to the prophet's place of activity.

Based on internal evidence, the events Nahum describes can be dated to approximately 662-612 and those in Habakkuk to approximately 625-612,⁴¹ but neither prophet mentions a king by name. Only Zephaniah and Jeremiah do so and of these only Jeremiah dates his oracles. Thus, Jeremiah is the only seventh century prophet who gives us any substantive information about what kind of calendar was current at the time he wrote.

Jeremiah

Twenty-four specific dates are given in Jeremiah, and these represent a valuable historical resource for the period during which he lived and ministered. Thirteen of Jeremiah's datelines, or just over half of the total, give only a year number, usually the regnal year of whatever Judean king was in power at the time. In six cases both a year and a month are given, while in the remaining five there is a year, month, and day. Jeremiah's datelines are summarized in table 4 (below, p. 14).

With the abundance of evidence available there should be no question about the nature of the calendar Jeremiah used. But in fact it is the abundance of materials that makes disagreement on this matter possible, even among scholars who argue for a pre-exilic fall-to-fall calendar in other Old Testament books.⁴² Thus, for Thiele Jeremiah's year began in the spring,⁴³ while for Horn it began in the fall.⁴⁴ Indeed the evidence appears to be mixed. Below I discuss eight passages that bear on the nature of Jeremiah's calendar.

Jeremiah 25:1. Here Jeremiah dates an oracle concerning Babylon to the fourth year of Jehoiakim. This passage--together with vs. 3 and such other passages as Jer 46:2 and Dan

1:1--is of great importance in determining how Jews at the beginning of the exile measured time.

The word came to Jeremiah concerning all the people of Judah in the fourth year of Jehoiakim son of Josiah king of Judah, which was the first year [*haššānâ hārīšōnît*] of Nebuchadnezzar king of Babylon. (Jer 25:1)

The most obvious and at the same time most important single fact about Jer 25:1 is that the fourth year of Jehoiakim is equated with the first year of Nebuchadnezzar.⁴⁵ The Hebrew expression *haššānâ hārīšōnît* "the first year" does not mean "the accession year." It is not equivalent to Akkadian *rēš šarrūti* "beginning of reign" despite the fact that *rīšōn* and *rēš* share a common etymology. Word origins must be considered, but cannot be made the final arbiter of word meanings. The present comparison is not between the fourth year of Jehoiakim and the accession year of Nebuchadnezzar but between the fourth year of Jehoiakim and the first year of Nebuchadnezzar. The passage has been correctly translated.

Table 4
Dates in Jeremiah

Reference	King	Yr	Mo	Dy	Julian F-F	Julian S-S
Jer 1:2	Josiah	13	-	-	628/27	627/26
Jer 1:3	Zedekiah	11	5	-	Aug/Sep 586	Aug/Sep 587
Jer 25:1	Jehoiakim	4	-	-	605/04	605/04
Jer 25:1	Nebuchadnezzar	1	-	-	605/04	604/03
Jer 25:3	Josiah	13	-	-	628/27	627/26
Jer 28:1	Zedekiah	4	5	-	Jul/Aug 593	Jul/Aug 594
Jer 28:17	[Zedekiah]	[5]	7	-	Sep/Oct 593	Sep/Oct 593
Jer 32:1	Zedekiah	10	-	-	588/87	588/87
Jer 32:1	Nebuchadnezzar	18	-	-	588/87	587/86
Jer 36:1	Jehoiakim	4	-	-	605/04	605/04
Jer 36:9	Jehoiakim	5	9	-	Dec 605/Jan 604	Dec 605/Jan 604
Jer 39:1	Zedekiah	9	10	-	Jan/Feb 588 ²	Jan/Feb 588
Jer 39:2	Zedekiah	11	4	9	Jul 18, 586	Jul 29, 587
Jer 41:1	[Zedekiah]	[12]	7	-	Sep/Oct 587	Sep/Oct 587
Jer 45:1	Jehoiakim	4	-	-	605/04	605/04
Jer 46:2	Jehoiakim	4	-	-	605/04	605/04
Jer 51:59	Zedekiah	4	-	-	594/93	594/93
Jer 52:4	Zedekiah	9	10	10	Jan 15, 588	Jan 15, 588
Jer 52:5	Zedekiah	11	-	-	587/86	587/86
Jer 52:6	[Zedekiah]	[11]	4	9	Jul 18, 586	Jul 29, 587
Jer 52:12	Nebuchadnezzar	19	5	10	Aug 17, 586	Aug 17, 586
Jer 52:28	Nebuchadnezzar	7	-	-	599/98	598/97
Jer 52:29	Nebuchadnezzar	18	-	-	588/87	587/86
Jer 52:30	Nebuchadnezzar	23	-	-	583/82	582/81
Jer 52:31	Jehoiachin's exile	37	12	25	Mar 21, 561	Mar 21, 561

² See also 2 Kgs 25:1-2 (Jan 7, 588).

Jehoiakim replaced Jehoahaz as king of Judah just after Tishri 1, 609.⁴⁶ So his fourth year would be 605/04 either spring-to-spring or fall-to-fall, and the winter months of each year would be the same using either calendar. Nebuchadnezzar, by contrast, became king just before Tishri 1, 605. So his first year would be 605/04 fall-to-fall or 604/03 spring-to-spring. The summer months would be the same using either calendar. What this means is that if both kings' reigns are reckoned spring-to-spring, the fourth year of Jehoiakim (605/04) would not correspond to the first year of Nebuchadnezzar (604/03) at any point. If Jehoiakim's dates are reckoned fall-to-fall and Nebuchadnezzar's spring-to-spring, then the fourth year of the one king would correspond to the first year of the other during the summer months of 604 only. If Jeremiah reckons both kings' reigns fall-to-fall, then the two regnal years are identical throughout (605/04). Both would begin in the fall of 605 and end in the fall of 604. Thus, if the same calendar is used for both kings in Jer 25:1, it must be the Jewish civil fall-to-fall calendar. If different calendars are used, then at least Jehoiakim's reign must be reckoned fall-to-fall. In no case can a spring-to-spring calendar be used for Jehoiakim in Jer 25:1.

Jer 25:3. In vs. 1 the question was which calendar Jeremiah used; in vs. 3 it is when the oracle was given. The answer to this second question will help us at a later point in the discussion to establish what kind of calendar Ezekiel used. Jer 25:3 is a passage that must be given careful consideration. It says,

For twenty-three years—from the thirteenth year of Josiah son of Amon king of Judah until this very day—the word of the Lord has come to me and I have spoken to you again and again, but you have not listened. (*Jer 25:3*)

Before 1956 Seventh-day Adventist commentators generally held that Josiah's thirty-one year reign ended in the summer of 608.⁴⁷ That is, they held that the battle of Megiddo in which he was killed occurred in 608. In 1956, however, Wiseman published some historical tablets from Babylon which show unequivocally that the battle of Megiddo was fought in the summer of 609.⁴⁸ This important fact has been incorporated into the chronologies of such noted scholars as Thiele and Horn.⁴⁹

If the battle of Megiddo occurred in the summer of 609, then a number of adjustments are necessary leading up to that event. In particular, Josiah ruled thirty-one years (2 Kgs 22:1); if his thirty-first year is moved back in time, so are the thirty that preceded it. The first year of Josiah must now be given as 640/39 rather than 639/38 and the thirteenth year of Josiah must be given as 628/27 rather than 627/26. The battle of Megiddo is a fixed point historically and so is the first year of Nebuchadnezzar.⁵⁰ There is no reason to doubt the accuracy of the Hebrew text. But if the thirteenth year of Josiah is 628/27 fall-to-fall and the first year of Nebuchadnezzar is 605/04 fall-to-fall, assuming a fall-to-fall calendar, then Jeremiah's ministry would appear to be twenty-four years long at this point rather than twenty-three. I submit that when we understand how Jeremiah thought we will have no difficulty in understanding what he said. But this matter will be left for now and taken up again in connection with Ezek 1:1, 2; 24:1; and 33:21, below.

Jer 28:1, 17. Verse 1 speaks of an event in the fifth month of the fourth year of Zedekiah and vs. 17 speaks of an event in the seventh month. Thus, these two verses appear to provide evidence contradicting what was said in the previous section. Jeremiah seems to be using a spring-to-spring calendar here in which month 5 precedes month 7. But this conclusion is incorrect.

To interpret vs. 17 correctly one must understand the situation being described in it. During the fourth year of Zedekiah Jeremiah's message was challenged by a false prophet named Hananiah, who predicted that the exile would come to an end within two years.

(15) Then the prophet Jeremiah said to Hananiah the prophet, "Listen, Hananiah! The Lord has not sent you, yet you have persuaded this nation to trust in lies. (16) Therefore, this is what the Lord says: 'I am about to remove you from the face of the earth. This very year you are going to die, because you have preached rebellion against the Lord.'" (17) In the seventh month of that same year, Hananiah the prophet died.

When Jeremiah says, "that same year," he is not referring to regnal years but to a succession of seasons. It is nowhere stated that month 7 occurs in the same regnal year of Zedekiah as month 5. Jer 28:17 provides no evidence for or against either a spring-to-spring or fall-to-fall year. It cannot be used to contradict what was said earlier about the use of a fall-to-fall calendar in Jer 25:1.

Jer 32:1. Next Jeremiah equates the tenth year of Zedekiah with the eighteenth year of Nebuchadnezzar. Such an equation works only when Zedekiah's reign is measured using a fall-to-fall calendar. The reason for this has to do with the time of Nabopolassar's death. Nebuchadnezzar's father Nabopolassar died in the summer of 605 on Ab 8 (August 15), more than six months before the Babylonian spring New Year. His son's accession year therefore included a Jewish fall New Year. By contrast Zedekiah came to the throne on Adar 2 (March 16), 597, less than one month before the Babylonian spring New Year. Thus, Nebuchadnezzar's eighteenth year is later spring-to-spring (587/86) than fall-to-fall (588/87), whereas Zedekiah's tenth year is later fall-to-fall (588/87) than spring-to-spring (also 588/87). There is no correspondence between the tenth year of Zedekiah and the eighteenth year of Nebuchadnezzar if both are measured spring-to-spring (587/86 as opposed to 588/87). In a fall-to-fall system, however, the two are identical (both 588/87). Therefore here, as in Jer 25:1, we have strong evidence that Jeremiah was using a fall-to-fall calendar.

Jer 36:1, 9. The contrast in Jer 36:1 and 9 is between the fourth and fifth years of Jehoiakim. I now quote vs. 1 in its context.

(1) In the fourth year of Jehoiakim son of Josiah king of Judah, this word came to Jeremiah from the Lord: (2) "Take a scroll and write on it all the words I have spoken to you concerning Israel, Judah and all the other nations from the time I began speaking to you in the reign of Josiah till now. (3) Perhaps when the people of Judah hear about every disaster I plan to inflict on them, each of them will turn from his wicked way; then I will forgive their wickedness and their sin." (Jer 36:1-3)

The scroll referred to in vs. 2 was duly prepared, but was not read before the people because Jeremiah was under surveillance and he could not move about freely. Jeremiah's scribe Baruch was told to wait until an appropriate occasion when large numbers of people would be assembled at the temple and to read the scroll publicly to them at that time.

(9) In the ninth month of the fifth year of Jehoiakim son of Josiah king of Judah, a time of fasting before the Lord was proclaimed for all the people in Jerusalem and those who had come from the towns of Judah. (10) From the room of Gemariah son of Shaphan the secretary, which was in the upper courtyard at the entrance of the New Gate of the temple, Baruch read to all the people at the Lord's temple the words of Jeremiah from the scroll. (Jer 36:9-10)

The most natural interpretation of this sequence of events is that what Jeremiah said was written down in the late summer of Jehoiakim's fourth year (605/04) and was read publicly a short time after the fall New Year in Jehoiakim's fifth year (December 604/January 603). Thus, no more than three months would have to have intervened between the time when the scroll was written and the time when it was read to the people. It is true that the interval could have been a year and three months or whatever. But the most natural interpretation is that the events of Jer 36 occupy a relatively short time, and in this case they lend support to, without giving conclusive evidence for, the fall-to-fall calendar hypothesis.

Jer 46:2. I have argued above that Jeremiah uses a fall-to-fall calendar, but that some of the evidence is mixed. Here we have an example. Jer 46:2 demands a spring-to-spring calendar.

The first verse of chap. 46 introduces a collection of Jeremiah's oracles against the nations: "This is the word of the Lord that came to Jeremiah the prophet concerning the nations:" The corresponding statement following that set of oracles is the last verse of chap. 51: "The words of Jeremiah end here." From this I draw that chaps. 46-51 are a compilation of things that he wrote on various occasions.

After the general introduction to chaps. 46-51, there is a section heading: "Concerning Egypt: . . ." Other oracles are directed against the Philistines (47:1-7), Moab (48:1-47), Ammon (49:1-6), Edom (49:7-22), Damascus (49:23-27), Kedar and Hazor (49:28-33), Elam (49:34-39), and Babylon (50:1-59). Thus, only after reading past two levels of introductory material do we come to the first oracle.⁵¹

Whatever one says in explanation of the fact, there is no way to show that the fourth year of Jehoiakim fall-to-fall was the same as the year in which the battle of Carchemish took place. Horn discusses the date of this battle at length.⁵² We know that it occurred before Ab 8 (August 15), 605, because that was the date on which Nebuchadnezzar's father Nabopolassar died and by the time the young crown prince learned of that fact he had already left Carchemish and was campaigning inside Hatti-land.⁵³ Judea was one part of Hatti-land.⁵⁴ According to Dan 1:1 Nebuchadnezzar had covered almost the entire length of that territory before Tishri 1, because his first attack on Jerusalem came within Jehoiakim's third year. The battle of Carchemish was fought at least two months prior to the Jewish New Year at which Jehoiakim's fourth year would begin in a fall-to-fall system.

The nature of the claim being made here should be noticed carefully. Jer 46:2 provides evidence for a mixed system, not for a consistent spring-to-spring system. It would be inaccurate using any calendar to say that the battle of Carchemish occurred in the first year of Nebuchadnezzar. It did not. At the time of that battle he had not yet come to the throne, i.e., even his accession year period had not yet begun. In Jer 46:2 the fourth year of Jehoiakim cannot by any means be equated with the first year of Nebuchadnezzar. In Jer 25:1, on the other hand, it is unavoidable that they be equated. From this I draw that two methods of calculation are in evidence. A fall-to-fall calendar is used for Jehoiakim and presumably also for Nebuchadnezzar in Jer 25:1, while in Jer 46:2 a spring-to-spring calendar is used for Jehoiakim and there is no regnal year at all for Nebuchadnezzar. The evidence in both cases is clear and forceful, but it leads to different conclusions. Two systems are illustrated in Jer 25:1 and 46:2 and they are not the same.

Discussion. I believe there is good reason for the apparent contradiction before us. After all that has been said, Jeremiah was still neither mistaken nor inconsistent in his usage. But what his usage was and was not must be carefully defined.

It has been pointed out that chaps. 46-51 represent a collection of Jeremiah's oracles against the nations. It has also been pointed out that 46:1 represents a general introduction to the entire section that follows. In addition to this each oracle is preceded by its own introductory note. See table 5.

Table 5
Oracles Against The Nations
In Jer 46-51

Nation	Introduction	Oracle
Egypt	46:2	46:3-12
Egypt	46:13	46:14-28
Philistines	47:1	47:2-7
Moab	48:1a	48:1b-47
Ammonites	49:1a	49:1b-6
Edom	49:7a	49:7b-22
Damascus	49:23a	49:23b-27
Kedar and Hazor	49:28a	49:28b-33
Elam	49:34	49:35-39
Babylon	50:1	50:2-51:64a

Some of the introductions in Jer 46-51 do nothing more than indicate the nation against which the oracle associated with it is directed. Thus, "Concerning Moab:" (48:1a), "Concerning the Ammonites:" (49:1a), "Concerning Edom:" (49:7a), "Concerning Damascus:" (49:23a). Others give us some indication as to the historical background for the oracle as well. Examples of this second type of introduction are quoted below.

This is the message the Lord spoke to Jeremiah the prophet about the coming of Nebuchadnezzar king of Babylon to attack Egypt: (46:13)

This is the word of the Lord that came to Jeremiah the prophet concerning the Philistines before Pharaoh attacked Gaza: (47:1)

Concerning Kedar and the kingdoms of Hazar, which Nebuchadnezzar king of Babylon attacked: (49:28a)

This is the word of the Lord that came to Jeremiah the prophet concerning Elam, early in the reign of Zedekiah king of Judah: (49:34)

This is the word the Lord spoke through Jeremiah the prophet concerning Babylon and the land of the Babylonians: (50:1)

The passage in question of course is Jer 46:2, which has not yet been quoted. Here we find both types of introduction. First the nation is identified as Egypt, then a note is added to clarify the historical situation being addressed by the prophet:

Concerning Egypt: This is the message against the army of Pharaoh Neco king of Egypt, which was defeated at Carchemish on the Euphrates River by Nebuchadnezzar king of Babylon in the fourth year of Jehoiakim son of Josiah king of Judah: (Jer 46:2)

From what has been presented above I conclude that Jer 46:2 is not part of Jeremiah's oracle against Egypt. It is an introduction to that oracle. What Jeremiah says begins with vs. 3 and has an entirely different style:

(3) "Prepare your shields, both large and small, and march out for battle! (4) Harness the horses, mount the steeds! . . . (Jer 46:3-4)

If the first oracle begins with vs. 3, we must ask whether Jeremiah wrote vs. 2. I would say that the compiler wrote vs. 2, just as the compiler wrote all the other introductory lines in chaps. 46-51, many of which refer to Jeremiah in the third person. This is not critical arrogance but a face value reading of the text. When Jeremiah is referred to in the third person the most obvious sense of the passage is that someone other than Jeremiah is writing (see 46:13; 47:1; 49:34; and 50:1). And when Jer 46:2 is compared with the other introductory passages, it is seen to be identical with them in style and purpose. Thus, in 48:1a; 49:1a; 49:7a; and 49:23a (where only a nation is named), in 46:13; 47:1; 49:34; and 50:1 (where Jeremiah is named as well but in the third person), and in 49:28a--and also 46:2--(where Jeremiah is not named), someone other than Jeremiah is writing.

Returning now to the original question, did Jeremiah use a fall-to-fall calendar? Yes. Was a fall-to-fall calendar used in Jer 46:2? No.

Jer 52:4-6, 12. In the first twenty-seven verses of Jer 52 we have a Jewish perspective on the beginning and end of the final siege of Jerusalem.

(4) So in the ninth year of Zedekiah's reign, on the tenth day of the tenth month, Nebuchadnezzar king of Babylon marched against Jerusalem with his whole army. They camped outside the city and built siege works all around it. (5) The city was kept under siege until the eleventh year of King Zedekiah. (6) By the ninth day of the fourth month the famine in the city had become so severe that there was no food for the people to eat. (Jer 52:4-6)

On the tenth day of the fifth month, in the nineteenth year of Nebuchadnezzar king of Babylon, Nebuzaradan commander of the imperial guard, who served the king of Babylon, came to Jerusalem. (Jer 52:12)

In Jer 52:4 the final siege of Jerusalem is said to have begun on the tenth day of the tenth month of Zedekiah's ninth year. Zedekiah became king approximately Adar 2 (March 16), 597, one month before the Babylonian spring New Year on Nisan 1, and so the winter months for any of his regnal years will be the same spring-to-spring or fall-to-fall. The tenth month comes within this range of winter months. Thus, the date for the beginning of the Babylonian siege must be January 15, 589 in either system.

The fourth month of Zedekiah's eleventh year in Jer 52:6, however, is in the summer. For this king's summer months there is a difference of one year depending on which calendar is used. Thus, the ninth day of the fourth month would be July 29, 587 spring-to-spring but July 18, 586 fall-to-fall.

It is important to notice that the eleventh year of Zedekiah is equated with the nineteenth year of Nebuchadnezzar both in Jer 52:1, 12 and in 2 Kgs 25:1, 8, discussed earlier. The nineteenth year of Nebuchadnezzar was 586/85 spring-to-spring but 587/86 fall-to-fall. This fact forces a fall-to-fall interpretation, because July 29, 587 for Zedekiah is no part of the spring-to-spring year 586/85 for Nebuchadnezzar, whereas July 18, 586 for Zedekiah corresponds perfectly to the fall-to-fall year 587/86 for Nebuchadnezzar, as a Jewish chronicler would interpret that king's reign using his own fall-to-fall calendar.

From the preceding discussion it follows that 586 can be accepted with confidence as the year for the destruction of Jerusalem.⁵⁵ The final siege began on Jan 15, 589, the report on the state of the famine in Jer 52:6 was current as of July 18, 586, and Jerusalem fell to the Babylonians on August 14, 586. When Jer 52:5 and 6 are compared with Jer 52:12 it is unavoidable that a fall-to-fall calendar was used for calculating Zedekiah's regnal years in the above passages.

Jer 52:28-31. We now return to the question of a mixed system for reckoning dates in the book of Jeremiah. Jer 46:2 was discussed earlier as a case where a spring-to-spring date occurred against an otherwise consistent backdrop of fall-to-fall usage. There is another small group of possible exceptions at the end of the book. Verses 28-30 give a brief tally of the exiles taken by Nebuchadnezzar at different times.

(28) This is the number of the people Nebuchadnezzar carried into exile: in the seventh year, 3,023 Jews; (29) in Nebuchadnezzar's eighteenth year, 832 people from Jerusalem; (30) in his twenty-third year, 745 Jews taken into exile by Nebuzaradan the commander of the imperial guard. There were 4,600 people in all. (Jer 52:28-30)

These verses are interesting both for what they do say and for what they do not say. First, three deportations are mentioned. The one in vs. 28 involved 3,023 persons and occurred in the seventh year of Nebuchadnezzar, which would be 599/98 fall-to-fall or 598/97 spring-to-spring. The one in vs. 29 involved 832 persons and occurred in the eighteenth year, which would be 588/87 fall-to-fall or 587/86 spring-to-spring. The one in vs. 30 involved 745 persons and occurred in the twenty-third year, which would be 583/82 fall-to-fall or 582/81 spring-to-spring. What vss. 28-30 do say, assuming a spring-to-spring calendar, is that a very small number of captives were taken in 597 and 586.

Alternatively, assuming a fall-to-fall calendar, there would have been captives taken in 598 as well as 597 and in 587 as well as 586. Neither set of conditions is easily explainable. In addition there was a final group taken toward the end of Nebuchadnezzar's long reign in 582/81, which is not known otherwise. Horn argues that minor deportations occurred the year before the major ones of 597 and 586. This follows from his position that Jeremiah used a fall-to-fall calendar consistently throughout.

The two deportations of Jews recorded in Jer 52:28-30 which took place in the 7th and 18th years of Nebuchadnezzar must have been secondary and minor deportations, and cannot refer to deportations which took place after Jehoiachin's capture in 597 and after the fall and destruction of Jerusalem in 586, because of the small number of deportees. For the deportation of 597 our sources in 2 Ki 24:14 and 16 mention 10,000 and 8,000 deportees respectively. Therefore, the deportation of 3,023 according to Jer 52:28 in the preceding year (the 7th year of Nebuchadnezzar, 599/598, autumn-to-autumn) must have been in connection with the harassment of Jehoiakim by "bands of the Chaldeans" to which 2 Ki 24:2 refers, in which Nebuchadnezzar was not personally involved, although these military activities against Judah were carried out under his direction and with his sanction (cf. 2 Chr 36:6). They were probably led by one of his generals. In the course of these military encounters Jehoiakim must have met his death.⁵⁶

Horn's argument is a forceful one. In regard to 599/98, however, the Babylonian Chronicle states that Nebuchadnezzar was in the field and that his military activity at that time took place in Hatti-land,⁵⁷ which would make Judea a possible site for his military activity that year. So he would have been close by if not actually present at Jerusalem during 599/98, if Horn is correct in his interpretation. But the question remains as to why, after referencing a secondary captivity in 598 and a secondary captivity in 587, there should be no mention of the main groups taken captives in 597 and 586.

Recall that Jer 51:64 says, "The words of Jeremiah end here." Thus, the text demands that we interpret chap. 52 as a historical appendix added by someone other than Jeremiah. The person who compiled it either personally lived through the sieges referred to or did not. If he did not, he was obviously referring to Jewish fall-to-fall records in vss. 4, 6, and 12. In a similar manner it would be entirely possible for him to have consulted Babylonian spring-to-spring records when compiling vss. 28-31.⁵⁸ In this case the passage under discussion would have the events of 597 and 586 in view rather than 598 and 587, dating them in terms of a spring-to-spring calendar. This alternative based on a spring-to-spring calendar remains a possibility. Nevertheless, Horn may be right. The small number of captives in and of itself and the problem of reconciling Jer 52:28-30 with 2 Kgs 24:14 and 16 would support such a conclusion.

Due to the possibility of multiple interpretations in Jer 52:28-31 the passage cannot be used dogmatically to defend either hypothesis. Only one clear example can be given where anything other than a fall-to-fall calendar is used in the book of Jeremiah and this is Jer 46:2. If Jer 46:2 is the exception, then Jer 25:1; 28:1, 17; 32:1; 36:1,9, and 52:4-6, 12 are the rule, with judgment withheld on 52:28-31. And if these are the data, the conclusion must be that Jeremiah uses a fall-to-fall calendar.

Sixth Century Prophets

Overview

There are only four sixth century prophets whose writings have been preserved as part of the Old Testament record, but each contains a number of specific dates and makes a valuable contribution to the present discussion. The four prophets referred to are Ezekiel, Daniel, Haggai, and Zechariah. See table 6.

Table 6
Sixth Century Prophets

Prophet	Kingdom	Kings Contemporary with the Prophet				
Ezekiel	Judah		Jehoiachin			
Daniel	Judah	Jehoiakim				
	Babylon	Nebuchadnezzar	Belshazzar			
	Persia			Darius the Mede	Cyrus	
Haggai	Persia					Darius I
Zechariah	Persia					Darius I

Note: The "Loc" column in this table refers to the location of any contemporary kings mentioned and not necessarily to the prophet's place of activity.

Ezekiel

Ezekiel, like Jeremiah, carefully dated his oracles. There are fifteen specific dates in the book. Ezekiel's method of recording calendar dates, however, differs from that of Jeremiah. All but one of his fifteen dates includes a day number. In only four cases is the month omitted.

In addition, following an ancient Jewish practice, Ezekiel in every case numbers his months rather than naming them. And no Babylonian or Persian king is ever mentioned. Ezekiel uses the captivity of Jehoiachin as his main point of reference. He does not date events between 597 and 586, for example, to the reign of Zedekiah, but to the era of Jehoiachin's captivity. Indeed none of Ezekiel's oracles is dated in terms of a currently reigning king. Eras used, apart from Jehoiachin's exile, are the culmination of Josiah's reforms (1:1) and the fall of Jerusalem (40:1b).

All of this taken together shows that Ezekiel had a single-mindedly pro-Jewish attitude,⁵⁹ which must be taken into account when determining the type of calendar he used. Occasionally such seemingly irrelevant background information has been set aside.⁶⁰ But doing so is a mistake. For a summary of Ezekiel's datelines see table 7.

Table 7
Dates in Ezekiel

Reference	King	Yr	Mo	Dy	Julian F-F	Julian S-S
Ezek 1:1	[Josiah's reform]	30	4	5	Jul 21, 592	Jul 21, 592
Ezek 1:2	Jehoiachin's exile	5	[4]	5	Jul 21, 592	Jul 31, 593
Ezek 8:1	[Exile]	6	6	5	Sep 7, 591	Sep 17, 592
Ezek 20:1	[Exile]	7	5	10	Sep 1, 590	Aug 14, 591
Ezek 24:1-2	[Exile]	9	10	10	Jan 15, 588	Jan 15, 588
Ezek 26:1	[Exile]	11	-	1	587/86 587/86	
Ezek 29:1	[Exile]	10	10	12	Jan 7, 587	Jan 7, 587
Ezek 29:17-18	[Exile]	27	1	1	Apr 16, 570	Apr 26, 571
Ezek 30:20-21	[Exile]	11	1	7	Apr 19, 586	Apr 29, 587
Ezek 31:1	[Exile]	11	3	1	Jun 11, 586	Jun 21, 587
Ezek 32:1	[Exile]	12	12	1	Mar 3, 585	Mar 3, 585
Ezek 32:17	[Exile]	12	[12]	15	Mar 17, 585	Mar 17, 585
Ezek 33:21	Exile	12	10	5	Jan 8, 585	Jan 8, 585
Ezek 40:1a	Exile	25	[7]	10	Oct 22, 573	Oct 22, 573
Ezek 40:1b	Fall of Jerusalem	14	-	-	573/72	573/72

Ezek 1:1-3. Two dating formulas appear in the opening verses of Ezekiel. Verse 1 is dated to "the thirtieth year" (Ezek 1:1), measured from the time when Josiah's reforms were completed in the spring of 622 (2 Kgs 22-23). Verse 2 is dated to "the fifth year of the exile of King Jehoiachin" (1:2). The first date appears in a line written in the first person:

In the thirtieth year, in the fourth month on the fifth day, while I was among the exiles by the Kebar River, the heavens were opened and I saw visions of God. (Ezek 1:1)

The second date is given immediately afterward in a line written in the third person:

(2) On the fifth of the month—it was the fifth year of the exile of King Jehoiachin—(3) the word of the Lord came to Ezekiel the priest, the son of Buzi, by the Kebar river in the land of the Babylonians. There the hand of the Lord was upon him. (Ezek 1:2-3)

According to 2 Kgs 23:21-23 Josiah consummated his various religious reforms by observing the Passover of his eighteenth regnal year in an unusually impressive manner.⁶¹ For Ezekiel this Passover was so significant that it was treated as the beginning of an era. Our ability to date events correctly within that era is closely related to our ability to date the other events of Josiah's reign correctly.

Josiah died in the battle of Megiddo (2 Kgs 23:29) at the end of a thirty-one year reign (2 Kgs 22:1) during the seventeenth year of Nabopolassar king of Babylon in early Tammuz (June/July) 609--not in 608 as had been thought previously.⁶² That Josiah used a fall-to-fall calendar was demonstrated earlier by comparing 2 Kgs 22:3 with 23:23. So if the summer of 609 was the summer of Josiah's thirty-first year fall-to-fall, his first regnal year was 640/39 fall-to-fall and his eighteenth--the year in which for Ezekiel the era of Josiah's reforms began--was 623/22 fall-to-fall. These dates contrast with 639/38 and 622/21. Josiah's entire reign must be shifted back one year.

As regards Jehoiachin's reign, Jehoiachin came to the throne of Judah on Marcheshwan 22 (December 10), 598 and he was taken captive by Nebuchadnezzar on Adar 2 (March 16), 597.⁶³

If 623/22 fall-to-fall is the year in which Josiah's reforms were brought to completion, and if 598/97 fall-to-fall is the year in which Jehoiachin was taken captive by the Babylonians, it is a simple matter to count forward thirty years by inclusive reckoning from the eighteenth year of Josiah (623/22) to 594/93 and to count forward five years in the same manner from the year Jehoiachin was taken captive (598/97) to 594/93. Based on the above information, 594/93 is the year of Ezekiel's first oracle. But this cannot be. As shown below, the year of Ezekiel's first oracle must be 593/92, and being received in the fourth month its date can be narrowed to approximately June/July 592.

Recall that Jeremiah's twenty-three year ministry in Jer 25:3 also appears to be one year shorter in description than in fact and this must be seen as an additional facet of the same problem that we now encounter in Ezek 1:1-3. If a spring-to-spring calendar is accepted in Ezekiel, the data from Ezekiel can be accounted for but those aspects of the same problem that are found in Jeremiah remain unaddressed. Recall that for the most part Jeremiah used a fall-to-fall calendar. Another option would be to switch from inclusive to exclusive reckoning. Doing this would have the same limited effect, but in my view it would be a mistake to accept

either of these initial possibilities too soon. What we need is a solution that applies equally in both Ezekiel and Jeremiah, not just in one or the other.

Ezek 24:1-2. In the first two verses of Ezek 24 the prophet receives word from the Lord telling him the city of Jerusalem was laid under siege that very day.

(1) In the ninth year, in the tenth month on the tenth day, the word of the Lord came to me: (2) "Son of man, record this date, this very date, because the king of Babylon has laid siege to Jerusalem this very day." (Ezek 24:1-2)

According to 2 Kgs 25:1 the final siege of Jerusalem began on the tenth day of the tenth month of the ninth year of Zedekiah's reign. According to Ezek 24:1-2 it began on the tenth day of the tenth month of the ninth year of Jehoiachin's exile. This means that for Ezekiel the years of Jehoiachin's exile are the same as the regnal years of Zedekiah. Any date in the one series is predictable from a date in the other series, so in this sense there is a systematic relationship between the two. But the problem is not just how to determine when an event occurred given that the above sets of years are the same. The problem is how to justify their sameness. It is not clear what basis Ezekiel had for treating Jehoiachin's years in exile as though they were the same as Zedekiah's regnal years. Regardless of the time for the final destruction of Jerusalem in a later passage, the years for Jehoiachin's exile should be earlier than those for Zedekiah.

Suggesting that Ezekiel reasoned from Zedekiah's reign to Jehoiachin's captivity does nothing to solve the related problem of Jeremiah's twenty-three years of ministry in Jer 25:3. So on the one hand, even though predictable results can be obtained in Ezekiel by simply equating the years of Zedekiah on the throne and Jehoiachin in captivity, doing so is not a solution. There is no reason to suppose that Jeremiah thought of his ministry in terms of regnal years defined by reference to contemporary kings. On the other hand one cannot simply ignore the parallel between Ezek 24:1-2 and 2 Kgs 25:1. The problem of how Ezekiel counted the years of Jehoiachin's exile is a significant one.

Ezek 33:21. The following passage makes sense only under the assumption that the years of Jehoiachin's exile are the same as, or at least no earlier than, the years of Zedekiah's reign.

In the twelfth year of our exile, in the tenth month on the fifth day, a man who had escaped from Jerusalem came to me and said, 'The city has fallen!'" (Ezek 33:21)

If we merely count twelve years inclusively from the time of Jehoiachin's dethronement early in 597 and take the fifth day of the tenth month of the year we come to in this way, the resulting fall-to-fall date is January 19, 586. But the city did not fall until some seven months later on August 14, 586. Thus, if 587/86 is the twelfth year of Jehoiachin's exile, it is necessary to assume that a survivor of the final attack on Jerusalem reported the event to Ezekiel as an accomplished fact seven months before it occurred. This is not the most obvious sense of the passage. The city fell on "the seventh day of the fifth month, in the nineteenth year of Nebuchadnezzar king of Babylon" (2 Kgs 25:8), which was August 14, 586 regardless of the calendar used. The twelfth year of Jehoiachin's exile can only be 586/85. Ezekiel received word of the city's downfall not on January 19, 586, but on January 8, 585.

Discussion. In attempting to reconcile the evidence from Ezekiel with that from Jeremiah we could explain Jer 25:3 by saying that the accession year of Nebuchadnezzar is really what

Jeremiah had in mind, not his first year, but that would not help in Ezek 1:1-2; 33:21 and besides *haššānâ hārîʾšōnît* (Jer 25:1) really does mean "the first year." NIV has given the correct sense of the passage. Alternatively we could explain Ezek 1:1-2; 33:21 by shifting the date for the fall of Jerusalem from 586 to 587, but this would not help in Jer 25:1, 3. It would not help in 2 Kgs 25:8 either, since according to that passage the city fell on "the seventh day of the fifth month of the nineteenth year of Nebuchadnezzar," and this can only be August 14, 586.

Neither of the above solutions has any chance of being successful, but even if both of them were the result would represent little more than two isolated facts about two different Old Testament writers. Thus, even if it were possible to do so, accounting separately for Jeremiah's twenty-three year ministry and Ezekiel's era of Jehoiachin's exile would not be especially interesting. This is the problem.

I offer the following tentative solution. Jews living in the time of Jeremiah and Ezekiel measured elapsed time of whatever sort on the analogy of a king's reign using the accession-year method. In an earlier version of the present paper I suggested that what the prophets were counting was not years but New Years--not a period of time but a point of time.⁶⁴ Either set of assumptions would account for the data of Jer 25:3 and Ezek 1:1-2; 33:21, but it is both more reasonable and more economical to assume that in Judah by this time all years, and not just regnal years, were counted the same way.

The kings of Judah used the accession-year method for counting their regnal years at least from Rehoboam (931/30-913) until the beginning of Jehoram's sole rule in 848. Fifty-two years later, in 796 B.C., Amaziah went back to that method and it was used uninterruptedly for the next 210 years until the fall of Jerusalem in 586. This is a strong precedent and my claim is that the prophets followed it.⁶⁵ When counting any substantial period of time, they started with the first New Year and omitted the few months leading up to that readily countable starting point.

The accession-year method is a special case of inclusive reckoning--a practice that was widespread in antiquity and persists in the Middle East down to the present time.⁶⁶ So if these broadly pervasive concepts are now found to be extended in the above manner, the fact should not surprise us.

Jeremiah counted his twenty-three year ministry in Jer 25:3 from the fall New Year of 627. If Tishri 1, 627 marked the first of the twenty-three years referred to, then Tishri 1, 605 marked the twenty-third year. He would not count twenty-four until Tishri 1, 604. The internal requirements of the passage are entirely consistent with such an interpretation. Thus, Jer 25 pertains to a time after the beginning of 605/04 fall-to-fall during the fourth year of Jehoiakim and the first year of Nebuchadnezzar, using a fall-to-fall calendar for both kings.

Ezekiel counted the era of Josiah's reforms in Ezek 1:1 from Tishri 1, 622. The thirtieth New Year after this point was Tishri 1, 593. Similarly Ezekiel counted the era of Jehoiachin's exile in Ezek 1:2 and elsewhere from Tishri 1, 597. In his mind this was not the first New Year of Zedekiah but the first New Year after Jehoiachin. It is gratuitous that the two are the same. The fifth New Year after Jehoiachin's dethronement was therefore Tishri 1, 593 and the two dates in Ezek 1:1 and 2 correspond perfectly. Both should be assigned to the fall-to-fall year 593/92, as stated earlier.

The ninth year of Jehoiachin's exile began on the ninth New Year after that king was dethroned. Thus, according to Ezek 24:1, the final siege of Jerusalem began on January 15, 588.

The twelfth year of Jehoiachin's exile began on the twelfth New Year after Jehoiachin was dethroned. Starting from Tishri 1, 597 the twelfth New Year would be Tishri 1, 586, which removes any discrepancy between Ezek 1:1-3 and 33:21 and at the same time allows Ezek 33:21 to be successfully harmonized with 2 Kgs 25:8.⁶⁷ According to Ezek 33:21 the prophet received word of Jerusalem's destruction on January 8, 585, approximately five months after the event itself, which occurred on August 14, 586.

Ezek 40:1. With chap. 40 Ezekiel begins an extended description of what the restored temple should look like and how its services should be conducted.

In the twenty-fifth year of our exile, at the beginning of the year, on the tenth of the month, in the fourteenth year after the fall of the city--on that very day the hand of the Lord was upon me and he took me there. (Ezek 40:1)

This passage is doubly dated. First, counting twenty-five New Years from Tishri 1, 597, as in Ezek 1:2, we come to the autumn of 573. Next, counting fourteen New Years from Tishri 1, 586, we again come to 573. The year in question--the "twenty-fifth year of our exile" or the "fourteenth year after the fall of the city"--begins on Tishri 1, 573 if Ezekiel is using a fall-to-fall calendar.

The "beginning of the year" is not identified further. Ezekiel assumes that his readers will know which month he is referring to. In a fall-to-fall system it would be Tishri; in a spring-to-spring system it would be Nisan. If Ezekiel has Nisan in mind, the date referred to is approximately April 19, 573. If he has Tishri in mind, the date referred to is approximately October 23, 573. The question posed above is whether the prophet was referring to a date in April or a date in October in Ezek 40:1. The passage itself does not contain sufficient information to decide between these two alternatives, but this fact may be less important than it seems.

A more useful approach would be temporarily to set aside all consideration of Julian calendar equivalents and use Ezekiel's own categories for measuring time. Thus, the question is whether Ezekiel was referring to the tenth day of the first month or the tenth day of the seventh month. At the same time we might ask what relationship there is between the date of this particular oracle and its subject matter.

Important religious festivals occurred in both the first and seventh months of the Jewish religious calendar. On the one hand we have Passover, on the other the Day of Atonement. Passover is on the fourteenth day of Nisan--the first month (Lev 23:5), while the Day of Atonement is on the tenth day of Tishri--the seventh month (Lev 16:29; 23:26). Here in Ezek 40:1 we have the tenth day of some month, either Nisan or Tishri, and the subject matter of the oracle has to do with how a restored and newly operative temple cultus should be organized.

I suggest that Ezekiel received the vision of chaps. 40-48 on the Day of Atonement. If Ezekiel did receive a major vision about the restored temple on the Day of Atonement it would be easier to explain that fact than the alternative possibility that it came four days before Passover. If Ezek 40:1 does refer to the tenth day of the seventh month instead of the tenth day

of the first month, then Tishri is clearly the beginning point for Ezekiel's year. The evidence presented is not conclusive, but it is consistent with everything else we know about Ezekiel's manner of using dates and calendars. When all factors are considered the most reasonable conclusion is that Ezekiel used a fall-to-fall calendar.

Daniel

Six dates appear in the book of Daniel. In each case only a year is specified. No months or days are given. See table 8.

Table 8
Dates in Daniel

Reference	King	Yr	Mo	Dy	Julian F-F
Dan 1:1	Jehoiakim	3	-	-	606/05
Dan 2:1	Nebuchadnezzar	2	-	-	604/03
Dan 7:1	Belshazzar	1	-	-	550/49
Dan 8:1	Belshazzar	3	-	-	548/47
Dan 9:1-2	Darius the Mede	1	-	-	538
Dan 10:1	Cyrus	3	-	-	May 535

Dan 1:1. The first verse of Daniel contains reference to two kings. Even though one date is given rather than two, it is possible to base a comparison between the reigns of Jehoiakim and Nebuchadnezzar on the information found in Dan 1:1.

In the third of the reign of Jehoiakim king of Judah, Nebuchadnezzar king of Babylon came to Jerusalem and besieged it. (Dan 1:1)

According to the present verse Nebuchadnezzar's first attack on Jerusalem occurred in the third year of Jehoiakim. It is significant here, as in Jer 46:2, that no regnal year is given for Nebuchadnezzar. The reason for this is that he was not yet king during the summer of 605. Indeed if Nebuchadnezzar arrived at Jerusalem before receiving word of his father's death, it follows that he arrived at Jerusalem before even his accession period had begun. It is appropriate to call this man "king of Babylon" in a general sense--it was not some other Nebuchadnezzar who attacked Jerusalem--but in fact he did not become king until Elul 1, 605,⁶⁸ one month before the Jewish fall New Year and some seven months before the next Babylonian spring New Year. Dan 1:1 must therefore be dated earlier than Tishri 1, 605. In this case the fact that there is no date for Nebuchadnezzar is just as informative as a year number would have been if it had been possible to supply one.

Jehoiakim came to the throne shortly after Tishri 1, 597. Thus, the summer of 605, when Nebuchadnezzar first came against Jerusalem, would be part of Jehoiakim's fourth year if he used a spring-to-spring calendar, but part of his third year if he used a fall-to-fall calendar. Because Dan 1:1 specifies "the third year of the reign of Jehoiakim king of Judah," it is clear that Daniel used a fall-to-fall calendar.⁶⁹

Discussion. The fact that Dan 1:1 is dated to Jehoiakim's third year, while Jer 25:1 is dated to his fourth year, deserves comment. There is a question why two writers who personally witnessed the events in question should disagree in dating them. Both are dealing with

Nebuchadnezzar's first attack on Jerusalem and there were not two first attacks. So would logic not indicate that there must be only one date? We return to this issue below. For now please notice that there is a second difference between the passages, which raises the possibility that these two differences work together in some way. Jer 25:1 speaks of Nebuchadnezzar's first regnal year, while Dan 1:1 gives no year number at all. Is this an oversight on Daniel's part or is the fact that he omitted the year number significant? The omission is significant, the dates are not the same, and there is no disagreement.

One approach to the problem of making the above dates agree has been to suggest that Jeremiah used a spring-to-spring calendar while Daniel used a fall-to-fall calendar.⁷⁰ But Jeremiah did not use a spring-to-spring calendar. Jer 46:2 is the only date in that prophet's writings that demands a spring-to-spring calendar and it appears in a note prefacing an oracle of Jeremiah rather than appearing within the oracle itself. The prophet's own usage is consistently fall-to-fall, as can be clearly seen in Jer 25:1; 32:1; 36:1, 9; and 52:4-6, 12. So a difference in calendars cannot be used to account for the difference in dates.

Another approach has been to argue that Jeremiah did not count an accession year when reckoning the reigns of Jehoiakim and Nebuchadnezzar⁷¹ while Daniel did. This explanation works, by brute force as it were, but offers no contextual factors that would make it credible. The accession year system was commonly used not only in the kingdom of Judah but also in Babylon. Anyone who advances an explanation such as this for the difference between Jer 25:1 and Dan 1:1 should be prepared to show why Jeremiah would abandon the system used by both kings he refers to. The accession year must be taken as a given in both passages.

If both writers used a fall-to-fall calendar and both kings used an accession year, the question remains as to how the dates in question are the same. The most straightforward answer would be that they are not the same. The third year of Jehoiakim is simply not the same as his fourth year.⁷² Similarly the accession year of Nebuchadnezzar is not the same as his first year. But this does not mean that the passages disagree. Jeremiah's oracle concerning Babylon was given shortly after Tishri 1, 605, while Nebuchadnezzar mounted his attack on the city in late summer shortly before that time. The events of Dan 1:1 and Jer 25:1 occurred within a very short time of each other, perhaps only weeks apart, but this was long enough for them to be counted in different regnal years assuming a fall-to-fall system.⁷³

Recall that Nebuchadnezzar came to the throne on Elul 1, 605, one month before the Jewish fall New Year. Thus, using a fall-to-fall calendar, as Jeremiah did, his accession year period or "beginning of reign" was only one month long. The difference between Dan 1:1 and Jer 25:1 therefore would not need to be much more than a single month for both datelines to be accepted at face value using the same calendar and the same principles of reckoning for the reigns of both kings involved.

Haggai

There are no fewer than six dates in Haggai's two short chapters. In each case a day is specified and where a month (2:20) or year (2:1, 18, 20) is not given context makes clear what is intended. Haggai does not write in the manner of a poet, as Isaiah did earlier, but like a carefully schooled historian. For a summary of Haggai's datelines see table 9.

Table 9
Dates in Haggai

Reference	King	Yr	Mo	Dy	Julian S-S
Hag 1:1	Darius	2	6	1	Aug 29, 520
Hag 1:15	Darius	2	6	24	Sep 21, 520
Hag 2:1	[Darius]	[2]	7	21	Oct 17, 520
Hag 2:10	Darius	2	9	24	Dec 18, 520
Hag 2:18	[Darius]	[2]	9	24	Dec 18, 520
Hag 2:20	[Darius]	[2]	[9]	24	Dec 18, 520

If the oracles of Haggai are reported in the order they occurred--and there is no reason to doubt this--then there can be no question as to which calendar he used. Dates from both halves of the year are referred to and, within the same regnal year of the king, the summer months come before the winter months. Thus, in Hag 1:1 and 15 we have month 6 and in Hag 2:10 month 9, both in the second year of Darius. Using a fall-to-fall calendar month 9 would still follow month 6, as it does here, but would be in a different year. Haggai uses a spring-to-spring calendar.

Notice that Hag 2:1, which speaks of "the seventh month," without specifying which year that seventh month is part of, supplies no useful independent information about which calendar the prophet used. Hag 2:1 must be interpreted, and can only be interpreted, in the context of 2:10. For similar reasons Jer 28:17 is inconclusive in itself and can only be interpreted in the context of such other passages as 25:1 and 36:1, 9. In both cases it is not enough to know that winter months follow summer months. This is always true. The item of real importance is whether different years are involved.

Zechariah

Zechariah also dates his work carefully, though not to the extent that Haggai does. There are three dates in Zechariah, two of which contain year, month, and day. See table 10.⁷⁴

Table 10
Dates in Zechariah

Reference	King	Yr	Mo	Dy	Julian S-S
Zech 1:1	Darius	2	8	-	Oct/Nov 520
Zech 1:7	Darius	2	11	24	Feb 15, 519
Zech 7:1	Darius	4	9	4	Dec 6, 518

Unfortunately all three of the dates that occur in Zechariah come from the same half of the year. Thus, no explicit evidence is provided that would establish which type of calendar this prophet used. In the absence of any information to the contrary we may assume that Haggai and Zechariah used the same type of calendar.

The reasonable nature of the above conclusion is supported by a list of annual feasts that appear in Zechariah. In this list spring festivals occur before fall festivals:

"This is what the Lord Almighty says: 'The fasts of the fourth, fifth, seventh and tenth months will become joyful and glad occasions and happy festivals for Judah.'" (Zech 8:19)

If Zechariah had been using a fall-to-fall calendar we might expect him to have said, "The fasts of the seventh, tenth, fourth and fifth months . . ." Even this evidence is not conclusive, however, because the religious festivals would naturally be referenced in terms of a religious calendar, which in this case started with Passover in the spring. A stronger argument that Zechariah uses a spring-to-spring calendar is that Haggai his fellow worker uses a spring-to-spring calendar.

Fifth Centuries Documents

Overview

Evidence for Jewish calendrical practices during the fifth century can be drawn from four sources--Esther, Ezra, Nehemiah, and the Elephantine papyri. In addition there are three writing prophets from the fifth century whose work cannot be used here because it lacks sufficient historical detail. These prophets are Obadiah, Joel, and Malachi.⁷⁵ See table 11.

Table 11
Fifth Century Old Testament Books

Person	Location	Contemporary Kings			
Esther	Persia			Xerxes	
Ezra	Persia	Cyrus	Darius I	Xerxes	Artaxerxes
Nehemiah	Persia				Artaxerxes
Obadiah	N/A	N/A			
Joel	N/A	N/A			
Malachi	N/A	N/A			

Note: The "Loc" column in this table refers to the location of any contemporary kings mentioned and not necessarily to the main character or writer's place of activity.

Esther

The book of Esther contains fourteen dates, none of which is fully specified as to day, month, and year. When the year is given the day is not, and when the day is given the year is not. Here I assume that the twelfth year of Xerxes is intended in each date reference subsequent to Esth 3:7.⁷⁶ See table 12.

Table 12
Dates in Esther

Reference	King	Yr	Mo	Dy	Julian S-S
Esth 1:3	Xerxes	3	-	-	Apr 483-Apr 482
Esth 2:16	Xerxes	7	10	-	Dec 479/Jan 478
Esth 3:7	Xerxes	12	1	-	Apr/May 474
Esth 3:7	[Xerxes]	[12]	12	-	Feb/Mar 473
Esth 3:12	[Xerxes]	[12]	1	13	Apr 17, 474
Esth 3:13	[Xerxes]	[12]	12	13	Mar 8, 473
Esth 8:9	[Xerxes]	[12]	3	23	Jun 25, 474
Esth 8:12	[Xerxes]	[12]	12	13	Mar 8, 473
Esth 9:1	[Xerxes]	[12]	12	13	Mar 8, 473
Esth 9:15	[Xerxes]	[12]	Adar	14	Mar 9, 473
Esth 9:17	[Xerxes]	[12]	Adar	13	Mar 8, 473
Esth 9:18	[Xerxes]	[12]	[12]	15	Mar 10, 473
Esth 9:19	[Xerxes]	[12]	Adar	14	Mar 9, 473
Esth 9:21	[Xerxes]	[12]	Adar	14-15	Mar 9-10, 473

Esth 3:7. If within this verse both the first month and the twelfth represent the same regnal year of Xerxes, which is a crucial assumption, then month 1 comes before month 12 (Adar) and a Persian spring-to-spring calendar is used for the dates recorded in the book of Esther.

It is interesting to notice that Esth 3:7 speaks of the twelfth month. The twelfth month was Adar. But in the year during which the story of Esther takes place (474/73, the twelfth year of Xerxes) a second Adar was intercalated as part of the normal nineteen year cycle for such seasonal adjustments. Second Adar would not be month twelve but presumably month thirteen. We can conclude from the fact that the Jews' deliverance came in the twelfth month that the reference is to first Adar 473 B.C.⁷⁷

Ezra

Fifteen dates are given in the book of Ezra. Of these only Ezra 6:15 contains year, month, and day. In three cases only the year is given (1:1; 4:24; 7:7) and in one case only the month (3:1). Year and month appear together in 3:8 and 7:8, month and day in 3:6; 6:19; 7:9, 9; 8:31; 10:9, 16, and 17. For a summary of Ezra's datelines see table 13.

Table 13
Dates in Ezra

Reference	King	Yr	Mo	Dy	Julian F-F
Ezra 1:1	Cyrus	1	-	-	538/37
Ezra 3:1	[arrival]	[2]	7	-	Oct/Nov 536
Ezra 3:6	[arrival]	[2]	7	1	Oct 5, 536
Ezra 3:8	arrival	2	2	-	Apr/May 535
Ezra 4:24	Darius	2	-	-	520/19
Ezra 6:15	Darius	6	Adar	3	Mar 12, 516
Ezra 6:19	[Darius]	[6]	1	14	Apr 21, 515
Ezra 7:7	Artaxerxes	7	-	-	458/57
Ezra 7:8	The king	7	5	-	Jul/Aug 457
Ezra 7:9	[Artaxerxes]	[7]	1	1	Mar 27, 457
Ezra 7:9	[Artaxerxes]	[7]	5	1	Jul 24, 457
Ezra 8:31	[Artaxerxes]	[7]	1	12	Apr 7, 457
Ezra 10:9	[Artaxerxes]	[8]	9	20	Dec 8, 457
Ezra 10:16	[Artaxerxes]	[8]	10	1	Dec 18, 457
Ezra 10:17	[Artaxerxes]	[8]	1	1	Apr 15, 456

Ezra 1:1; 3:1, 6, 8. Ezra 1:1 places the beginning point for the narrative of this book in the first year of Cyrus. In between Ezra 1:1 and 3:1 a number of events occur, including the return trip of the first group of exiles from Babylon. Ezra 3:1 takes place during the seventh month of an unspecified year. Then Ezra 3:8 takes place during the second month of the second year. From this we can be sure that the time from Ezra 1:1 to 3:8 is just over one year. What we do not know is whether the "seventh month" of Ezra 3:1 is a reference to Cyrus' first year or his second. A spring-to-spring calendar would be required in the one case, a fall-to-fall calendar in the other.

The issue cannot be decided on the basis of the available evidence. One can only say that if the second month of Ezra 3:8 was in the same year as the seventh month of 3:1, then we have clear evidence that Ezra used a fall-to-fall calendar.⁷⁸ This is the assumption made above in table 13. But without definite information as to which year the seventh month in 3:1 was part of either interpretation is possible.

Ezra 6:15, 19. Ezra 6:15 states that, "The temple was completed on the third day of the month Adar, in the sixth year of the reign of King Darius." Adar 3 in the sixth year of Darius would be March 12, 515 in either calendar. There is no question about the Julian date for vs. 15. In vss. 16-18, the temple is dedicated and finally in vs. 19 it is used. Thus, we learn that, "On the fourteenth day of the first month, the exiles celebrated the Passover." Again there is no doubt as to when the event took place. The Passover of Ezra 6:19 occurred on April 21, 515. The problem is not how to locate the fourteenth day of the first month after March 12, 515 on a Julian calendar, but how to relate that date to the regnal years of Darius. Unfortunately this information is not given in the passage.

If Ezra used a spring-to-spring calendar, the above Passover occurred in the first month of Darius' seventh year. If Ezra used a fall-to-fall calendar it occurred in the first month of Darius' sixth year. But since Ezra does not give a year number of the date of vs. 19, no conclusion can be drawn from the passage itself as to which calendar Ezra used.

Ezra 7:7-9. Ezra 7 is a chapter of the greatest importance, not only for Ezra research in and of itself but for what it can tell us about other passages of Scripture. Horn and Wood's informative book, *The Chronology of Ezra 7* takes this chapter as its primary subject matter.⁷⁹ And the main purpose for the present paper as well is to explore the bases on which it must be interpreted. The three verses under consideration say,

(7) Some of the Israelites, including priests, Levites, singers, gatekeepers and temple servants, also came up to Jerusalem in the seventh year of King Artaxerxes. (8) Ezra arrived in Jerusalem in the fifth month of the seventh year of the king. (9) He had begun his journey from Babylon on the first day of the first month, and he arrived in Jerusalem on the first day of the fifth month, for the good hand of his God was on him. (*Ezra 7:7-9*)

There was more than one Artaxerxes in history. Some maintain that Ezra was referring here to Artaxerxes II (404-359). This claim has far-reaching implications but has been discussed at length by more than one generation of scholars and cannot be taken up here.⁸⁰ Below I make the reasonable assumption that Ezra was referring to Artaxerxes I (464-424).

Artaxerxes' regnal years, like those of Darius, run earlier spring-to-spring than fall-to-fall. Thus, the same Julian year equivalents will apply and the half year held in common by the two calendars throughout this king's reign will be made up of the winter months, i.e., months 7-12. The two dates given in *Ezra 7:9* both represent the part of the year in which there is a clear difference between spring-to-spring or fall-to-fall reckoning.

If Ezra used a spring-to-spring calendar, the "first day of the first month" of Artaxerxes' seventh year would be April 8, 458 and the "first day of the fifth month" would be August 4, 458. If, on the other hand, Ezra used a fall-to-fall calendar, the one date would be March 27, 457 and the other would be July 24, 457. Thus, the question of whether the decree of *Ezra 7* went into effect during 458 or 457 depends on whether Ezra used a spring-to-spring calendar or a fall-to-fall calendar. Taking *Ezra 7:7-9* in isolation, there is not enough internal evidence to decide between these two alternatives.

Discussion. The lack of any immediate proof in regard to Ezra's calendar is especially unfortunate in the case of chap. 7, although comparative evidence does strongly suggest that Ezra uses a fall-to-fall calendar. The reason why it is so important to have an accurate date for the royal decree of *Ezra 7* is that this decree provides a starting point for the messianic prophecy of seventy weeks in *Dan 9*.

From earliest times the Christian church taught that the seventy weeks of *Dan 9* accurately predicted the time of Christ's first coming and death.⁸¹ Seventh-day Adventists trace the historical starting point for that messianic time period to the circumstances surrounding *Ezra 7*. The passage on which they base their interpretation is the following:

(25) "Know and understand this: From the issuing of the decree to restore and rebuild Jerusalem until the Anointed One, the ruler, comes, there will be seven 'weeks,' and sixty-two 'weeks.' It will be rebuilt with streets and a trench, but in times of trouble. (26) After the sixty-two 'weeks,' the Anointed One will be cut off and will have nothing. (*Dan 9:25-26*, margin)

Thus, when Dan 9:25 says, "From the issuing of the decree to restore and rebuild Jerusalem," Seventh-day Adventists identify the decree of Ezra 7 as that which corresponds most closely to the requirements of the prophecy.

If the above relationship holds, then more than one date is at issue when we talk about the decree of Ezra 7. If Ezra used a spring-to-spring calendar, then autumn 458 is the time when Artaxerxes' decree finally went into effect and we would expect Christ to begin His public ministry at the beginning of the seventieth week in autumn A.D. 26. Similarly we would expect Him to be crucified in the middle of the seventieth week at Passover time A.D. 30 three and one half years later. On the other hand, if Ezra used a fall-to-fall calendar, then autumn 457 is the starting point for the seventy weeks and we would expect Christ to begin His public ministry in autumn A.D. 27 and to be crucified at Passover time A.D. 31. Because the year of Christ's death is still debated by scholars⁸² no independent confirmation of the date can be offered at this point, but one should realize what issues are involved in seeking a date for this ancient decree. There is more here than a desire to satisfy curiosity as to when Ezra went to Jerusalem.

Another reason why Ezra 7 is significant for Seventh-day Adventists is that the seventy weeks have a sister prophecy--the 2300 days. The principles of interpretation required by the one prophecy are clear. In order to understand the other, and to place that understanding on a firm exegetical basis, Seventh-day Adventists have applied the same exegetical principles in both cases.⁸³ Dan 9 speaks of seventy weeks (=490 days) and a period of 490 years brings us to Christ in the first century A.D. Thus, in Dan 9 each day stands for a year. When the 2300 days of Dan 8 are interpreted in a similar manner, as 2300 years with each day for a year, the 2300 days bring us to A.D. 1844. If the seventy weeks represent 490 years leading up to the timeframe of the first coming of Christ and his death on the cross, the 2300 days represent 2300 years leading up to the beginning of the judgment and the last years of earth's history before the second coming of Christ in glory. The implications of bringing the 2300 days to an end in our own day are vast. Hence the interest in making sure that the starting point for that period has been determined correctly.

The starting point for both prophecies is the same. First, the seventy weeks begin with "the issuing of the decree to restore and rebuild Jerusalem" (Dan 9:25). The decree referred to is best interpreted as the one found in Ezra 7, in the context of Ezra 4. And second, the seventy weeks are "decreed [*nehtak*] for your people" (Dan 9:24). The word *nehtak* literally means "cut off." What they are cut off from is the longer time period in the preceding chapter. Thus, the decree of Ezra 7 is not only the point at which the seventy weeks begin; it is also the point at which the 2300 days begin. At issue is the time for Christ's earthly ministry and death at His first coming and the question of what events will immediately precede His second coming. These are not unimportant questions.

The credibility of the principles of interpretation from which the above results follow is at issue as well. This is perhaps the item of greatest interest for people living now in the twentieth century and especially for Seventh-day Adventists, because the events surrounding the great disappointment of 1844 are a part of their own spiritual heritage and history.⁸⁴ If Christ began His public ministry in A.D. 26 instead of 27, one could argue that in either case His public ministry began and that finding out when has no interest. And if the judgment began in 1843 instead of 1844, that fact also could be dismissed as having only academic interest. But if one goes farther than this and makes the assumption that any divergence from earlier positions makes the system which produced them unreliable and untrustworthy, i.e., if challenges to those positions are felt to remove the basis for present faith, then it is important and even urgent to settle the questions dealt with in the present paper.

The farreaching nature of the issues make it all the more important to pay careful attention to exegetical method and in particular for Dan 9, Dan 8, and Ezra 7 not to be studied in isolation from each other. The nature of their significance is such that to separate them is to empty them. When we ask for the date of the decree in Ezra 7, included in the answer are the dates for the beginning of Christ's ministry on earth and for the second phase of His high priestly ministry in heaven shortly before returning in glory for those who love Him. Some will search the answer harder for assurance as to the reliability of the system than for any information it might provide on points of fact or detail. But detailed examinations should not be set aside. It is only when the historicist framework is examined closely, i.e., when it is forced to take detailed, exposed, and therefore vulnerable positions, that its reliability can be seen. Otherwise we are confined to generalities, and those issues which would be capable of vindicating the framework are not raised.

From what has been said it is clear that a lot depends on correctly dating the decree of Ezra 7. The only way to go about doing this is to determine what kind of calendar Ezra used. Unfortunately there is no internal evidence within the passage itself that would preclude either alternative. On the basis of only the information available within Ezra it is not possible to decide the issue either way. So at first glance the basis for claiming that 457 (using a fall-to-fall calendar) rather than 458 (using a spring-to-spring calendar) is the correct date for Artaxerxes' decree would appear to be insecure. Actually, however, this is not the case. The year 457 for the decree of Ezra 7 and the Jewish use of a fall-to-fall calendar from which it is derived both have excellent historical credentials. But Ezra is not the only historical source at our disposal for this period. We now turn to Nehemiah.

Nehemiah

The book of Nehemiah, like that of Ezra, is extensively dated. In two cases (1:1; 2:1) the year and month are given, in three cases only the year (5:14, 14; 13:6). Other dates consist of both a month and a day (6:15; 8:2), or only a month (7:73), or only a day (8:13; 9:1). This does not mean at all that our information about Nehemiah's calendar is defective. On the contrary, from Nehemiah we get one of the clearest and most persuasive examples anywhere in the Old Testament of a Jewish writer using a fall-to-fall calendar. For a summary of Nehemiah's datelines see table 14.

Table 14
Dates in Nehemiah

Reference	King	Yr	Mo	Dy	Julian F-F
Neh 1:1	[Artaxerxes]	20	Kislev	-	Nov/Dec 445
Neh 2:1	Artaxerxes	20	Nisan	-	Mar/Apr 444
Neh 5:14	Artaxerxes	20	-	-	445/44
Neh 5:14	[Artaxerxes]	32	-	-	433/32
Neh 6:15	[Artaxerxes]	[20]	Elul	25	Sep 21, 444
Neh 7:73	[Artaxerxes]	[21]	7	-	Sep/Oct 444
Neh 8:2	[Artaxerxes]	[21]	7	1	Sep 27, 444
Neh 8:13	[Artaxerxes]	[21]	[7]	2	Sep 28, 444
Neh 9:1	[Artaxerxes]	[21]	[7]	24	Oct 20, 444
Neh 13:6	Artaxerxes	32	-	-	433/32

Neh 1:1; 2:1. The dates in Neh 1:1 and 2:1 are highly significant. To understand the nature of their significance they must be compared. Both passages are quoted below.

(1) The words of Nehemiah son of Hacaliah: In the month of Kislev in the twentieth year, while I was in the citadel of Susa, (2) Hanani, one of my brothers, came from Judah with some other men, and I questioned them about the Jewish remnant that survived the exile, and also about Jerusalem. (Neh 1:1-2)

In the month of Nisan in the twentieth year of King Artaxerxes, when wine was brought for him, I took the wine and gave it to the king. (Neh 2:1)

The events of Neh 1:1 take place in Kislev during the twentieth year of Artaxerxes. Those of Neh 2:1 take place in Nisan also during the twentieth year of Artaxerxes. In a spring-to-spring calendar Nisan comes before Kislev. In the calendar used by Nehemiah Kislev comes before Nisan. From this we can only conclude that Nehemiah was not using a spring-to-spring calendar. The evidence requires a fall-to-fall calendar.

This conclusion is unavoidable if the order of chapters corresponds to the order of events. But it would still be possible to show that Nehemiah was using a spring-to-spring calendar if we could demonstrate that the passage in which he refers to Nisan (2:1) logically precedes the one in which he refers to Kislev (1:1-2). Thus, we would need to show that the events of chap. 2 logically precede those of chap. 1.

The purpose for the narrative of Neh 1 and 2 is to explain how Nehemiah came to be in Jerusalem at a later time, repairing its damaged wall and carrying out his various reforms. Some sort of explanation is called for, because when Nehemiah finally did go to Jerusalem he went as a representative of the king of Persia and the king's permission and support must be set in context. So the narrative of the book requires an introduction.

Nehemiah was a devout Jew. While still in Persia he heard that his fellow Jews in Jerusalem were under great difficulty. This caused him concern, which for a time he was able to conceal. As long as he did so Artaxerxes had no knowledge of Nehemiah's concern, Nehemiah had no basis for bringing his request before the king, and the king had no basis for sending him to Jerusalem. But then Nehemiah, as the royal cupbearer, made the grave mistake of allowing anxiety to show on his face before the king. Since anxiety could be taken as evidence of a plot Nehemiah's life was in danger at this point. But the crisis provided the necessary occasion for an explanation. It was at this point that Nehemiah requested permission to go to Jerusalem. The king then granted his request.

The sequence of events is important. News came that conditions in Jerusalem were bad. The news depressed Nehemiah. The king saw his sadness and inquired as to its cause. Nehemiah explained his concern for Jerusalem and was commissioned to go there. If the sequence is altered in any way, the whole narrative becomes meaningless. The order of events is correct as it stands. For Nehemiah Kislev really did precede Nisan. Thus, Nehemiah can only have used a fall-to-fall calendar.

Elephantine papyri

The papyri discovered on the Nile island of Elephantine are not part of the Bible record, but come from the same period of time as Ezra-Nehemiah. They were left by a garrison of

Jewish soldiers and their families who lived on Elephantine from at least 471 to 402 B.C.⁸⁵ The papyrus contracts and legal documents they left behind are of great importance in any discussion of post-exilic Jewish calendars because a number of them give datelines in terms of both Egyptian and non-Egyptian calendars. The question for our purposes is whether the non-Egyptian component of such dual dates was in fact Persian (i.e., Babylonian) or Jewish.

Kraeling 7

1. In the month of Tishri, that is Epiphi, in the 4th year of Darius [the king, at that time] in Yeb the fortress said Ananiah b. Haggai,⁸⁶

The Darius referred to in the papyrus document just quoted is Darius II (423-405). Darius II came to the throne in February 423. Using a Persian calendar this king's first regnal year began Nisan 1, 423. In a fall-to-fall system, however, his first year would not begin until the following Tishri. Papyrus Kraeling 7 is dated within Tishri, so by the time it was written Darius' fourth regnal year (420/19) had already begun in both types of calendar. The year number would be the same in either case. Because of the time of year when Darius II came to the throne initially, and because of the time of year when papyrus Kraeling 7 is dated, it contains nothing that would indicate which type of calendar was being used. Only a date in months 1-6 can give us the desired information.

Kraeling 6

1. On the 8th of Pharmuthi, that is the 8th day of Tammuz, the 3d (read: 4th) year of Darius the king, at that time⁸⁷

In terms of the present investigation the slightly earlier papyrus Kraeling 6, just quoted, is one of the most interesting to be found at Elephantine. Kraeling felt that year 3 was a scribal mistake because the 8th of Pharmuthi in the Egyptian calendar does not correspond to the 8th of Tammuz in a Persian calendar during the third year of Darius (421/20), but does during the fourth year. Horn and Wood comment as follows:

Pharmuthi 8 in the 3d Egyptian year of Darius II fell on July 11/12 (sr-sr), 421 B.C., while Tammuz 8 according to the Babylonian calendar was July 21/22 (ss-ss). Since Tammuz is the fourth month of the Babylonian calendar, July 21/22, 421 B.C., fell in the 3d regnal year of Darius II also according to Persian reckoning, and no agreement between the two dates can be achieved if one would assume that the scribe used either the Persian or Egyptian system of reckoning the 3d year of Darius.⁸⁸

It is important to realize that Kraeling took a spring-to-spring calendar as a given in reasoning that the scribe made a mistake. And so he translated, "the 3d (read: 4th) year of Darius the king, . . ."⁸⁹ But this is not the only possible interpretation. The fact that a spring-to-spring calendar does not account for the year number on the papyrus does not necessarily mean that the year number is wrong. It could mean that the calendar used to evaluate it has been incorrectly identified. The incongruity between the two dates in question, as reckoned in terms of a Persian spring-to-spring calendar, however, has been correctly noted. The incongruity is just as Kraeling indicates.

If we assume that the non-Egyptian component of the dateline on papyrus Kraeling 6 was not Persian/Babylonian but Jewish--i.e., if Darius' regnal years were being reckoned here from an autumn starting point instead of a spring starting point--then the Julian year referred to

is not 421 but 420 and there is no problem whatever in reconciling Pharmuthi 8 with Tammuz 8. "Pharmuthi 8 was, as in the previous year, July 11/12 (sr-sr), and Tammuz 8 either July 10/11 (ss-ss) or July 11/12 (ss-ss)."⁹⁰

What papyrus Kraeling 6 indicates is that for the non-Egyptian component of those dates which they gave in two forms, the Jewish garrison at Elephantine did not use a Persian spring-to-spring calendar but a Jewish fall-to-fall calendar. Thus, there is forceful evidence that the expatriate Jews living at Elephantine in upper Egypt used the ancient fall-to-fall calendar of their ancestral homeland. In this regard Papyrus Kraeling 6 is not an isolated example, but represents the normal state of affairs at Elephantine. What is unusual about it is that it provides a clear test case. Other papyri found at the same site must be interpreted in the same way.

It is necessary at this point to ask what significance the above facts have. Both the provincial Jewish scribe who was responsible for papyrus Kraeling 6 and Nehemiah the Jewish cupbearer to the Persian king--one of whom lived on an island in the Nile (near modern Assuan, Egypt), the other at the royal Persian court in Shushan or Susa (near modern Dizful, Iran)--clearly used a fall-to-fall calendar. If the issue before us is which calendar Ezra used, then the evidence from Elephantine and from the book of Nehemiah is very significant indeed.

New Testament Times

James

That a fall-to-fall calendar continued in use among Jews down to New Testament times is demonstrated by at least two first century A.D. sources. The first is the book of James.

See how the farmer waits for the land to yield its valuable crop and how patient he is for the fall and spring rains. (James 5:7)

Here fall rains come first and are followed later by spring rains. Thus, fall comes first and is followed later by spring. James used a fall-to-fall calendar. It is possible that other New Testament passages bear on this question as well. I have not made a systematic search for them.

Josephus

The practice of numbering months from the spring, as described elsewhere in the present paper, has appeared as final proof to some that the year which contained those months also began in the spring.⁹¹ In this context consider the following statement by Josephus:

This catastrophe [the Flood] happened in the six hundredth year of Noah's rulership, in what was once the second month, called by the Macedonians Dios and by the Hebrews Marsuan, according to the arrangement of the calendar which they followed in Egypt. Moses, however, appointed Nisan, that is to say Xanthicus, as the first month for the festivals, because it was in this month that he brought the Hebrews out of Egypt; he also reckoned this month as the commencement of the year for everything relating to divine worship, but for selling and buying and other ordinary affairs he preserved the ancient order.⁹²

Josephus here refers twice to months by number. Marcheshwan (Marsuan) is the "second month," while Nisan is "the first month." On a first reading it would appear that Marcheshwan is the month next after Nisan (month 1). In fact it is the month next after Tishri (month 7). The above quotation removes all doubt that for Josephus the Jewish year began in the autumn. This does not mean, however, that Nisan is no longer month 1. It is indeed "the first month," but it is important to read the whole phrase. Nisan is "the first month for the festivals."

One other point should not be missed. Josephus says that Moses introduced a change by making Abib (later Nisan) month 1 for religious purposes. If the change introduced by Moses was to make spring the year's starting point, then before that time it was not the year's starting point. Of the two patterns, that of starting the year in the spring is younger, while that of starting the year in the fall is older. In the above quotation, then, there is evidence both for the very early use of a fall-to-fall calendar among Jews (before Moses) and also for the very late use of that same type of calendar (after A.D. 70).

A Modern Post Script

If Jews in antiquity thought of the year as beginning in the fall, the practice has persisted a long time.⁹³ Passover is still the year's first religious festival in modern times, but Jewish New Year is not in the spring. The date for Jewish New Year, or Rosh Hashanah, is printed on most modern calendars. This year it was October 4.

Summary

Before Israel had kings a fall-to-fall calendar was used for all except religious purposes. Here we are not talking about a carefully codified and regulated document, but rather a simple lunar calendar periodically adjusted to keep Passover in phase with the barley harvest. The Jews' temporal worldview at this early time in their history was largely determined by the agricultural cycle of the land they lived in, which had a winter growing season and two main harvests. In these circumstances the year would begin when the last of the harvests was complete and the cycle could begin repeating itself.

The religious calendar established by Moses took as its special point of reference the Exodus from Egypt. Thus, the annual festivals began in the spring at the time of the Exodus, which in turn was close to barley harvest. But the yearly series of festivals was only six months long, so despite the fact that it began in the spring it ended in the fall. It would be easy enough for a person living in Canaan at an early time in Israel's history to interpret the religious cycle in terms of the agricultural cycle. Thus, while Passover marked a beginning point in the religious year, the Day of Atonement with equal clarity marked an ending point. This fact represents a fundamental aspect of the theology of the Day of Atonement. That the religious year ended in the fall would at least not do anything to contradict the people's secular concept, based on harvests, that the agricultural year ended at the same time. It may well be that the idea of a secular fall-to-fall calendar was actually reinforced by the spring-to-spring religious calendar. At the very least there was ample room for both systems to coexist. And so the months were numbered from the spring, according to the command of God in Exod 12:1-2, but for all non-ceremonial purposes the year continued to start in the fall.

During the period of the united monarchy a fall-to-fall calendar was still in general use. Supporting this assertion are what we know from 1 Kgs 6 about the construction of Solomon's temple and what we have recently learned from the Gezer calendar.

During the period of the divided monarchy the evidence is mixed. A spring-to-spring calendar was evidently used in the northern kingdom of Israel, but not in the southern kingdom of Judah. Evidence for the continued use of a fall-to-fall calendar by Judean court historians occurs both in the account of Josiah's reforms in 2 Kgs 22-23 and the account of Jerusalem's destruction in 2 Kgs 25.

Going slightly back now in time in order to gather evidence from the prophets, during the eighth and seventh centuries Jeremiah is the only writing prophet who systematically dates his oracles, or who dates them at all. With only one clear exception Jeremiah's dates either demand or are consistent with a fall-to-fall calendar. This fact in turn corresponds to the data available for Josiah and Zedekiah, both of whom lived at the same time as Jeremiah.

No northern prophets dated their writings. Hosea and Amos ministered in part to the northern kingdom, and may have used a spring-to-spring calendar, but no dates are given to confirm or deny the likelihood that they did so.

During the sixth century the evidence is again mixed. It is my interpretation that first generation exiles continued to use the fall-to-fall calendar of their homeland, while second generation exiles did not. Thus, both Ezekiel and Daniel used a fall-to-fall calendar, while Haggai and Zechariah used a spring-to-spring calendar.

The story of Esther takes place during the fifth century and in all probability a spring-to-spring Persian calendar is the one used in it. Nehemiah, by contrast, clearly uses a fall-to-fall calendar. Reasoning from Nehemiah to Ezra in this regard is sound practice, just as we reasoned earlier from Haggai to Zechariah. And apart from Nehemiah we have supporting evidence from Elephantine, where a fifth century Jewish garrison used its own fall-to-fall lunar calendar alongside the Egyptian solar calendar. Thus, if what we base our conclusion on is the available evidence, that conclusion must be that Ezra also used a fall-to-fall calendar. It would be easier to support the claim that he did than to say he did not.

During New Testament times there is evidence for a fall-to-fall calendar from both James and Josephus. Thus, the impact of the exile on mainstream Jewish calendrical practices was short lived. And at the present time Rosh Hashanah still comes in the autumn, just as its ancient counterpart did so many years ago.

Thus, we can state with a good degree of confidence that the general and expected state of affairs is for Jews in antiquity to use a fall-to-fall calendar. Exceptions can be documented, but their status as exceptions must now be acknowledged. These include: (1) the northern kingdom of Israel during the two centuries of its existence between 931/30 and 723/22 and (2) second generation exiles during the late sixth century. The 364 day solar calendar used at Qumran is also a major exception.⁹⁴

Conclusion

The question now is what the above discussion means for our interpretation of Ezra. What it means is that unless someone can come forward with strong evidence to the contrary, our working assumption will have to be that Ezra used a fall-to-fall calendar just as Nehemiah did. The implications which follow from this fact in regard to placing the date for Ezra 7 not in 458 B.C. but in 457 B.C. are reasonable and should be accepted.

NOTE: All Scripture quotations in this paper, except when noted otherwise, are from the Holy Bible, New International Version. Copyright (c) 1973, 1978, 1984 International Bible Society. Reprint revised 9/6/87.

¹See Hardy, "The Day-Year Principle in Dan 9:24-27," *Historicism* No. 3/Jul 85, pp. 44-45; Siegfried H. Horn and Lynn H. Wood, *The Chronology of Ezra 7* (Washington, D.C.: Review and Herald, 1970), pp. 126-27.

²The Egyptian calendar was not lunar but solar and always had 365 days. These differences are significant in and of themselves, but they are not the ones I have in mind. The important difference for Jews living at the time of the exodus would be which season marked the beginning of the year. Because there was no leap year in the Egyptian calendar, every four years one day was lost and this small discrepancy added up to an entire year over a period of 1460 (365x4) years. Thus, at different times in history the Egyptian year began in different seasons. Taking the fourth year of Solomon to be 966/65 on the basis of 1 Kgs 11:42 and taking the 480 years of 1 Kgs 6:1 at face value, the textual evidence for the Exodus would place that event in the spring of 1445 B.C. At that time the first day of the Egyptian year was in late August. If Israel was in Egypt for 215 years (accepting a short chronology for this period), they would have entered Egypt in about 1660 B.C. At that time the Egyptian year would have begun in mid-October. The Hebrews, as expatriate citizens of Canaan, thought of time in terms of equinoxes. To them the Egyptian year would have started first earlier than, then at the same time as, and finally later than the autumnal equinox. In all of this the equinox was a point of reference--not in an astronomically sophisticated sense but more generally as a change of seasons. The Hebrew's former Canaanite neighbors also started the year in the fall. Therefore when God told Moses to number the months from the spring, in addition to commemorating an important event in Jewish history which occurred at the beginning of spring, that command should also be seen as introducing an intentional contrast with the worldview of both Canaanites and Egyptians.

³Along the coast as far S as Gaza, the Mediterranean zone has mild winters (53.6°F, 12°C, mean monthly average for January at Gaza) compared with the severer conditions of the interior hills (Jerusalem 44.6°F, 7°C, in January). But summers are everywhere hot (Gaza 78.8°F, 26°C, in July, Jerusalem 73.4°F, 23°C). . . . Less than one-fifteenth part of the annual rainfall occurs in the summer months from June to October; nearly all of it is concentrated in winter to reach a maximum in mid-winter. The total amount varies from about 35-40 cm on the coast to about 75 cm on Mt Carmel and the Judaeian, Galilean and Transjordan mountains" (*New Bible Dictionary*, 2nd ed. [Wheaton, IL: Tyndale House, 1982], s.v. "Palestine," by J. M. H.).

⁴"Astronomers employ the Julian reckoning unchanged to this day because of its convenient regularity, and historians date all pre-Christian events in the Julian scale extended backward theoretically, as if it had been in use throughout" (Horn and Wood, *Chronology of Ezra 7*, p. 45).

⁵To take one set of examples, February has 28 days in 1700, 1800, and 1900, but 29 days in 2000 (*ibid.*, pp. 44-45, n. 44). At first we expect 2000 to have a leap year because it is

evenly divisible by 4, then expect it not to because it is evenly divisible by 100, and then find that it does have a leap after all because it is evenly divisible by 400. In this way the Gregorian calendar omits three leap years every 400 years.

⁶The sectarians at Qumran used a solar year with 364 days (30+30+30+1 repeated four times). See James C. Vanderkam, "The Origin, Character, and Early History of the 364-Day Calendar: A Reassessment of Jaubert's Hypotheses," *Catholic Biblical Quarterly* 41 (1979): 390-411.

⁷For readily accessible comment on the Islamic view of time see Daniel J. Boorstin, *The Discoverers* (New York: Random House, 1983; Vintage Books, 1985), pp. 10-11. Boorstin begins his discussion of time with the moon (*ibid.*, p. 4), showing the priority of the lunar month over the solar year in a number of societies, ancient and modern (*ibid.*, pp. 4-24).

⁸An exception is Abib (later Nisan), which was customarily referred to by name rather than number. See Exod 9:31; 13:4; 23:15; 34:18 (x2); Lev 2:14; Deut 16:1 (x2). This fact is pointed out in William Smith, *Smith's Bible Dictionary*, reprint ed. (New York: Pyramid, 1967), s.v. "Month." Abib originally referred to young barley ears ("new grain," Lev 2:14) that matured earlier in the year than any other crop.

⁹Seasonal adjustments in the Babylonian calendar were made in such a way that the first day of Nisan came during the last third of March or in April, most commonly on or after the equinox but not before. How long after would depend on when the moon first became visible. See Richard A. Parker, "Persian and Egyptian Chronology," *American Journal of Semitic Languages* 58 (1941): 294. The question of calculation as opposed to direct observation in a lunar calendar has been raised by Horn and Wood, "Since most translation periods have a low tendency, there is the possibility that the Jews in Elephantine did not entirely rely on the observation of the new crescent to determine the beginning of the new month" ("The Fifth-Century Jewish Calendar at Elephantine," *Journal of Near Eastern Studies* 13 [1954]: 19). This is not to say that the time of first visibility was unimportant at Elephantine. On the contrary, the calendar used there was in such close agreement with what we know of the lunar cycle from astronomy that Horn and Wood speculate whether observation alone could account for such accuracy. Parker warns against making calculation a substitute for observation, "In two years out of seven, Miss Amadon finds it necessary to place Nisan 1 on the third day of lunar visibility. It is inconceivable to the writer that any ancient people using a lunar calendar should follow such a practice" ("Ancient Jewish Calendation: A Criticism," *Journal of Biblical Literature* 63 [1944]: 175).

¹⁰The Babylon data from 626 B.C. down to the first Christian century have been assembled by Richard A. Parker and Waldo H. Dubberstein, *Babylonian Chronology 626 B.C.-A.D. 75*, Brown University Studies, vol. 19 (Providence: Brown University Press, 1956). The title is slightly different in the 1942 edition. There the cutoff point is A.D. 45 rather than A.D. 75. It is hazardous to reason directly from the Babylonian system to the Jewish system, despite the number of similarities, but it is necessary to do so because there is no other place to begin. One has to start somewhere. On the accuracy of Parker and Dubberstein's tables for Babylonian data see n. 16 below.

¹¹The Babylonian calendar also at one time had a fall-to-fall orientation, just like that in Canaan and elsewhere. This claim follows from the way months were added, or intercalated, into the calendar from time to time. In Babylon intercalation was practiced in order to make the important New Year celebration correspond to the beginning of spring. The month repeated was generally the one immediately prior to the target month, i.e., the one immediately prior to whatever month was being stabilized in relation to the seasons. In the case of an autumn starting point a second Elul would be added periodically; in the case of a spring starting point a second Adar would be added. For this reason it is interesting to note that the Babylonian calendar showed an early preference for second Ululus (Eluls). At a later time it showed a preference for second Adarus (Adars). This highly significant change led Parker and

Dubberstein to speculate that the earliest Babylonian calendar began in the autumn and not in the spring (1942 ed., p. 3).

There is an important precedent for such usage at Ebla. William H. Shea comments as follows: "The associations Pettinato has worked out in this way appear to be correct and they locate the month of *beli*, with which the New Calendar began in the fall (around September). We lack such specific textual evidence for the time of year with which the Old Calendar began. At present, it can only be assumed that it began at the same time of year as the New Calendar did. The agreement in meaning of some of the parallel month names and the similar location for the intercalary month currently suggest that the Old Calendar also began in the fall" ("The Calendars of Ebla, Part I: The Old Calendar," *Andrews University Seminary Studies* 18 [1980]: 30). There is no reason to suggest any link between the change of calendars that occurred at both of these important ancient cities. At Ebla the change had to do with month names only, while at Babylon the change was more substantive. It is of immediate interest, however, that early evidence from both cities favors an autumn rather than spring beginning point for the year.

¹²There is still a question whether Jews intercalated the month Elul (just before Tishri) as well as the month Adar (just before Nisan) (see Horn and Wood, "Calendar at Elephantine," p. 20). If they only added second Adars, this fact reveals a unilateral focus of attention on the month immediately following Adar, which was Abib or Nisan (*Bible Commentary* 2:104). Babylonians, on the other hand, added one Elulu every nineteen years. If it is true that Jews only used Adar as an intercalary month and never Elul, this would show that the Jewish purpose for intercalation was to regulate the time for Passover. In Babylon the New Year ceremony was both a religious and civil event; in Judah it was only civil. Passover half a year away was the corresponding religious event. Once the cycle of religious festivals had begun there would be no reason to introduce an extra month between Passover and the Day of Atonement. So in Babylon intercalation was a civil as well as religious regulator; in Judah it was apparently used only for religious purposes.

¹³The orders transmitted to the temple officials at Uruk look very much like 'form letters,' and it seems reasonably certain that they were sent to temple officials throughout Babylonia. These letters also make it clear that no established system which fixed the seven intercalations at definite points within the nineteen-year period existed at the beginning of the Persian period. Letter No. 15 implies that intercalary orders were even issued within a few weeks of the beginning of an intercalary month" (Parker and Dubberstein, *Chronology*, 1956 ed., pp. 1-2).

¹⁴*Bible Commentary* 2:113.

¹⁵The Jewish religious festivals, and their need to relate Passover to the time for barley harvest, provided a natural corrective to the perpetual discrepancy between a year based on the movements of the moon and agricultural seasons determined by the movements of the sun. "There could never be an extra Hebrew year in 33 seasonal years, for every Jewish year had a Passover, held in connection with a harvest, and there can be only 33 harvest seasons in 33 years" (*ibid.*).

¹⁶There are limitations in accuracy to consider as well: "A 20 per cent inaccuracy of Parker and Dubberstein's tables can be demonstrated by an actual check of published cuneiform business documents (from Nabopolassar to Artaxerxes I) that happen to be dated on the 30th of various months. Of 73 such 30-day months thus attested, 15 are given a length of only 29 days in the tables of Parker and Dubberstein's *Babylonian Chronology*" (Horn and Wood, "Calendar at Elephantine," p. 19, n. 51).

¹⁷Qof "head" is the name for the nineteenth letter of the Hebrew alphabet. Notice that the name for the twentieth letter, Resh, also means "head." The Hebrew word *qôp* is one of a handful of Semitic words that have Indo-European cognates, in this case Sanskrit *kapī-* (Ludwig Koehler and Walter Baumgartner, eds., *Lexicon in Veteris Testamenti libros* [Leiden: E. J. Brill, 1958], p. 833), Latin *caput*, English "cap," "caption," and "capital." The expression *t'qûpâ*

(*Wendepunkt*), derived from *qôp*, has a number of possible referents. It can refer to the winter solstice (Ps 19:7[6]), to the autumnal equinox (Exod 34:22; 2 Chron 24:23[?]), and in later Hebrew to the new moon (Ben Sira 43:7). In the case of Exod 34:22 we know that *t^eqûpat haššānâ* refers to the autumnal equinox, because of its association with the Feast of Ingathering on the fifteenth day of the seventh month (September/October).

D. J. A. Clines ("The Evidence for an Autumnal New Year in Pre-exilic Israel Reconsidered," *Journal of Biblical Literature* 93 [1974]: 28) comments on the word in question and mentions 1 Sam 1:19-21 as a relevant example. This is an interesting passage and one which illustrates the point being made here rather than the one he suggests: "Elkanah lay with Hannah his wife, and the Lord remembered her. So in the course of time [*lit^eqûpôt hayyāmîm*] Hannah conceived and gave birth to a son" (vss. 19-20). Then in vs. 21 "Elkanah went up with all his family to offer the annual sacrifice to the Lord . . ." Clines associates *lit^eqûpôt hayyāmîm* (which he cites as *lit^eqûpat hayyāmîm*) with the time of the annual feast. NIV, by contrast, correctly associates it with the time of Hannah's childbirth. Thus, the period of time that reaches its culmination in vs. 20 is not one of twelve months but of nine months. What this passage demonstrates is not that the year begins in the spring but that the word *t^eqûpâ* can refer to the culmination or end of a period lasting any length of time. The expression *t^eqûpat haššānâ* as applied to the autumnal equinox refers to the end of the year, which is also the beginning of the year. See also the brief comment on *t^eqûpâ* in John Briggs Curtis, "A Suggested Interpretation of the Biblical Philosophy of History," *Hebrew Union College Annual* 34 [1963]: 119). I do not wish to imply by citing Curtis' paper that I necessarily agree with his major thrust, but on *t^eqûpâ* what he says is germane.

¹⁸Different month names were used after the exile. The second month, Ziv, is later called Iyyar and corresponds to April/May. The eighth month, Bul, is later called Marcheshwan and corresponds to October/November. Neither Iyyar nor Marcheshwan is mentioned by name in the Bible. See table 1, above.

¹⁹According to 2 Chron 3:2 work began at the beginning of the month: "He began building on the second day of the second month in the fourth year of his reign." So the entire second month is included here as part of the construction period.

²⁰We do not know when during the eighth month the work ended, but the whole month would be counted using the inclusive method. See following note.

²¹Inclusive reckoning was commonly used by Jews both before the time of Solomon and afterward. For example, "Noah was six hundred years old when the floodwaters came on the earth" (Gen 7:6); "In the six hundredth year of Noah's life, on the seventeenth day of the second month--on that day all the springs of the great deep burst forth, and the floodgates of the heavens were opened" (Gen 7:11). Here the distinction between cardinal and ordinal numbers is collapsed. Noah was 600 years old not after completing his 600th year, but during it. This is inclusive reckoning. See *Bible Commentary* 1:182; 2:136-37. By contrast, in western countries today a person is not sixty years old until after his sixtieth birthday, i.e., until after sixtieth year has already been completed. This is exclusive reckoning. Here the two principles are clearly contrasted, but counting a period of elapsed could be done in a variety of ways and more research should be done in this area. One could total the number of months, divide by twelve, and count the remainder as a whole year (see *Bible Commentary* 1:182.) One could count whole years and add the remaining months on either end, as I have done here. But then the question would be what a whole year is. Alternatively one could simply count New Years, but this would not qualify as inclusive reckoning because, while a New Year is a point of time in this comparison, the distinction between inclusive and exclusive reckoning depends crucially on being able to ask whether the period of time one is now in should (inclusive) or should not

(exclusive) be counted. Thus, there must be periods of time before inclusive reckoning can take place.

²²At least two intercalary months would be added during this length of time. In any event it is unlikely that months would be counted as units rather than subgrouped into larger units. If those larger units are years, we again raise the question of what a year is. At issue is whether one counts from the beginning of the period being reckoned or from some other point such as the next New Year. See *Bible Commentary* 2:134.

²³Not everyone agrees that Jews counted inclusively in Bible times, but the concept is easily defended. Consider for example the idiomatic expression *ʿetmōl šilšōm*, translated "before" (Ruth 2:11), "In the past" (1 Chron 11:2), and so on. Literally the words mean "yesterday, three days," where *šilšōm* is compounded from the two words *šālōš* "three" and *yôm* "day(s)." If one counts inclusively starting with today, "yesterday" would be two days ago and the day before that would be *šilšōm*, the third day. Inclusive reckoning was deeply ingrained in the thoughtworld of the language group which produced this idiom. Clines is one of those who doubts that biblical writers counted inclusively. But he has simply not come to grips with the full extent of the influence that this principle had on ancient Jewish thought ("Autumnal New Year," p. 30-32).

²⁴Translated by William F. Albright, quoted in James B. Pritchard, ed., *The Ancient Near East: An Anthology of Text and Pictures* (London: Oxford University Press, 1958), p. 209 (ANET, p. 320).

²⁵The tablet was first dated in the sixth century B.C. Recently, however, it has been attributed to the eleventh, tenth or ninth century B.C., and it may be regarded, on linguistic and palaeographic grounds, as the most ancient inscription in Early Hebrew writing, as old as the age of Saul or David" (D. Winton Thomas, ed., *Documents from Old Testament Times*, Harper Torchbooks [New York: Harper & Row, 1958], pp. 201-3).

²⁶Pritchard, *Ancient Near East*, p. 209.

²⁷Immediately after Saul's death his general Abner took "Ish-Bosheth son of Saul and brought him over to Mahanaim. He made him king over Gilead, Ashuri and Jezreel, and also over Ephraim, Benjamin and all Israel" (2 Sam 2:8-9). Mahanaim was on the east side of the Jordan, but notice that Ish-Bosheth's realm included Benjamin and Ephraim. Meanwhile David ruled Judah from the city of Hebron (2 Sam 2:1). David eventually consolidated his rule over both all of the northern and southern tribes, but the unity he imposed did not last after the death of Solomon. It is therefore not just that Solomon died, but that his successor was not strong enough to maintain an artificial unity in the face of historic pressures working against it.

²⁸Alternatively one could say, the oldest original document in the Jewish dialect of Northwest Semitic yet discovered. Hebrew was just one Canaanite dialect among many. On the relationship of Hebrew to the languages of Israel's closest neighbors see Zellig S. Harris, *Development of the Canaanite Dialects: An Investigation in Linguistic History* (New Haven: American Oriental Society, 1939), 1-12.

²⁹*New Bible Dictionary*, 2nd ed., s.v. "Olive," by R. K. H. and F. N. H. The SDA *Bible Commentary* continues this same thought: "In Palestine and neighboring lands the agricultural year has always begun in the autumn. After the spring grass has been parched and the soil baked by the long, rainless summer, the autumn rains moisten the soil for planting. This is the early rain, beginning perhaps in October and increasing in November. The wet season lasts through the winter, ending with the 'latter rain' of spring, which matures the grain (see Deut. 11:14; Jer. 5:24; Hosea 6:3; Joel 2:23). The barley harvest in Palestine begins in the middle or end of April, and that of wheat comes in the next month, followed by summer fruits, then grapes and olives in the late summer and fall" (2:109).

³⁰According to Parker, the date for the spring New Year in the Persian calendar generally came in the last third of the corresponding Julian month, most commonly on or after the equinox ("Persian and Egyptian Chronology," p. 294). The Canaanite fall New Year was not

calculated in so sophisticated a manner and was probably not regulated by intercalation at all. Only the date for Passover was. When September/October is given as the Julian equivalent for Tishri. If Tishri began in October during a given year it could be expected to end in November, but the Julian equivalent is still September/October because that is when the ancient Semitic month commonly began.

³¹A spring-to-spring year was not the original pattern in Babylonia: "The specific years in which the intercalations were to be made, however, and whether they should be second Adarus or second Ululus remained to be determined empirically--a process which lasted some centuries. . . . In the earlier periods there is a marked preference for second Ululus, perhaps going back to the time when the year began in the autumn with the month Tashritu" (Richard A. Parker and Waldo H. Dubberstein, *Babylonian Chronology 626 B.C.-A.D. 45*, Studies in Ancient Oriental Civilization, no. 24 [Chicago: University of Chicago Press, 1942], pp. 1, 3). (Elsewhere I use the 1956 edition of this standard work; see n. 10 above.)

As mentioned in n. 11 above, much older than either the Gezer calendar or the Babylonian system of Parker and Dubberstein are the two calendars found recently at Ebla. "The main New Calendar text, the 7-year record from the reign of Ibbi-Sipiš, begins with the month of *be-li*. By correlating the month names of both calendars with the climatological seasons of Syro-Palestine, that month can be located in the fall, probably in the lunar month of September/October" (Shea, "The Calendars of Ebla, Part II: The New Calendar," *Andrews University Seminary Studies* 19 (1981): 60). For a table comparing the two, see Shea, "Calendars of Ebla, Part I," p. 132. Thus, at three different locations in the Middle East (Ebla, Israel, and Babylon) there is strong early evidence for a fall-to-fall calendar.

³²See Edwin R. Thiele, *A Chronology of the Hebrew Kings* (Grand Rapids: Zondervan, 1977), pp. 14-16.

³³Clines directs his challenge against the idea of a fall-to-fall calendar to Judah but I think he could be fairly interpreted as claiming that it was not used anywhere (see n. 17 above). Agreeing with Clines that Judah did not use a fall-to-fall calendar, Nadav Na'aman nevertheless diverges from him to suggest that Israel did ("Historical and Chronological Notes on the Kingdoms of Israel and Judah in the Eighth Century B.C.," *Vetus Testamentum* 36 [1986]: 82-83).

³⁴Horn and Wood, *Chronology of Ezra 7*, p. 44.

³⁵In Exod 12:3 the date for the first Passover is given as the tenth day rather than the fourteenth.

³⁶Clines carries the argument further, pressing it to an extreme. He suggests not only that two weeks would be insufficient to do everything in 2 Kgs 23. Six months would not be enough time either ("Autumnal New Year," p. 32). Thus, he counters the obvious flaw in the spring-to-spring hypothesis in this passage by suggesting that the same flaw applies to the fall-to-fall hypothesis. If Clines is correct, one could reasonably claim--although it would still not be necessary to claim--that Josiah used a spring-to-spring calendar. This much might be accepted as a plausible argument whether or not it were also a successful one. But Clines then goes on to say that "there would have been no physical impossibility in Josiah's doing all he is said to have done in a fortnight if the word of a king is thought as good as a deed" (p. 33). Taken together his two arguments weaken each other. By proposing both extremes simultaneously--i.e., that two weeks would be a possibility but six months would not be enough--Clines himself makes the best of cases for taking the middle ground between them. When 2 Chron 34 is considered, a period of between two weeks and six months would be quite adequate to account for what Josiah did during the first half of his eighteenth regnal year, which corresponds perfectly with the requirements of a fall-to-fall calendar in 2 Kgs 23.

³⁷"9. For twenty-one years Nabopolassar had been king of Babylon. 10. On the 8th of the month of Ab he died (lit. 'the fates'); in the month of Elul Nebuchadrezzar returned to Babylon 11. and on the first day of the month of Elul he sat on the royal throne in Babylon"

(D. J. Wiseman, *Chronicles of Chaldaean Kings [626-556 B.C.] in the British Museum* [London: British Museum, 1956], p. 69.)

³⁸In their article entitled, "Chronology of the Old Testament," in the *New Bible Dictionary* (2nd ed.), K. A. Kitchen and T. C. Mitchell for the most part follow Thiele's pioneering work. Only two significant changes are introduced. First, Kitchen and Mitchell accept a coregency for Hezekiah, just as Horn does ("The Chronology of King Hezekiah's Reign," *Andrews University Seminary Studies* 2 [1964]: 40-52). And second, they suggest moving the date for the fall of Jerusalem to 587. The one change is entirely justified by the evidence but the other is not, at least not on the basis of 2 Kgs 24:18 and 25:8. The very slightly modified Kitchen and Mitchell summary of Thiele's chronology is brought together in convenient tabular form in Roland Kenneth Harrison, *Introduction to the Old Testament* (Grand Rapids: Eerdmans, 1969), pp. 733-36.

³⁹In addition there are four important but undated historical allusions (Isa 1:1; 6:1; 7:1; 20:1). The last two speak respectively of a joint attack on Jerusalem by Rezin king of Aram and Pekah king of Israel (7:1) and of an attack on Ashdod by Sargon king of Assyria (20:1). But there is little hope at present of learning anything in regard to Isaiah's calendar from such passages.

⁴⁰In the fourteenth year of his reign Hezekiah gave in to Sennacherib and sent him about one ton of gold (thirty talents) and about eleven tons of silver (300 talents) (2 Kgs 18:14). Sennacherib places the figure at 800 talents of silver (about 30 tons): Hezekiah "did send me, later, to Nineveh, my lordly city, together with 30 talents of gold, 800 talents of silver, precious stones, antimony, large cuts of red stone, couches (inlaid) with ivory, *nîmedu*-chairs (inlaid) with ivory, elephant-hides, ebony-wood, box-wood (and) all kinds of valuable treasures, his (own) daughters, concubines, male and female musicians. In order to deliver the tribute and to do obeisance as a slave he sent his (personal) messenger" (Pritchard, *Ancient Near East*, pp. 200-201).

Giving Sennacherib thirty tons of silver, or even eleven tons of silver, along with all the other gifts mentioned, does not reflect an attitude that would provoke the Assyrian king to send his field commander to Jerusalem with the following message: ""This is what the great king, the king of Assyria, says: On what are you basing this confidence of yours. . . . On whom are you depending, that you rebel against me?"" (2 Kgs 18:19-20). The biblical evidence is that there were two campaigns of Sennacherib against Judah. During the first campaign Hezekiah yielded to the king's demands. We know this both from 2 Kgs 18:13-16 and the Assyrian annals. During Sennacherib's second campaign he did not yield to that king's demands. His resistance in the face of an otherwise certain defeat and God's supernatural assistance in response to his faith are the whole point of 2 Kgs 18:17-19:37 and Isa 36:2-37:38. Two entirely different situations are depicted here. See table below.

	Sennacherib	Isaiah	2 Kings
1st campaign	Annals	36:1	18:13-16
2nd campaign	. . .	36:2-37:38	18:17-19:37

Sennacherib's court historians wrote from a particular point of view which it was their purpose to support, and so did Isaiah. Because the first campaign was successful, that is the one discussed at length in the Assyrian records. Because the second campaign was a disastrous failure, Sennacherib says nothing about it. By contrast, this second campaign is the one that Isaiah deals with almost exclusively. For another writer who comes to similar conclusions see Hayim Tawil, "The Historicity of 2 Kings 19:24 (=Isaiah 34:25): The Problem of *Ye'ôrê Māšôr*," *Journal of Near Eastern Studies* 41 (1982): 202-4.

⁴¹See Harrison, *Introduction*, pp. 926-27, 932-37.

⁴²We are dealing here with a majority of those who have written on the subject. Few reject the idea that a fall-to-fall calendar was used in Judah. Clines calls the fall-to-fall calendar hypothesis the "prevailing scholarly opinion" ("Autumnal New Year," p. 22).

⁴³"Daniel also employs Tishri years, but Jeremiah, Ezekiel, Haggai, and Zechariah used Nisan years for the Hebrew kings and also for the rulers of Babylon and Persia. Thus, according to Daniel 1:1, Nebuchadnezzar's attack on Jerusalem was made in the third year of Jehoiakim, but according to Jeremiah 25:1 and 46:2, this campaign took place in Jehoiakim's fourth year" (Thiele, *Chronology*, p. 68, n. 3).

⁴⁴"It is, therefore, obvious that the date of the fall of Jerusalem depends on what type of calendar is employed. While no definite and unassailable conclusions can be reached until a historical record dealing with that event is found, it is the present writer's conviction that the authors and/or compilers of the books of Kings, Chronicles, and Jeremiah used a calendar year that began in the autumn with the month of Tishri" (Siegfried H. Horn, "The Babylonian Chronicle and the Ancient Calendar of the Kingdom of Judah," *Andrews University Seminary Studies* 5 [1967]: 16).

⁴⁵See Horn, "Calendar of Judah," pp. 18-19.

⁴⁶*Ibid.*, pp. 18-19.

⁴⁷See *Bible Commentary* 2:77 (summary table), 2:980 (on 2 Kgs 23:29), 4:445 (on Jer 25:3), 4:574 (on Ezek 1:1). Volume 2 was published in 1954, vol. 4 in 1955.

⁴⁸*Chronicles of Chaldaean Kings*, pp. 19, 63.

⁴⁹Thiele, *Chronology*, p. 67; Horn, "Calendar of Judah," pp. 16-20.

⁵⁰Thiele, *Chronology*, p. 69.

⁵¹Thus, the grammatical solution proposed by Horn cannot be maintained (see "Calendar of Judah," p. 26).

⁵²"Calendar of Judah," p. 50.

⁵³Wiseman, *Chronicles of Chaldaean Kings*, p. 69.

⁵⁴Hatti-land extended down the entire length of the eastern Mediterranean coast. According to Manfred Weippert, "At the time of Tiglathpileser III Carchemish was the first city of the Hatti-land, which lay on the westward line of march for Assyrian troops" ("Menahem von Israel und seine Zeitgenossen in einer Steleninschrift des assyrischen Königs Tiglathpileser III. aus dem Iran," *Zeitschrift des deutschen Palästina-Vereins* 89 [1973]: 51). Also the remark in the Babylonian Chronicles that Nebuchadnezzar "conquered the whole area of the Hatti-country" (Wiseman, *Chronicles of Chaldaean Kings*, p. 69, l. 8) should be compared with 2 Kgs 24:7 where we read that, "The king of Egypt did not march out from his own country again, because the king of Babylon had taken all his territory, from the Wadi of Egypt to the Euphrates River." "Hatti-land" is an ancient equivalent of our more modern term "Levant."

⁵⁵See Horn, "Calendar of Judah," p. 22.

⁵⁶*Ibid.*, pp. 26.

⁵⁷"9. In the sixth year in the month of Kislev the king of Akkad mustered his army and marched to the Hatti-land. From the Hatti-land he sent out his companies, 10. and scouring the desert they took much plunder from the Arabs, their possessions, animals and gods. In the month of Adar the king returned to his own land" (Wiseman, p. 71). Kislev in Nebuchadnezzar's sixth regnal year ran from November 29 to December 27, 599. Adaru included February 25 to March 26, 598.

⁵⁸Up through vs. 27 Jer 52 is paralleled by 2 Kgs 25. Jer 52:1-27 corresponds almost perfectly to 2 Kgs 24:18-25:21. But the parallel stops at Jer 52:27/2 Kgs 25:21. After this point 2 Kgs 25 goes on to speak of Gedaliah, an interim overseer of those who remained in Judah after Jerusalem was destroyed, and Jer 52 goes on to append the list of numbers under discussion here. Jer 52:28-34 represents a separate extension of the historical appendix referred to above. It is not necessary to reason from the one to the other as though both necessarily shared the same point of view or consulted the same documents.

⁵⁹Ezekiel's attitudes toward the law and toward the temple cultus are probably what ingratiated him to Ben Sira. See Hardy, "Ben Sira's Silence Concerning Daniel," *Historicism* No. 2/Apr 85, pp. 17-18, n. 14.

⁶⁰Thiele held that Ezekiel used a spring-to-spring calendar (*Chronology*, p. 68, n. 3), which could come to this prophet only from the Israel of an earlier age or the Babylon of his own day. Thiele's conclusion as to Ezekiel's calendar is based on the way the prophet counted from the major events in Judah's history listed above. But there is more to learn about how Ezekiel counted. It is most unlikely that a prophet who refused to mention any Babylonian or Persian king by name should have adopted that king's official calendar shortly after arriving in captivity. Contextual information does not support such a possibility. It is necessary to look for some other solution and in particular I suggest that the case for a fall-to-fall calendar in Ezekiel should be reopened. See William H. Shea, "Wrestling with the Prince of Persia: A Study on Daniel 10," *Andrews University Seminary Studies* 21 (1983): 227.

⁶¹There may be some telescoping of events in this account, as mentioned earlier in connection with 2 Chron 34-35. The period of time involved would require a fall-to-fall calendar, however, even if every item listed in 2 Kgs 23:4-20 (2 Chron 34:3-7) were assigned to his twelfth year instead of his eighteenth. The thing to notice here is that Josiah's Passover did unequivocally occur in his eighteenth year. Ezekiel very appropriately uses this event as the beginning of an era in the present dateline.

⁶²See *Bible Commentary* 4:574. The second volume of the SDA *Bible Commentary* appeared in 1954, two years before the publication of Wiseman's *Chronicles of Chaldaean Kings* (see BC 2:77), and the fourth volume appeared in 1955, one year before. The Babylonian records published by Wiseman show that the battle of Megiddo, in which Josiah died (2 Kgs 23:29-30), was fought before Tishri 609 during the seventeenth year of Nabopolassar and not in 608 (Wiseman, p. 63). Thus, Josiah's first year was actually 641/40 rather than 640/39 and his eighteenth year was 623/22 rather than 622/21. The revised date for the battle of Megiddo makes it necessary to move the entire reign of Josiah back one year. And if Josiah moves back, so must Amon (first year 642/41) and Manasseh (first year 697/96). This is where the adjustments stop. Manasseh was initially coregent with his father Hezekiah and so, as regards Hezekiah, the only change demanded by redating the battle of Megiddo is to say that there were eleven years of coregency with Manasseh instead of ten.

⁶³Horn, "Calendar of Judah," pp. 20-21.

⁶⁴Linguistically the important thing is how the categories referred to in sentences and words are perceived by the people who use them. It is neither necessary nor appropriate make a point of the fact that a day, having twenty-four hours, is a period of time in a philosophical sense no less that a year is. In the present comparison it is perceived as being a point of time.

⁶⁵The present suggestion does not account for 2 Kgs 14:17, "Amaziah son of Joash king of Judah lived for fifteen years after the death of Jehoash son of Jehoahaz king of Israel." Amaziah's fifteen years following the death of Jehoash were counted inclusively with any part of a year counted as a whole year.

⁶⁶See *Bible Commentary* 2:136-37.

⁶⁷The same method can also be applied successfully to the seven years Solomon spent building the temple, which demonstrates that counting New Years is not always equivalent in its results to counting exclusively. Starting from Tishri 1, 966 the seventh New Year that falls within the building period would be Tishri 1, 960. According to 1 Kgs 6:38 the temple was completed during the next next month after this. Whether Solomon's court historians used inclusive reckoning or counted New Years to arrive at their figure of seven years for the building of the temple is unclear. The results in this case are the same. Here I claim only that it would be possible for them to have counted New Years in order to obtain the figures in 1 Kgs 6, not that they did so.

⁶⁸Wiseman, *Chronicles of Chaldaean Kings*, p. 69.

⁶⁹See Horn, "Calendar of Judah," p. 19.

⁷⁰See Thiele, *Chronology*, p. 68, n. 3.

⁷¹See Gerhard F. Hasel, "The Book of Daniel: Evidences Relating to Persons and Chronology," *Andrews University Seminary Studies* 19 (1981): 48.

⁷²"The message of ch. 25 is definitely placed in the year immediately following the taking of the first Jewish captives to Babylon (see on Dan. 1:1)" (*Bible Commentary* 4: 445).

⁷³This proposal is discussed at greater length in a forthcoming paper.

⁷⁴For a table of dates that shows how the prophecies of Haggai and Zechariah overlap, thus in effect combining my tables 9 and 10 above, see, *Bible Commentary* 3:99.

⁷⁵The only sure clue we have as to the chronological interrelationships among these three undated prophecies is that Joel quotes Obadiah: "But on Mount Zion will be deliverance; it will be holy, and the house of Jacob will possess its inheritance" (Obad 17); ". . . for on Mount Zion and in Jerusalem there will be deliverance, as the Lord has said, . . ." (Joel 2:32 [3:5, MT]).

⁷⁶During Xerxes' sixth year (480/79), he fought his ill fated campaign against Greece. For the above campaign see N. G. L. Hammond, *A History of Greece to 322 B.C.*, 3rd ed. (Oxford: Clarendon Press, 1986), pp. 219-53. The story of Esther comes six years after the battle of Thermopylae.

⁷⁷In *Bible Commentary* 3:460 the editors make this same assumption, dating the events of Esth 3:7 to February/March 473 instead of March/April. Second Adar 473 began on March 13. But for some reason the editors list the thirteenth, fourteenth, and fifteenth days of that month as March 6, 7, and 8, respectively. February in the Julian calendar always has twenty-eight days and Adar 473 began on February 24 (Parker and Dubberstein, *Babylonian Chronology*, 1956 ed., p. 31). So unless I am mistaken the thirteenth, fourteenth, and fifteenth of Adar 473 should be March 8, 9, and 10, respectively. See Esth 3:13; 8:12; 9:1, 15, 17-19, 21.

⁷⁸Ezra 1:1 probably does not refer to the time when Cyrus extended his rule over Persians but to the time when he extended his rule over Jews. This happened when Cyrus conquered Babylon. So the issue is not when Cyrus became king of Persia, but when he became king of Babylon. Ugbaru was the general who led the Persian army into the city. A little over a year later he died. During the interim Cyrus very generously allowed Ugbaru to reign as a vassal king in Babylon. During that time Cyrus did not use the title "king of Babylon." These events are summarized in Shea, "An Unrecognized Vassal King of Babylon in the Early Achaemenid Period," *Andrews University Seminary Studies* 10 (1972): 112-13. And yet Ugbaru was not a monarchy in his own right; he ruled under Cyrus. So in Ezra 1:1 the first year of Cyrus should probably be counted from Nisan 1, 538 as Parker and Dubberstein (*Babylonian Chronology*, 1956 ed., p. 29) have it. Cyrus' first year as "king of Persia" for our purposes would begin either Nisan 1, 538 spring-to-spring or, for a Jewish writer using a fall-to-fall calendar, Tishri 1, 538.

⁷⁹See n. 1, above. ⁸⁰For a rather polemical survey of arguments relating to this issue see, Carl G. Tuland, "Ezra-Nehemiah or Nehemiah-Ezra?" *Andrews University Seminary Studies* 12 (1974): 47-62.

⁸¹See Appendix to Hardy, "The Day-Year Principle in Dan 9:24-27," *Historicism* No. 3/Jul 85, pp. 48-50.

⁸²See for example Parker, "Ancient Jewish Calendation," pp. 173-76; and Grace Amadon, "The Crucifixion Calendar," *Journal of Biblical Literature* 63 (1944): 177-90. For the related issue of Jesus' birth see John Thorley, "When Was Jesus Born?" *Greece & Rome*, 2nd series, 28 (1981): 81-89.

⁸³See Leroy E. Froom, *The Prophetic Faith of Our Fathers: The Historical Development of Prophetic Interpretation*, 4 vols. (Washington, D.C.: Review and Herald, 1954), vol. 4: *New World Recovery and Consummation of Prophetic Interpretation*, pp. 226-48.

⁸⁴The earliest concensus among pre-1844 adventists was that the 2300 days would end in 1843. With more careful study it was determined that they would end in 1844. For discussion

of the process by which these early students concluded that 1844 was the correct year see P. Gerard Damsteegt, *Foundations of the Seventh-day Adventist Message and Mission* (Grand Rapids: Eerdmans, 1977), pp. 78-100. After 1844 it was obvious that something had been misunderstood because Christ did not return to the earth. There were those who still maintained that Christ would come at the end of the 2300 days but that 1844 was not the correct year for that event. So they set about to establish different years when Christ would come. A series of dates were proposed, each giving way to another when the event failed to occur. This was only one of two possible approaches to the problem of the disappointment. The event was right but the date was wrong. Others held that the 2300 days ended in 1844 on schedule, but that the connection between that fact and Christ's return to the earth had not been understood correctly. Thus, the date was right but the event was wrong; in regard to time those involved in the 1844 movement had been correct. Seventh-day Adventists are the spiritual heirs of this second position.

Just here, incidentally, is the significance of Ellen White's often quoted statement in *Early Writings*: "Then I saw in relation to the 'daily' (Dan. 8:12) that the word 'sacrifice' was supplied by man's wisdom, and does not belong to the text, and that the Lord gave the correct view of it to those who gave the judgment hour cry. When union existed, before 1844, nearly all were united on the correct view of the 'daily'; but in the confusion since 1844, other views have been embraced, and darkness and confusion have followed. Time has not been a test since 1844, and it will never again be a test" (pp. 74-75). The word "sacrifice" was felt to be a concession to those who applied the 2300 days as literal twenty-four hour days during the time of Antiochus Epiphanes. Thus, the point Ellen White is making here is not what the "daily" refers to but the fact that 2300 years rather than 2300 literal days make up the period in question. That the issue in her statement was time can be seen also from the way she concludes the paragraph. Her assertion here is that as regards time those in the 1844 movement were correct and the time period they preached should not be changed.

⁸⁵These are respectively the earliest and latest datelines discussed in Horn and Wood, "Calendar at Elephantine," *Journal of Near Eastern Studies* 13 (1954): 1-20 passim. For a summary of the findings from the above paper see idem, *Chronology of Ezra 7*, pp. 75-90, 121-59. See also *Bible Commentary* 3:103-7.

⁸⁶Emil G. Kraeling, *The Brooklyn Museum Aramaic Papyri, New Documents of the Fifth Century B.C. from the Jewish Colony at Elephantine* (New Haven, 1953), p. 205.

⁸⁷Ibid., p. 193.

⁸⁸Horn and Wood, "Calendar at Elephantine," p. 14.

⁸⁹Kraeling, *Aramaic Papyri*, p. 193.

⁹⁰Horn and Wood, "Calendar at Elephantine," p. 14.

⁹¹According to Clines, "it has been widely agreed that the numbering of the months from the spring as employed in Jer 36:9 proves that the spring calendar had been introduced into Judah by this time" ("Autumnal New Year," p. 33). As regards Jer 36:9, I fail to see why this one passage is singled out for comment. All Hebrew months are numbered from the spring. Any number of additional references could have been cited. Clines' premise is obvious, but his conclusion does not follow.

⁹²Josephus, *Antiquities* 1.3.3 (Loeb ed., vol. 4, pp. 36-39).

⁹³A detailed investigation of how modern Jewish practice developed over time in this regard lies outside the scope of the present paper. The connection is not entirely direct. "Standard almanac computers know that the modern rabbinical institutions are not the exact counterpart of the ancient Jewish feast dates" (Amadon, "Crucifixion Calendar," p. 177). See also *Bible Commentary* 2: 122.

⁹⁴The second/first century sectarians at Qumran had a calendar other than the one under discussion but it does not represent mainstream Jewish thought. The calendar of the book of Jubilees and other Qumran documents was solar rather than lunar and it proved to be

one of the main things that separated them from the rabbis in Jerusalem, whom I take to be representative of Jewish thought in that period. "The use of a divergent calendar and of different systems of reckoning time would have the advantage of enabling the Covenanters to keep themselves in some sense separate from their fellow Jews; but it would also have the disadvantage of hindering or preventing their participation in the services of the Temple and might even produce serious clashes. It might therefore be one reason why they had retreated into the Wilderness of Judah (cp. D viii 13-14, ix 20 W i 2)" (G. R. Driver, *The Judaean Scrolls* [New York: Schocken, 330]).