

ARCHAEOLOGY

Christ Was Nearly 50

New Studies of Babylonian Calendar Uphold Version In St. John's Gospel; Show Jesus' Life Was Longer

By EMILY C. DAVIS

JESUS CHRIST was not 33, but a middle-aged man nearly 50 years old, when He died.

And the crucifixion on new evidence can be definitely and finally fixed as occurring on April 7, 30 A.D.

The world's first Easter, therefore, was on April 9 of that eventful year.

These are the impressive, tradition-shaking conclusions of an American scholar, reached 1900 years and more after Christ lived and died in Palestine.

Star-gazing wise men of the East have played a role in presenting the new aspect of the adult Christ—like the wise men who, in Luke's narrative, followed the Bethlehem star to His cradle.

To Dr. Albert T. Olmstead, noted archaeologist and historian of the University of Chicago's Oriental Institute, who has reported these researches on the life of Christ, the usefulness of the work is this:

By dating the crucifixion exactly, students of the New Testament will have the basis for a decidedly exact chronology of the ministry of Jesus.

Also, there is now prospect of gaining a start toward fixing sequences of dates in the careers of the Apostles.

Documents which make up the books of the New Testament have much more value for reconstructing events in historic order than some Biblical critics have been inclined to think. So Dr. Olmstead is convinced. Results of his research, announced at the Graduate School of Theology at Oberlin, where he recently delivered the Haskell Lectures, will be published under those auspices in a special volume.

Best They Could Do in 1655

In King James Bibles, dates in the margins of the pages still tell the reader that the world was created in the year 4004 B. C. The crucifixion is set down as occurring in 33 A.D. These represent the best that seventeenth century scholarship could do with such problems, when Archbishop Usher wrestled with the task of editing dates into the Bible, in 1655.

Since Usher made his decision, with little more than clues in the Bible itself and traditions to go on, our age of arch-

aeology and systematic research has dawned. Thousands of clay tablets, inscribed with wedge-shaped Babylonian writing, have been unearthed and patiently deciphered. Buried cities in Palestine and elsewhere in the Bible world have been opened. Coins, pottery, and many other lines of evidence have helped with the huge puzzle of reconstructing dates and happenings, in all of which the Bible has importantly helped scholars to understand what they found, and in turn the Bible has become better understood.

So now, the calendar of the Babylonians, whose wise men gazed at the stars and tried to improve methods of counting time, comes into the solution of dating Christ's experiences on earth. The Babylonian calendar was very familiar to Christ. Jews of His day used it in reckoning their religious dates of the year.

That the Jews had adopted the Babylonian way of counting time when they were kept in enforced exile in Babylon is a well-known fact. And when they returned to their homeland, they continued to use it.

Used Babylonian System

It must have been the Babylonian system of counting time that the New Testament writers had in mind, Dr. Olmstead points out, when they wrote their narratives so steeped in religious events.

"What is not so well known today," says Dr. Olmstead, "is that, thanks to astronomical tablets, we can establish a calendar for events in the late Babylonian period with rarely a probable error of a day. For the period from 367 to 11 B. C., our table is exact to the day. And we can extend the calendar through 45 A. D., by additional data gained from coins and recently found clay tablets."

Fitting this Babylonian calendar to the Passover dates of the year Christ died, Dr. Olmstead declares that he has clinched the evidence that the crucifixion was in 30 A. D. This date has been considered probably correct by a good many authorities, but uncertainties remained.

Like the involved plot of a mystery is the reasoning which leads him to the year 30, as the year of the crucifixion and the first Easter. For the situation is complicated by a question of whether or

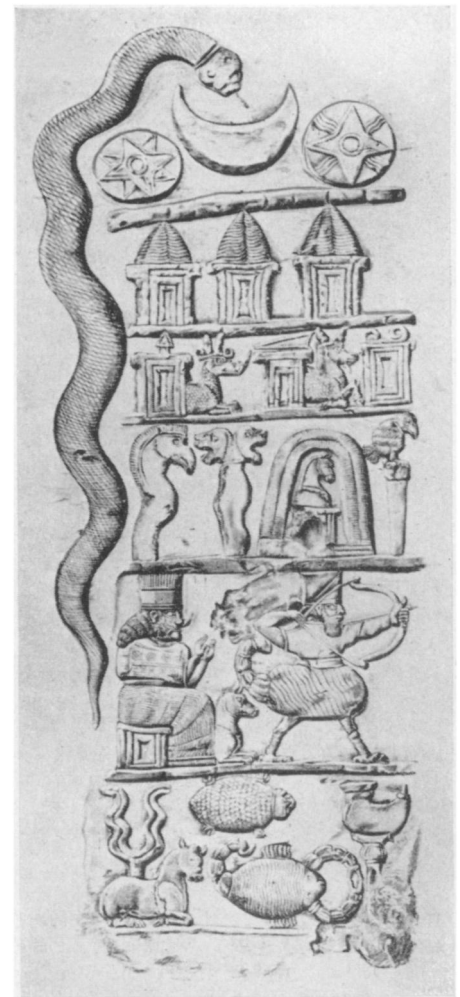
not the Last Supper of Christ and His disciples was really on the Passover day, or the day before.

Here is the way Dr. Olmstead builds up the reasoning:

Babylonian astronomers from 367 B. C. on began the day at midnight, as we do. But the Jews began the day with sunset.

Agree on Thursday Night

Now, all four Gospels agree that the Last Supper occurred on Thursday night, which in Jewish usage was a part of Friday. But while Matthew, Mark, and Luke describe the occasion as a Passover



HEAVENLY GUIDE

A Babylonian astronomical picture. Note the three symbols at the top of crescent moon and two bright stars, which in early Babylonia formed the heavenly guide to the start of a new year.



ANCIENT ASTRONOMY

Unreadable to most people in the world today, broken clay tablets like this reward scholars by making clear much of the Babylonian astronomy. This tablet records month by month the location of the 12 zodiac signs.

feast, the fourth writer of Christ's biography, John, does not. He even indicates that the Last Supper was on the day preceding the Jewish Passover.

"On these conflicting data hangs the date of the crucifixion," declares Dr. Olmstead.

If John is right, he explains, the Last Supper was on the 14th day of the Babylonian spring month called Nisan. The Passover feast was always on the 15th. So, this would make the Passover of that year Friday, the 15th. If the other three biographers were the more accurate, then Thursday really was the 15th, the Passover date.

To find out whether Nisan 15 fell on Thursday or Friday in the possible years in which the crucifixion might have occurred, Dr. Olmstead prepared a new calendar table. The years 31 to 36 did not fit at all, because the Passover must have been during early days of the week in those years.

Crucifixion on Passover

The only date that did fit upheld John's version, placing the crucifixion in the year 30, and the Passover on the day of the crucifixion itself.

Says Dr. Olmstead confidently: "The date of the crucifixion, April 7, 30, is as certain as any in ancient history and is more exact than the majority."

That John wrote his memoirs before the other Gospel writers, and wrote them

very early after Christ's death is the view of some scholars, supported by this new research. By the year 50 A. D. the Apostle Paul understood that the Last Supper was a Passover meal, showing that this view of it was established before that time.

Clears Up Obscurities

Accepting John's omission of details in describing the Last Supper as meaning that it was not a Passover feast, clears up obscurities in the last hours of Christ's conversation with His friends and the trial experiences:

"The disciples," says Dr. Olmstead, "did expect that Judas had left the Last Supper table to procure food for the Paschal (Passover) Meal. The high priests did refuse to enter the Praetorium lest they be defiled and unable to eat the approaching Meal.

"When John speaks of the 'preparation of the Passover,' instead of the expected 'preparation for the Sabbath' for Friday, he implies what afterwards he makes perfectly clear, 'great was the day of that Sabbath.'

"According to our table, the great day of the feast 15 Nisan, did coincide in the year 30 with the Sabbath and therefore according to Jewish custom was an especially holy day. Thus Jesus expired at the very hour when the paschal lamb was being slaughtered.

"Now at last we can understand why

Paul insists: 'Our Passover is sacrificed, Christ; therefore let us keep the feast.'"

From his calendar studies and the outstanding importance given to the Gospel of John, Dr. Olmstead is now convinced that Christ was much older during His brief ministry than artists have painted him, and preachers have described Him.

Very significant, the archaeologist points out, is the statement by John that Jesus' enemies taunted Him as being not yet fifty years old. While Jesus astounded the teachers in the temple by child wisdom, He would not have become a teacher with a reputation for authority until near middle age.

Our method of reckoning time from the birth of Christ was started by a monk of the sixth century, who figured as best he could the time that had elapsed since the event. Even in Archbishop Usher's day, it was recognized that Christ was born a few years "B. C."

Now, the likelihood that the first Christmas was about 18 or 20 B. C., by our calendar, is emphasized in Dr. Olmstead's studies.

Babylonian Calendar

Babylonian wise men, whose calendar lore has become important for explaining the birth date and death date of Christ, used a lunar year of 354 days. To keep the year from getting too badly out of step with the sun and the cycle of seasons for planting crops, the astronomers of early Babylonia apparently advised the King when he should insert an extra month in a year.

One of Hammurabi's decisions, which incidentally took account of taxpayers' deadlines, about 2200 B. C., is preserved on a clay document:

"Thus says Hammurabi: the year having gone wrong, let the coming month be registered by the name of Ululu the second. And instead of payment of taxes being made on the 25th day of Tasritsu, let it be made on the 25th day of Ululu the second."

Later, adding an extra month in certain years became systematic, thus giving modern scholars confidence in calculating Babylonian dates.

Astronomers have been attracted by the frequent use of three star symbols on Babylonian pictures. They came to realize that early Babylonians meant these to represent the Moon and the Constellation of the Twins that we call today Castor and Pollux. The three had a vitally important sky task for early Babylonia.

When the new moon appeared in the evening sky in spring with these two stars bright and close to it, the observers

signaled to the people that the new year had begun.

When Babylonian calendar records showed that the sign in the sky was late, and instead of being seen on the first evening of the expected month, the moon did not shine near the stars until the third evening, then the astronomers had an extra announcement. The calendar was slipping, and an extra month must be added.

Babylonian astronomy gained in exactness as time went on, making it possible now, thousands of years after, for persevering scholars to use the ancient lore in clearing up dates of interest to millions.

Science News Letter, April 12, 1941

SAFETY

Life-Saving "Oxygen Shirt" New Aid to Life Guards

ALIFE-SAVING "oxygen shirt" to aid life guards in rescuing drowning persons is announced by Dr. Christian J. Lambertsen, of the University of Pennsylvania Medical School. (*Journal, American Medical Association*, March 28.)

With this new kind of apparatus strapped like a harness to his bronzed back and chest, the life guard will be able to stay under water for from 18 to 25 minutes in depths to 60 feet while searching for drowning accident victims, instead of the usual one minute at depths to 30 feet.

The oxygen harness which thus increases the life guard's life-saving ability weighs just over 12 pounds in air. Under water it is practically weightless. A small cylinder for oxygen or an oxygen-nitrogen mixture fits into a pocket. A nose and mouth mask, rebreathing bags, lead plate and a soda lime container are the other chief features. The breathing bags, breathing tubes and inhaler are all buoyant under water and their lift almost exactly balances the under water weight of the oxygen cylinder, regulator, soda lime container and lead plate.

The whole life-saving apparatus can be strapped on and be in use within 15 seconds or less. It is designed to fit persons of varied size and shape without time-consuming adjustments. Unlike the deep-sea diver's outfit, this apparatus does not require an assistant at the surface but it does not give the life guard protection against cold while under the water.

Besides helping life guards and others rescue drowning persons, the new apparatus could be used for inspection and

minor under-water repairs of hulls of boats; for pearl and sponge fishing; sport, as in goggle fishing; and, with slight modifications, in mines, sewers, chemical

plants and gas companies where the atmosphere is deficient in oxygen or contains noxious gases.

Science News Letter, April 12, 1941

ASTRONOMY

Gigantic Pinwheel Star Shines With Many Colors

Red, Yellow and Green Gases, Spiralling Out From Double Star Center Would Be Beautiful Sight

IF IT could be seen from the proper angle, through some super-telescope many times more powerful than any now contemplated, the star Sheliak would be revealed as a gigantic pinwheel of red, yellow and green gases, spiralling outwards from a double star at the center to a distance of 50,000,000 miles.

This star, called beta Lyrae by astronomers, is in the constellation of Lyra, the lyre, near the bright star Vega, now seen in the northeast about midnight.

The pinwheel conception is given by Dr. Otto Struve, director of the Yerkes Observatory. (*American Journal of Physics*, April). His ideas are based on the researches of his colleague, Dr. Gerald P. Kuiper.

Beta Lyrae is normally fairly bright, of the third magnitude, but in 1784 a 20-year-old deaf mute in England, John Goodricke, noticed that it varies in a period of a little less than a week. Later it was found that the star's cycle is really 12 days 22 hours. From its full brightness, after 6.5 days, it decreases about a third, then it returns to the original, and drops again, this time to about two-fifths of its former brilliance. Then it brightens again, and the cycle starts over.

Though it was long ago realized that this is a double star, with two parts, revolving around their center, and that sometimes both stars are visible, sometimes one, and sometimes the other, depending on which is in front, many peculiarities were discovered, requiring an elaboration of the theory. Many of these were found in analyzing the star's light through the spectroscope.

Now, however, astronomers have evolved what appears to be a satisfactory theory to explain its mystery. The two stars, one large, the other small, are actually in contact, and material flows from the big one into the smaller. As

the system revolves, some of this is sprayed off and spirals outward. Dr. Struve summarized the conceptions as follows:

"The star is actually a binary, just as the older theory had predicted. However, the cool and relatively small star which turns around the hot supergiant is so much fainter in light that we cannot even photograph it; in the time required to record it, the image of the hot supergiant would be so completely overexposed that the photographic emulsion would be burned out. Of course, the distance of beta Lyrae is so great that we cannot actually see the pinwheel structure of the expanding gases, or the motion of the faint companion around the primary star. Even the greatest telescope now in existence is much too small to bring this marvel to our eyes. We must be content with information secured by theory and indirect observation.

"Imagine then a giant sun so hot that its color is essentially blue, so large that a good portion of the entire solar system could be hidden within its confines, and so brilliant that our sun would completely disappear in its glare. At a short distance, probably less than the radius of the large star, is another sun, yellow in color, and relatively cool, though hotter and considerably larger than our sun. This yellow star revolves around the blue supergiant once in 13 days. Its gravitational attraction upon the supergiant is tremendous."

The pinwheel would be a gorgeous affair, for, says Dr. Struve, "this spiral is hot—almost as hot as the blue supergiant; and the gases shine in all the colors characteristic of electric discharges in gases—luminous hydrogen with its red tinge, helium with yellow and green, neon with its red; the matter spirals out with a speed close to 100 miles per second."

Science News Letter, April 12, 1941