

DOES THE BIBLE SUPPORT  
TWO CALENDARS  
(FEAST/CIVIL) &  
ADDITIONAL LEAP MONTH  
INFORMATION

25:29 וְאִישׁ כִּי־יִמְכַר בַּיִת־מוֹשָׁב עִיר חוֹמָה וְהִיָּתָה גְאֻלָּתוֹ  
עַד־חָם שְׁנַת מִמְכָּרוֹ יָמִים תְּהִיָּה גְאֻלָּתוֹ:

Septuagint

Reverse Interlinear

English (KJV) [?]		Strong's	Root Transliterated		Parsing
And if a man	<a href="#">PHRASE</a>	H376	אִישׁ <i>iysh</i>		
sell		H4376	מָכַר <i>makar</i>		<a href="#">PARSE</a>
a dwelling	<a href="#">PHRASE</a>	H4186	מוֹשָׁב <i>mowshab</i>		
house		H1004	בַּיִת <i>bayith</i>		
in a walled	<a href="#">PHRASE</a>	H2346	חוֹמָה <i>chowmah</i>		
city		H5892	עִיר <i>iyr</i>		
then he may redeem	<a href="#">PHRASE</a>	H1353	גְאֻלָּה <i>gěullah</i>		
it within a whole	<a href="#">PHRASE</a>	H8552	תָּמַם <i>tamam</i>		<a href="#">PARSE</a>
year		H8141	שָׁנָה <i>shaneh (in pl. only),</i>		
after it is sold	<a href="#">PHRASE</a>	H4465	מִמְכָּר <i>mimkar</i>		
within a full year	<a href="#">PHRASE</a>	H3117	יוֹם <i>yowm</i>		
may he redeem	<a href="#">PHRASE</a>	H1353	גְאֻלָּה <i>gěullah</i>		
it					

# Whole year:

Lexicon Strong's H8552 - tamam KJV Translation Count — Total: 64x The KJV translates Strong's H8552 in the following manner: consume (26x), end (9x), finished (4x), clean (3x), upright (3x), spent (3x), perfect (2x), done (2x), failed (2x), accomplish (2x), miscellaneous (8x). מַמַּלְלָם tāmam, taw-mam'; a primitive root; to complete, in a good or a bad sense, literal, or figurative, transitive or intransitive:—accomplish, cease, be clean (pass-) ed, consume, have done, (come to an, have an, make an) end, fail, come to the full, be all gone, × be all here, be (make) perfect, be spent, sum, be (shew self) upright, be wasted, whole. Gen 47:15 “And when money failed H8552 in the land of Egypt, and in the land of Canaan, all the Egyptians came unto Joseph, and said, Give us bread: for why should we die in thy presence? for the money faileth. Gen 47:18 “When that year was ended, H8552 they came unto him the second year, and said unto him, We will not hide it from my lord, how that our money is spent; H8552 my lord also hath our herds of cattle; there is not ought left in the sight of my lord, but our bodies, and our lands:”

# Within a full year:

Lexicon Strong's H3117 - yowm KJV Translation Count — Total: 2,287x The KJV translates Strong's H3117 in the following manner: day (2,008x), time (64x), chronicles (with H1697) (37x), daily (44x), ever (18x), year (14x), continually (10x), when (10x), as (10x), while (8x), full (8x), always (4x), whole (4x), alway (4x), miscellaneous (44x). *di' yôwm*, yome; from an unused root meaning to be hot; a day (as the warm hours), whether literal (from sunrise to sunset, or from one sunset to the next), or figurative (a space of time defined by an associated term), (often used adverb):—age, always, chronicals, continually(-ance), daily, ((birth-), each, to) day, (now a, two) days (agone), elder, × end, evening, (for) ever(-lasting, -more), × full, life, as (so) long as (... live), (even) now, old, outlived, perpetually, presently, remaineth, × required, season, × since, space, then, (process of) time, as at other times, in trouble, weather, (as) when, (a, the, within a) while (that), × whole ( age), (full) year(-ly), younger. Refer to Genesis 1 “day” and Genesis 4:3 “And in process of time H3117 it came to pass, that Cain brought of the fruit of the ground an offering unto the LORD.”

## **“Calendar” Entry**

**Ephraim Jehudah Wiesenberg and Jacob Licht**

**Encyclopaedia Judaica. Ed. Michael Berenbaum and Fred Skolnik. Vol. 4. 2nd ed. Detroit, MI: Macmillan Reference USA, 2007. p354-359.**

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Bottom of Page 355 THE PHASIS: Leaving out of account the unpredictable factor of atmospheric conditions, the length of the interval from the true conjunction to the first sighting of the new crescent, the phasis is determined by four predictable astronomical factors: the interval from the true conjunction to the ensuing sunset(s), the season of the year, the lunar latitude, and the geographical longitude and latitude of the place of observation. In the region of Jerusalem – observations at which may well be presupposed in the calculation of the astronomical basis of the Jewish calendar – shortly before the autumnal equinox the minimum interval from the true conjunction to the phasis is approximately 20 hours, while the maximum is close to 72 hours, with the minimum of approximately 18 hours shortly before the vernal equinox and the various respective. Pages 357-358 Early Indications of Intercalation: Some elements in it clearly date from earlier times, others may well have been introduced much later. The present names of the 12 months are already attested in several post-exilic biblical books, the Assuan Papyri, the Apocrypha, and Megillat Ta'anit, replacing the pre-Exilic names Abib, Ziv, Bul, and Ethanim and the designation by numbers. Intercalation is claimed to be evident from the figures in Ezekiel 1:1, 3:15, 4:4–6 and 8:1, with similar indications in I Kings 12:32–3 and II Chronicles 30:2–3; the old sectarian claim that the ancient Israelite calendar was purely solar, in vogue again because of the solar year in Enoch and Jubilees and a Qumran fragment, is militated against by the evident derivation from the moon of the terms שֻׁדָּחַ (ḥodesh) and יָרַח (yerah) and by the connection between the moon and the festivals in Psalms 104:19. The New Moon (Num. 28:11, and parallels) was determined by the phasis in the preceding evening, hence the plausibility of an early biblical record (I Sam 20:18) of its prediction for "tomorrow."

At a much later age, any month still consisted of either 29 or 30 days, the "sanctification" of the 30th as the New Moon being subject to witnesses' reports of the time and circumstances of their sighting of the new crescent scrutinized by a court competent to check them, and only accepted if tallying with each other and not contrary to astronomical prediction, with the further proviso of agreement by the court and formal declaration of "sanctification" before night set in. Proceedings were at times deliberately prolonged or speeded up, with the occasional choice of some observational post favorable for early sighting of the new crescent (Ein Tov), in order to avoid whenever possible a festival day, especially the Day of Atonement, falling immediately before or after the Sabbath.<sup>3</sup> In keeping with this, the number of the full months varied between four and eight in the common, and between four and nine in the leap years, with 352–6 days in 12 lunar months, variations greatly in excess of those in the present calendar. Some of these variations were early eliminated. Already under the aegis of R. \*Judah ha-Nasi (c. 200) and of his pupil Ray (d. 247), Elul and Adar (in a leap year Adar II) contained invariably 29 days only. R. Yose b. Bun (c. 300) assumed the same fixed number of days in the months Adar-Elul as in the present calendar, with Rosh Ha-Shanah postponed from Wednesday and Friday but not yet from Sunday (TJ Meg. 1:2, 70b). Also the mean length of the lunation in the canon of Rabban \*Gamaliel (c. 100) at 29d. 12<sup>2</sup>/<sub>3</sub>h. 73p. tallies with 29d. 12h. 793p. in the present calendar. Attested in all the texts of Rosh Ha-Shanah 25a, and with a parallel in the Almagest of Ptolemy (c. 140), even though wrongly calculated, his <sup>2</sup>/<sub>3</sub>h. 73p. is unlikely to be due to "late interpolation." As for 792p. arising from a dictum (Ar. 9b) of \*Ravina (d. 420), it is an approximation only as evident from its context. Regularization of Intervals of Intercalation: The intervals of intercalation were at first irregular, intercalation being in part due to the prevailing state of various agricultural products and to social conditions.

Regularity will also have been hampered by the Romans suppressing what they considered stirrings of Jewish nationalism (Tosef., Sanh. 2:2–9, and parallels). Astronomy was, however, always a powerful factor, as the state of the crops is ultimately determined by the sun's position in its annual path. Owing to the omission of intercalation over a period of some length, R. Akiva (d. 135) once intercalated three successive years as an emergency measure (ibid). The gradual regularizing of the intervals of intercalation had to be in the terms of the seven-year sabbatical cycle as none of the styles of the 19-year Metonic Cycle would have been compatible with the rule not to intercalate in sabbatical and post-sabbatical years (ibid.). R. Abbahu<sup>4</sup> (c. 300) reckoned, in fact, with a long cycle of 1176 y. =  $24 \times 49$  y. (= 24 jubilee cycles) =  $24 \times 7 \times 7$  y. (= 168 sabbatical cycles) = 14545 lunations (=  $12 \times 176$  for the 1176 y., +433 intercalations) = c. 61360 weeks 4 d.5 = c.  $23 \times 2556$  w.  $3\frac{1}{2}$  d. (= 23 jubilee cycles with 606 lunations each, i.e.,  $49 \times 12$ , + 18 intercalations) + 2560 w. 4d. (= the 24th jubilee cycle with 607 lunations, i.e.,  $49 \times 12$ , + 19 intercalations), a system in which, in the first great cycle of 1176 years at any rate, Rosh Ha-Shanah (or perhaps only its molad) was to fall on Wednesday and Sunday respectively in the alternate first years of the 49-year jubilee cycles.<sup>6</sup> This cycle, devised by David and Samuel according to R. Abbahu's homily on I Chronicles 9:22, with a remarkably early record of a similar notion in Page 358: unserviceable on account of its great length, and it is unlikely that there was ever any attempt to adhere to it in practice. It is the same with the oversimplified system, at the other end of the scale, propounded by an anonymous tannaitic authority, making the common year to consist invariably of 354d. and the leap year of 383d., exceeding the integral number of weeks by four and five days respectively (Ar. 9b and parallels).



This appears never to have been accepted in practice, as it just ignores the problems entailed in the lunisolar calendar (see the bold statement by R. Hananeel of Kairouan (990–1053) to Sukkah 54b (לא הוי בקי ר' מאיר [האחרים] בסוד העבור)). It is so a fortiori with the eight-year cycle in Enoch 74:13–16 and the often quoted observation by Sextus Julius Africanus (early third century) that both the Greeks and the Jews intercalate three extra months every eight years,<sup>7</sup> as also with the calendric data in Pirkei de-Rabbi Eliezer, chapters 6–8, marred by interpolations, and in Baraita de-Shemu'el, bristling with calendric and astronomical absurdities. Neither of the writers concerned had access to the Jews' "secret of the calendar intercalation" (sodha-ibbur) jealously guarded by its experts from outsiders, both Jewish and gentile.

# **Intercalation and the Hebrew Calendar**

**Author(s): J. B. Segal**

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In the present article I propose to examine the evolution in the Hebrew calendar of one aspect of calendar-making—the method by which an additional, or intercalary, month was inserted every two or three years. The problems of the Hebrew calendar are still far from solution. Yet our knowledge of systems of chronology and the calendar in the ancient Middle East has made remarkable progress during the past half-century. Side by side with the decipherment of texts from, above all, Egypt and Babylonia, we have had general studies of great importance on astronomy and time-reckoning. (Page 250)

It is, indeed, generally agreed that observation of the phases of the sun was preceded by observation of the motions of the moon as the basis of calendar reckonings. 1) We would not expect otherwise. The tropic year of approximately 365.25 days is too long for exact measurement at an early stage of social development. The lunar cycle of 29-30 days, on the other hand, does not tax too severely the memory or the mathematical ability of primitive man. The waxing and waning of the moon are constant; and the phasis in each month is always preceded by a few nights in which no moon is visible. Lunar calendars were widespread and indeed predominant among the peoples of the Middle East. A calendar that was essentially lunar existed in Persia, where worship of the sun had so dominant a role. 2) And in Egypt, also a country noted for its solar cults, a lunar calendar appears to have survived side by side with the civil calendar and continued to have great religious significance. 3) It is reasonable, then, to assume a lunar calendar among the Israelites. This is amply confirmed by the obvious lunar bias of the Bible. 4) And the practices of the Babylonians—who were almost certainly the mentors of their neighbours in these matters—as well as the practices of the Jews of post-Biblical times—whose conservatism in this sphere argues for an ancient tradition—make the hypothesis of a Hebrew lunar calendar well-nigh unassailable. Here we may make two secondary observations. First, it is naturally the new crescent and not the full moon that marks the opening and close of a lunation. 5) This was certainly the case in Babylonia and elsewhere in the Middle East; and the two examples cited by SETHE in which the lunation begins with the full moon are both found among peoples remote from the area of Semitic culture. 6) (Page 253)

Secondly, those passages of the Bible which imply that the cycle of night and day opens with sunrise cannot be adduced as evidence of a solar calendar among the Israelites. 1) No definite conclusions are to be drawn from these passages-or from those where the night-day cycle is held to commence with sunset. 2) Both systems of reckoning have been employed by peoples of the Middle East who observed the phases of both sun and moon. The Babylonians regarded the cycle as opening with sunset; they considered the first appearance of the crescent to mark the beginning of the lunation. To the Egyptians, on the other hand, the cycle opened with sunrise. Their lunations appear to have begun with the day when, for the first time, the old crescent was invisible in the morning. 3) There can be little doubt that the Hebrews, like the later Jews, maintained the same practice as the Babylonians, recognizing the sunset as the opening of the night-day cycle and the first appearance of the crescent as the opening of a lunation. 4) The occasional mention in the Bible of morning followed by evening, rather than evening followed by morning, reflects the ordinary course of human behaviour. It is at dawn that man begins the active work of the day, and, for that reason, a phrase current in men's mouth is "day and night". 5) We have concluded that the Hebrew calendar was based upon the moon. Nevertheless, the Israelites cannot have been content, even before the Exile, with a simple lunar calendar, for their principal festivals are connected with the tropic, or seasonal, year. There is a further reason for maintaining that their calendar was not lunar, but luni-solar. (Page 254)

Already, however, at the end of the 1st century Rabban Gamaliel was familiar with the criteria for judging the appearance of the new crescent; 2) and his grandfather Rabban Gamaliel I, who lived while the Temple still stood, was able to predict with confidence the exact length of the intercalary month. 3) But the competence of the Jewish authorities is likely to belong to a much earlier age. It has been maintained that the Aramaic papyri of the 5th century B.C. from Elephantine show that the Jews had a considerable degree of familiarity with lunar computation. 4) It is true that the Jews of Elephantine may have acquired this knowledge from their Egyptian neighbours, but they were applying it to their own religious practices. In view of the relations between the Elephantine community and the Jews of Palestine, we may fairly assume that their astronomical proficiency in determining the length of months was shared with the mother community there. (Page 289) This motif is properly preserved in the well-known letter of Rabban Gamaliel 2) to the Diaspora in the 1st century A.D., which has been quoted so frequently in studies on the Hebrew calendar: We beg to inform you that the doves are still tender and the lambs still too young and that the time of the green ears (of corn) has not yet arrived. It seems advisable to me and my colleagues to add thirty days to this year). (Page 265)

# PAUL AND GAMALIEL

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If we had to construct components of the curriculum of studies that Paul would have followed at the feet of Gamaliel, that is, under the auspices of the patriarch, it would include questions of liturgy, mourning, treatment of slaves, observance of the Sabbath (travel on the Sabbath, carrying objects from one domain to another on that day), preparation of the Passover offering, preparation of food on the festival, intercalation of the calendar, matters of uncleanness nearly the whole of the Pharisaic program involving Sabbath and festival observance and cultic cleanness that is well-attested to first-century venue. Working our way forward from the topical program that Paul can have followed in his studies with Gamaliel to the topics important in Paul's corpus begins, then, with these highly likely areas of Halakhic learning. (Page 146) Acts 5:34 Then stood there up one in the council, a Pharisee, named Gamaliel, a doctor of the law, had in reputation among all the people, and commanded to put the apostles forth a little space; Acts 22:3 I am verily a man which am a Jew, born in Tarsus, a city in Cilicia, yet brought up in this city at the feet of Gamaliel, and taught according to the perfect manner of the law of the fathers, and was zealous toward God, as ye all are this day.

Lexicon Strong's H388 - 'Eythaniym The KJV translates Strong's H388 in the following manner: Ethanim (1x). אֵי־תַנַּיִם 'Ēythânîym, ay-thaw-neem'; plural of H386; always with the article; the permanent brooks; Ethanim, the name of a month:—Ethanim.

Lexicon Strong's H945 - Buwl The KJV translates Strong's H945 in the following manner: Bul (1x). בּוּל Bûwl, bool; the same as H944 (in the sense of rain); Bul, the eighth Hebrew month:—Bul. “Month of Showers/Rain”

A leap month is necessary to keep the calendar in sync with tropic year. The Hebrews have know this since ancient times.