Dead Sea Scrolls Calendar Update from Israel!

Dead Sea Scrolls: One of Last Two Encrypted Ancient Writings Deciphered in Israel, Revealing Secret Calendar

Kastalia Medrano,Newsweek 13 hours ago

After decades of work, one of the final two encrypted Dead Sea Scrolls that had resisted efforts to decipher its meaning has at last been decoded, revealing an ancient Jewish calendar.

The Dead Sea Scrolls have represented one of archaeology's most compelling enigmas since their discovery in the 1940s and '50s in the Dead Sea Caves. Also known as the Qumran Scrolls, they were written by the hermetic religious Qumran Sect in Hebrew, Aramaic and Greek. This particular scroll was written in coded Hebrew, a rarity among the existing body of deciphered texts, according to *Haaretz*.

The Qumran Sect's name for itself was the Yahad, which translates to "Together Community," according to the *Jerusalem Post.* Archaeologists had spent decades assembling and deciphering their fragments, until at last only two had remained undecoded. Researchers from Haifa University in Israel spent a year painstakingly reconstructing the scroll from 60 fragments, according to *Jerusalem Online*. Some of those fragments were just a few millimeters across. The research was published in the journal *Biblical Literature*.

"Tens of thousands of fragments belonging to over 900 scrolls were found in the caves of Qumran," Eshbal Ratson, a biblical expert at Haifa University, told *Haaretz*. "This is the most important archaeological find ever made in Israel. This is literature from the Second Temple period, and that's rare."

Ratson told *Haaretz* that most Jews from that time period used a calendar similar to the one we use today. The Qumran sect used a 364-day calendar—so, almost based on a solar year but not quite—with 30- or 31-day months in each season. Since 364 divides into 7, Ratson continued, each date falls on a specific day of the week and all holidays have fixed dates.

"We now know that in the Temple there were disputes over what happens if the Passover falls on Shabbat," Ratson told *Haaretz* "What supersedes what, Shabbat or the holiday? This sect solved the problem, since no holiday fell on Shabbat. This scroll details all dates on which Shabbat falls and all the days of the week on which the holiday falls."

Fragments of the 2000-year-old Dead Sea scrolls at a laboratory in Jerusalem. MENAHEM KAHANA/AFP/Getty Images

The 364-day calendar also contained the sect's previously unknown word for days that marked the changing of the seasons: *tekuwfah*. The word, whose meaning had previously been lost, appears in the Mishnah (the written record of oral Jewish laws), according to *Haaretz*.

"This shows us that the researchers who believed the day of celebrating the transition between the seasons was called by this name were correct, and that this word, used in the Mishna, was preserved from the days of the Second Temple—it's a very early concept in the halakha [religious Jewish law]," Raston told *Haaretz*.

My comments: This is actually a much bigger breakthrough than the writer understands and the way this article is written underscores the issues that come about when journalists who are not conversant in this history make broad assumptions they are simply not qualified to do! Let me explain what I mean.

The writer of this article says that the meaning of *tekuwfa* had "previously been lost" and implies that prior to this discovery it was only in the Mishnah. Both assumptions are patently incorrect, so let me address these in the way the find is presented and then we can move on to what it really means for us today in terms of our calendar discussions in wider Jewish history.

> And perform the Festival of Weeks for yourself, of the first-fruits of wheat harvest, and the Festival of Ingathering **at the turn of the year**. (תְּקוּפַת הַשָּׁנָה) (Exodus 34:22-The Scriptures 1998)

> And it came to be, **at the turn of the year** (תְּקוּפַת הַשָּׁנָה), that the army of Aram came up against him. And they came into Yehuḏah and Yerushalayim, and destroyed all the rulers of the people from among the people, and sent all their spoil to the sovereign of Darmeseq. 2 Chronicles 24:23-The Scriptures 1998)

There is even a synonym to *tekuwfa*, *teshuvah*, that means the same thing and is used the same way (1 Kings 20:22, 26; 2 Chronicles 36:10). A careful reading, especially with an eye for astronomy and its related agricultural cycles, easily reveals that the year "turns" only at the start of spring and fall, but it meets halfway points in between these "turns" called "summer and winter" (Genesis 8:22). This is why we have the following statement in Job:

> Do you bind the bands of Kimah (Pleiades), or loosen the cords of Kesil (Orion)? **Do you bring out the constellations in its season**? Or do you lead the Bear with its sons? **Do you know the laws of the heavens? Or do you set their rule over the earth?** (Job 38:31-33-The Scriptures 1998)

In ancient times, the Pleiades Cluster in particular had a crucial role in telling people when spring was very close. Put simply, when this group of stars rises and falls throughout winter, it will set in the evening sky earlier and earlier. Then, when spring is near, these stars will set in the late afternoon and disappear from the night sky. Since the cluster of stars kind of resembles a shovel, when they all disappeared, ancients from all over the world, including the Middle East in general and the Hebrews in particular, took it as a sign that the "shovel" had gone into the earth and it was time to harvest. This was a literal fulfillment of both Genesis 1:14-19 and Job 38:31-33 as the "signs" determined the seasons, days and years and the rules of the heavens set their rule over the earth.

Equinoxes could also be determined by the position of the rising and setting sun. If a person watched the sun rise and set every dawn, if they were on a straight north-south line looking due east, the sun would rise and set at a particular angle each day. The ancients, thinking in terms of a circle, realized very early on that if they added the angle of the sunrise to the angle of the sunset it would always equal 360 degrees. So, if the sun rose at 120 degrees, it would set at 240, and so on.

However, only on equinox days, would the sunrise following the start of spring or fall rise perfectly straight, which is to say at a perfectly bisecting 90 degree angle, and therefore it would set at 270 degrees. If one then kept watching sunrise every morning, the march of the different angles over weeks and months would become very apparent, to the extent that one could even predict the next day's angle if it were cloudy, or record patterns of sunrises and sunsets that give birth to reliable math averages.

From what the Hebrew calls these *otot* (signs), we would learn the cycle or circuit of the solar year, which in Hebrew is called *tekuwfa*, so really the Torah is the original source for that term which was never lost, the Mishnah accurately remembered that to be the case, and the Dead Sea Scrolls have simply been proven to have had that understanding as well, after the Torah but before the Mishnah.

Having said that, let's move on to the real ramifications of this find. First, if there is some pause in the 364 day count to account for a *tekuwfa*, then it means the way 1 Enoch and Jubilees describe THEIR 364 calendar is simply incorrect:

> 32 **And command you the children of Israel that they observe the years according to this reckoning--three hundred and sixty-four days, and (these) will constitute a complete year, and they will not disturb its time from its days and from its feasts**; for everything will fall out in them according to their testimony, and they will not leave out any day nor disturb any feasts. 33 But if they do neglect and do not observe them according to His commandment, then they will disturb all their seasons, and the years will be dislodged from this (order), [and they will disturb the seasons and the years will be dislodged] and they will neglect their ordinances. 34 **And all the children of Israel will forget, and will not find the path of the years, and will forget the new moons, and seasons, and sabbaths, and they will go wrong as to all the order of the years**. 35 For I know and from henceforth will I declare it unto you, and it is not of my own devising; for the book (lies) written before me, and on the heavenly tablets the division of days is ordained, lest they forget the feasts of the covenant and walk according to the feasts of the Gentiles' after their error and after their ignorance. 36 For there will be those who will assuredly make observations of the moon--how (it) disturbs the seasons and comes in from year to year ten days too soon. 37 For this reason the years will come upon them when they will disturb (the order), and make an abominable (day) the day of testimony, and an unclean day a feast day, and they will confound all the days, the holy with the unclean, and the unclean day with the holy; for they will go wrong as to the months and sabbaths and feasts and jubilees. 38 **For this reason I command and testify to thee that you may testify to them; for after thy death your children will disturb (them), so that they will not make the year three hundred and sixty-four days only**, and for this reason they will go wrong as to the new moons and seasons and sabbaths and festivals, and they will eat all kinds of blood with all kinds of flesh.-Book of Jubilees

Both 1 Enoch and Jubilees reference the cycles of the moon as being important. But the Dead Sea Scrolls version becomes a completely solar calendar. And, of these three sources, it is probable the Dead Sea Scrolls version is the latest one, in that the Dead Sea Scrolls and Talmud record the changing of the Qumran calendar was done in part to embarrass their counterparts in Jerusalem.

Further, the strands of tradition in 1 Enoch and Jubilees are in an older form before the Essenes stopped using the moon to point to the feasts. As calendar expert John Pratt explained and I agree with on Wikipedia, it is not the case that what we broadly call "Enoch Calendar" (all forms) automatically goes out of date but merely that these sources do not mention how it intercalates to the longer solar year.

The very idea that "the days cannot be disturbed" and that the feasts still had to hit in their seasons, all but proves the need to have a system of a set number of days in between the years of 364 days. I have simply gone a step further in looking for that math, and found that only one configuration of intercalating weeks works in perfect synchronicity with the other solar year pattern in Scripture, that being the 360 day year. In both of those cases, math is needed to tell the communities when to look for the *tekuwfa*, the seasonal sign in between the years that tells us when to start counting the days again. It is this concept then that I believe the new find amongst the Dead Sea Scrolls speaks most strongly to.

But before explaining that aspect, I need to get into an aspect that I think has been neglected in this overall discussion: *The reason that 1 Enoch and Jubilees mention the timing of the moon is also because lunar cycles can be predicted in 364 day years as well!*

Dr. Geza Vermes (The Complete Dead Sea Scrolls in English, p. 78), explains that in the wider community of Israel, that is to say not with the Essenes who were doing the solar only approach, but groups like the Pharisees in Jerusalem and also groups of Jews influenced by 1 Enoch and Jubilees, had a system of adding a 30-day leap month after 36 lunar months, which always alternated between 30 and 29 days.

Mathematically speaking, over the course of nearly three solar years, this meant a cycle of 1,092 days (18 months @30 days each = 540 days + 18 months @29 days each = 522 days + 30 day leap month = 1,092[1]). The thing is, divide 1,092 days by 3 and you get 364! Since 364 days also equals 52 weeks, triple that and we have 156 weeks cycle that can in turn be matched to priestly service.

As a result, 364 counting seems to have a priestly origin and more evidence of that is a very long story that we can't get into here. What does matter however right now is that 1 Enoch and Jubilees, while being somewhat vague on the details, are associating lunar cycles in their 364 count because there are patterns of 364 that relate to the moon as well as the sun, the latter of which we are going to explain right now.

Okay, so let's do a kind of thought experiment. Let's say that just last year we made note of when the spring equinox was and we began counting 364 days from that day. When we end that count about 1 ¼ days shy of the solar year, the *tekuwfa*, or next spring equinox will soon happen. We might decide, for example, to just pause a day or so, see that *tekuwfa* sign, and resume the 364 day count starting the day after it happens. That will definitely work. It's simple and

[1] For those who are curious on the matter, this is a mathematical construct that may, on occasion, be corrected by actual observation. It is actually more accurate to estimate the lengths of thirty-six or thirty-seven lunar months than it is for two consecutive ones. This is because when we say the lunar month is 29.530588 (29 days, 12 hours, 44 minutes, 0 seconds) solar days long, this is just an average. In the real world, a lunar month can be as little as 29.2 and as long as 29.8 days long. That's a variance of more than ½ a day, and in Hebrew reckoning we have to end the last lunar day of that month at the next sunset. These variances mean that occasionally a given three year period will have consecutive 30 or consecutive 29 day months, but over the full thirty-seven month cycle, these differences will average out, so we can get an extremely accurate sense of when the New Moon three years from now will be with this math moreso than when the next New Moon is, so that's why the ancients were always counting years in advance.

effective, but almost certainly not the way the Dead Sea Scrolls community did their intercalation.

The reason I know that is because their own scrolls tell us plainly that they balanced by the day of the week. Dr. Vermes explains that since Genesis 1:14-19 talks about the sun, moon and stars on the fourth day, that the Essenes began their week on Wednesday and ended it on Tuesday 52 weeks later. But, in any given year, that next day would either start the new year if the *tekuwfa* was seen or wait to the following Wednesday morning if it was not.

However, this was a rather late development in Jewish history that was based on an earlier math model in Torah. This older math, like the newer one, balanced in term of leap weeks but unlike the Essenes, it was not dependent on the fourth day of the week but floated along with its 360 and Gregorian calendar cousins, because all three systems were and are using the same number of whole days over a 400 year period of time: 146,097.

Let's see this aspect first in Gregorian time. Like the Julian calendar before it, Gregorian has a February 29th leap day every 4th year. Unlike Julian though, Gregorian subtracts three other leap days, saying that each century year NOT evenly divisible by 400 is NOT a leap year. For example, the year 1600 and 2000 were leap years, but the years 1700, 1800 and 1900, which are not divisible by 400, are not leap years. So while Julian will have a total amount of days of 146,100 in 400 years (365.25 x 400 = 146,100), during that same period of time Gregorian will have three less.

In 360 time, the same number of days is achieved by a series of 30 day leap months hitting seven times every 40 years (end of 6th, 12th, 18th, 24th, 30th, 36th and 39th years), but the last month in years 120, 240 and 360 will only have 29 days. It's a matter of taking 360, multiplying it by 40 (14,400) and then adding seven 30 day leap months (210 total days) = 14,610. Take that number and multiply it by a factor of 10 (146,100) and subtract the three days from the three 29 day months and you get 146,097. Divide that by 400 = 365.2425 days per year, the same as Gregorian.

But in case of the 364 system underlying systems in 1 Enoch, Jubilees and Dead Sea Scrolls—not to mention Torah itself which gave birth to the codes in the first place—we have a slightly different schedule.

First, we will add up the same number of days with the 40 year process shared by 360, so over 40 years we have 364 x 40 (14,560 days), but instead of adding leap months we add seven leap weeks (49 days) =14,609, or one day shy of the 360 count.

Next we multiply that sum by ten and get 146,090 days, but in the last generation or 40 year count of that 400 years, we add a leap week to year 40, bringing the total back to 146,097 days.

As I said at the outset, while a variety of systems could work, this is the only one that synchronizes to other Torah codes for the solar year and stays perfectly in time also. In fact, both the 360 and 364 counts balance again at year 4,000 and remain eternally on time. That is why I believe, regardless of the fact that the ancients did not feel the need to spell out every tiny detail

of how they intercalated, the evidence of both their need to do so and what would ultimately work for them is very evident. This latest find among the Dead Sea Scrolls has just gone a long way to proving that all correct.