When was Jesus crucified? Evidence pointing to the year 31 AD

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Abstract

In which year was Jesus crucified? Many scholars consider that he died some time between 29 AD and 34 AD. A partial lunar eclipse (as described by St. Peter on the Day of Pentecost) on Wednesday 25 April 31 AD (evening/night on 14th Day of Nisan in the Jewish calendar) corresponds well with the Gospels, if the Last Supper were a private "eve of Passover" meal eaten as a Teacher with his disciples one day earlier than others in Jerusalem, followed by Jesus praying and being arrested in the Garden of Gethsemane. The crucifixion of Jesus on Thursday 26 April 31 AD (daytime on 14th Day of Nisan) corresponds well with the New Testament, if this were followed by a "special Sabbath" for the Passover on 15th Day of Nisan, then a regular weekly Sabbath on 16th Day of Nisan, then the resurrection of Jesus on 17th Day of Nisan (the First Day of the Feast of First Fruits), with descriptions of fig trees in bloom and bearing "early figs" being suggestive of a late Passover. This chronology, with the death of Jesus on 14th Day of Nisan, would account for the "Quartodeciman Controversy" in the 2nd Century AD.

Key words:

crucifixion 31 AD lunar eclipse Passover 14th Nisan

Introduction

Jesus of Nazareth or Jesus Christ is at the very centre of the Christian faith and is the world's most famous person. Almost all historians consider him to be a historical figure who lived in the Holy Land in the 1st Century AD (Ehrman, 2011). Yet the precise details of the date of his death are not known. The position of many scholars is that he died some time between approximately 29 AD and 34 AD. Any earlier, and the chronology of the life of Pontius Pilate becomes problematic (Flavius Josephus, a Romano-Jewish historian, stated in "Antiquities of the Jews" (written in about 93 AD) that Jesus was crucified on the orders of Pontius Pilate and that he was the Roman governor of the province of Judaea from 26 AD until summoned to Rome in 36 AD) (Theissen and Merz, 1998; Köstenberger et al., 2009). Any later, and the chronology of the life of the apostle Paul becomes problematic (St. Paul was on trial by Junius Gallio in Achaea, Greece around 51-52 AD, approximately seventeen years after his conversion, which was after Jesus' death) (Jewett, 2012; Bond, 2012, 2013).

In many ways this lack of knowledge does not matter, as it demonstrates that Jesus was a rather ordinary man in his time – a Galilean carpenter and itinerant preacher, who met his end by being executed in the Roman province of Judaea by crucifixion. He was a Mediterranean Jewish peasant (Crossan, 1991). Yet, as we approach two thousand years since this event, it is perhaps frustrating that we cannot be more precise. The year in which Jesus died is a very important year in history, as it was the

year of Christian beginnings – the year in which Christians believe Jesus rose from the dead and the Holy Spirit was poured out on his disciples.

When did Jesus die? I believe we can identify the likely year, by a careful reconsideration of descriptions of nature and events given in the New Testament. These descriptions are mostly already known to scholars, though the way that these descriptions have been analysed and reconsidered together here is different.

Partial eclipse of the moon on Wednesday 25 April 31 AD (evening/night on 14th Day of Nisan)

In ancient history there is frequently uncertainty as to the exact dates of events and, where available, descriptions of lunar and solar eclipses have been used to provide precise dates for events and to construct chronological frameworks for antiquity. This is because eclipses are natural astronomical phenomena that can be interpreted with a precision of the nearest hour or better, even over a time interval of 2,000 years (Morrison and Stephenson, 2004). It has long been suspected (at least since the times of Sir Isaac Newton, who considered the dates of Friday 3 April 33 AD and Friday 23 April 34 AD) that there was a lunar eclipse in the year that Jesus died (Pratt, 1991). The main difficulties, as is frequently the case with ancient history, have been determining whether the ancient descriptions definitely refer to a lunar eclipse and relating these ancient descriptions to the correct lunar eclipse within the astronomical record.

The main reason for considering a lunar eclipse around the time of the death of Jesus is the wording of the sermon given by the apostle Peter in Jerusalem on the Day of Pentecost (Acts 2:14-22):

"Fellow Jews and all of you who live in Jerusalem, let me explain this to you; listen carefully to what I say. These people are not drunk, as you suppose. It's only nine in the morning! No, this is what was spoken by the prophet Joel:

'In the last days, God says, I will pour out my Spirit on all people Your sons and daughters will prophesy, your young men will see visions, your old men will dream dreams. Even on my servants, both men and women. I will pour out my Spirit in those days, and they will prophesy. I will show wonders in the heavens above and signs on the earth below, blood and fire and billows of smoke. The sun will be turned to darkness and the moon to blood before the coming of the great and glorious day of the Lord. And everyone who calls on the name of the Lord will be saved.'

Fellow Israelites, listen to this: Jesus of Nazareth was a man accredited by God to you by miracles, wonders and signs, which God did among you through him, as you yourselves know."

St. Peter quoted the prophet Joel who spoke of the moon being turned to blood before the coming of the great and glorious day of the Lord, and stated that this was one of the wonders in the heavens above which his fellow Jews knew God had done among them. The moon being turned to blood, that is a "blood moon", is particularly significant as it is the description that is frequently used for a total lunar eclipse in which the moon usually takes on a reddish hue (though it may occasionally be used to describe a moon that appears reddish because of dust, smoke or haze in the sky) (Kher, 2021). Peter was clearly saying that the prophecy of Joel was being fulfilled through the death and resurrection of Jesus and the outpouring of the Holy Spirit. But was Peter also saying that one of the wonders seen in the heavens above around this time, known to both him and his fellow Israelites, was a lunar eclipse? Probably. The Synoptic Gospels (Matthew, Mark and Luke) record that that there was darkness over Jerusalem for several hours on the day that Jesus died, so Peter probably meant "the Sun was turned to darkness" literally. Hence, Peter probably meant "the moon was turned to blood" literally, as well. In antiquity, lunar eclipses often have been described in this way. For instance, the total lunar eclipse of 20 September 331 BC (two days after Alexander the Great crossed the River Tigris) was described by the Roman historian Quintus Curtius as "suffused with the colour of blood" (Ginzel, 1899), and the partial lunar eclipse of 18 October 69 AD (before the second battle of Cremona) was described by the Roman historian Dio Cassius as causing great confusion in the camp of Vitellius as the moon "appeared both blood coloured and black" (Humphreys, 2011).

If the sermon of St. Peter was referring to a lunar eclipse visible in the Roman province of Judaea in the early spring (the time of the Passover) between 26 AD and 36 AD, then there are only three possible lunar eclipses, as given in Table 1.

<u>Table 1. Lunar eclipses visible in Judaea in March or April between 26 AD and 36 AD</u> (From NavSoft.Com, 2012)

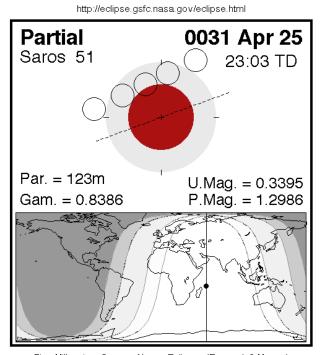
Date	Type of	Approximate time using Universal Time +2 hours 20 mins for Jerusalem								
(Julian calendar)	eclipse	Sunset	Start of civil twilight	Start of astronomical twilight	Moonrise	Start of eclipse (start of penumbral phase)	Start of partial phase	Maximum eclipse	End of partial phase	End of eclipse (end of penumbral phase)
Wednesday 25 April 31 AD	Partial lunar eclipse	18.31	18.56	19.58	18.15	20.02	21.17	22.17	23.18	00.32 (Thursday 26 April 31 AD)
Friday 3 April 33 AD	Partial lunar eclipse	18.18	18.42	19.41	18.17	14.07	15.29	16.55	18.20	19.42
Tuesday 23 March 34 AD	Penumbral lunar eclipse	18.12	18.36	19.33	18.09	16.00		17.22		18.44

At first sight, each of these lunar eclipses look quite promising candidates for the "moon being turned to blood", but that is not the case when their appearance from Jerusalem is carefully considered. The lunar eclipse of Tuesday 23 March 34 AD ended

several minutes after the start of civil twilight in Jerusalem, meaning that the eclipse would have had no discernible effect. The lunar eclipse of Friday 3 April 33 AD had a partial phase that ended at 18.20, before the start of civil twilight, meaning that the eclipse would probably not even have been noticeable in Jerusalem and certainly any reddish colouration of the moon associated with the eclipse would not have been visible (Schaefer, 1990; NavSoft.Com, 2012).

Which leaves the **partial lunar eclipse on Wednesday 25 April 31 AD** (**evening/night on 14**th **Day of Nisan**). This eclipse took place entirely within astronomical twilight and so would have been clearly visible from Jerusalem, weather permitting. Further details of the appearance of this partial lunar eclipse are given in Figure 1 (NASA, 2011).

Figure 1. Appearance of the partial lunar eclipse of Wednesday 25 April 31 AD (From NASA, 2011)



Five Millennium Canon of Lunar Eclipses (Espenak & Meeus)

NASA TP-2009-214172

Note: TD (Terrestrial Time, also known as Dynamical Time) of 23.02 & 48 secs for Time of Greatest Eclipse = 20.12 & 27 secs UT (Universal Time) (NASA, 2007, 2011)

This eclipse of the moon on Wednesday 25 April 31 AD could have been the cause of the "moon turning to blood" that the apostle Peter described in his sermon on the Day of Pentecost (Acts 2:20). It was a partial lunar eclipse with about one quarter of the moon totally immersed in the Earth's shadow, so the moon would have appeared dimmed with part of the moon having a reddish hue. Cloud and atmospheric dust may have accentuated the redness and dimming of the moon. Indeed, the appearance of lunar eclipses can vary, and may range in colour from nearly black to grey, brown, rust coloured, brick red, copper red, orange, yellow, or gold, with red being the most frequent colour. The amount of dust particles, water droplets, clouds, and mist can all have an effect on the shade of red, and volcanic ash and dust can cause the moon to

turn dark during an eclipse (Link, 1969; Kher, 2021). There is a Danjon Scale for lunar eclipse brightness that demonstrates this range (Figure 2).

Figure 2. The Danjon Scale for lunar eclipse brightness (From Kher, 2021)



It is interesting that a lunar eclipse on the evening and night of Wednesday 25 April 31 AD fits in well with descriptions in the Gospels, if that was the night that Jesus was betrayed and arrested. According to the Gospel of Luke, after the Last Supper Jesus went out to the Mount of Olives, where he prayed earnestly and "his sweat was like drops of blood falling to the ground" (Luke 22:44). This description might have arisen if Jesus were facing towards the eclipsed moon as he prayed and his sweat took on a blood red tinge in the red moonlight. Also, more prosaically, if Judas Iscariot and a band of men came to arrest Jesus in the Garden of Gethsemane on the Mount of Olives at around the hour of 10.00 p.m. to 11.00 p.m., this would have been the time of maximum eclipse and could explain why they came carrying torches, lanterns and weapons (John 18:3) on the night of a full moon. As they approached, Jesus said "Every day I was with you in the temple courts, and you did not lay a hand on me. But this is your hour—when darkness reigns" (Luke 22:53). On a night of a full moon, Jesus said it was the hour of darkness. Whilst these descriptions could have applied if the night were overcast or the band of men routinely carried torches and lanterns for searches, they have particular significance if the moon were at the maximum of an eclipse. Even though Jesus had been seen regularly in the Temple, the men needed Judas Iscariot to point Jesus out in the reddish darkness of the eclipse (Hage, 2014). Furthermore, this darkness and blood red moon would have been etched in St. Peter's memory, as the night that he fell asleep instead of keeping watch, struck out with his sword, and then deserted and denied Jesus (Mark 14:32-72).

There are a few difficulties with assigning the arrest of Jesus to Wednesday 25 April 31 AD. One issue is that this was only a partial eclipse, so the appearance of the moon might not have been as red as "the moon turned to blood", though other partial eclipses, such as that on 2 March 462 AD observed by Hydatius, bishop of Chaves (in

Portugal), have been described in this way (Stephenson, 2021). Another issue is that the verses Luke 22:43-44 are not in all early manuscripts and may have been an interpolation into the Gospel of Luke made some time prior to 160 AD (Ehrman and Plunkett, 2006). If Jesus were crucified on the day after his arrest, this would mean that Jesus died on Thursday 26 April 31 AD, whereas traditions of the established church assign the crucifixion of Jesus to a Friday. This is not such a great difficulty as it first seems, especially since there may not have been an unbroken cycle of weekdays from the 1st Century AD to modern times (Schaefer, 1990).

Crucifixion of Jesus on Thursday 26 April 31 AD (daytime on 14th Day of Nisan)

It is reasonable to assert that Jesus was crucified on the day after his arrest. All four Gospels indicate this, and the priests would have wanted swift action before the Passover and before Pilate left Jerusalem, as the consent of Pilate was needed to inflict capital punishment (Freeman, 2011). If that were the case, then **Jesus was crucified on Thursday 26 April 31 AD (daytime on 14th Day of Nisan)**. Whilst this is contrary to church traditions which assign the crucifixion to a Friday, dates for the crucifixion of Jesus on a Thursday and the resurrection of Jesus on a Sunday fit in very well with certain interpretations of the Gospels and the New Testament.

It is worth noting that the word "Sabbaths" – the Greek word is $\sigma\alpha\beta\beta\dot{\alpha}\tau\omega\nu$ (sabbaton), which is clearly plural (Nestle et al., 1988) – is used in certain places in the Gospel accounts of the burial and resurrection of Jesus, as shown by Young's Literal Translation:

"And on the eve of the <u>sabbaths</u>, at the dawn, toward the first of the <u>sabbaths</u>, came Mary the Magdalene, and the other Mary, to see the sepulchre," (<u>Matthew 28:1</u>)

"And the <u>sabbath</u> having past, Mary the Magdalene, and Mary of James, and Salome, bought spices, that having come, they may anoint him, and early in the morning of the first of the <u>sabbaths</u>, they came unto the sepulchre, at the rising of the sun, and they said among themselves, 'Who shall roll away for us the stone out of the door of the sepulchre?" (Mark 16:1-3)

"And the day was a preparation, and <u>sabbath</u> was approaching, and the women also who have come with him out of Galilee having followed after, beheld the tomb, and how his body was placed, and having turned back, they made ready spices and ointments, and on the <u>sabbath</u>, indeed, they rested, according to the command. And on the first of the <u>sabbaths</u>, at early dawn, they came to the tomb, bearing the spices they made ready, and certain [others] with them, and they found the stone having been rolled away from the tomb, and having gone in, they found not the body of the Lord Jesus." (Luke 23:54-24:3)

"And on the first of the <u>sabbaths</u>, Mary the Magdalene doth come early (there being yet darkness) to the tomb, and she seeth the stone having been taken away out of the tomb, she runneth, therefore, and cometh unto Simon Peter, and unto the other disciple whom Jesus was loving, and saith to them, 'They took away the Lord out of the tomb, and we have not known where they laid him." (John 20:1-2)

Interpreting the use of the plural Greek word "Sabbaths" is very difficult, not least because σαββάτων can be translated as "the seventh day of the week on which the Jews abstained from all work - the Sabbath", or as "seven days - a week" (Thayer, 1995). The Jews simply numbered the days of the week rather than giving them names, except for the Sabbath (and "Sabbath" literally means "seven", as it is the seventh day of the week). Furthermore, the word "Sabbaths" could mean that Jesus' resurrection took place following the sabbaths of the last week of his life. In short, this use of the plural "Sabbaths" is puzzling, as is the chronology of the death and resurrection of Jesus in general. In particular, the Synoptic Gospels (Matthew, Mark and Luke) apparently assign the crucifixion of Jesus to the daytime after the Passover meal – on the First Day of the Festival of Unleavened Bread (daytime on 15th Day of Nisan, the first month of the year in the Jewish calendar, with Jewish days running from sunset to sunset). By contrast, the Gospel of John assigns the crucifixion of Jesus to one day earlier to the daytime before the Passover meal – on the Preparation Day for the Passover (daytime on 14th Day of Nisan in the Jewish calendar) - with Jesus crucified at the same time as the lambs were slaughtered. Whilst this may have been a literary construct by the Gospel of John to portray Jesus as the Passover lamb taking away the sin of the world (Barclay, 2001; Ehrman 2009), the imagery is quite subtle, though strong. For instance, after death, Jesus' legs were not broken (John 19:31-33), just as none of the bones of the Passover lamb were to be broken (Exodus 12:46; Numbers 9:12), and the Passover lamb was traditionally roasted on two transverse spits of dry wood arranged like a cross (one spit from the lower limbs to the head, and another at the shoulder, to which the paws were fastened) (Tabory, 1996).

Nevertheless, especially since the Gospels used some sources in the Semitic language of Aramaic (Grant, 1943; Missick, 2006), the use of the plural "first of the Sabbaths" for the Sunday of the resurrection may be an indicator that the original oral traditions referred to two consecutive Sabbaths prior to the Sunday of the resurrection. These two consecutive Sabbaths could have been a "special Sabbath" on the Friday that was the First Day of the Festival of Unleavened Bread (daytime on 15th Day of Nisan), on which no regular or ordinary work was to be done (Leviticus 23:6-7), followed by the regular weekly Sabbath on the Saturday (daytime on 16th Day of Nisan). This appears to be borne out by Luke 23:54-24:1, with the women preparing spices and ointments (to anoint the body that had been prepared and buried by Joseph of Arimathea on the Thursday), on the first Sabbath on the Friday, the First Day of the Festival of Unleavened Bread (Figure 3). This was a day on which no regular or ordinary work was to be done, and the preparing of spices and ointments by the women was not "ordinary" work. The next day, the regular weekly Sabbath on the Saturday, the women rested according to the commandment. Then on the Sunday, after the two Sabbaths. they went to the tomb (Biblical Hermeneutics, 2016). Furthermore, the Gospel of John clearly specifies that the day after Jesus' crucifixion was a "special Sabbath": "Now it was the day of Preparation, and the next day was to be a special Sabbath. Because the Jewish leaders did not want the bodies left on the crosses during the Sabbath, they asked Pilate to have the legs broken and the bodies taken down" (John 19:31). It would have been highly objectionable to the Jewish leaders to allow crucified bodies to remain on the crosses overnight during this special Sabbath (Deuteronomy 21:22-23). All of this indicates that Jesus was crucified on Thursday 26 April 31 AD (daytime on 14th Day of Nisan) and was resurrected on Sunday 29 April 31 AD (daytime on 17th Day of Nisan).

This is contrary to the traditions of the established church, which ascribe the death of Jesus to the Friday, but is in keeping with various aspects of the Gospels which indicate that Jesus was three nights in the tomb. For instance, when speaking about the sign of Jonah, Jesus said "For as Jonah was three days and three nights in the belly of a huge fish, so the Son of Man will be three days and three nights in the heart of the earth" (Matthew 12:40). Also, on the day of the resurrection, two disciples on the road to Emmaus said "The chief priests and our rulers handed him over to be sentenced to death, and they crucified him; but we had hoped that he was the one who was going to redeem Israel. And what is more, it is the third day since all this took place" (Luke 24: 20-21). It is also consistent with the apocryphal Gospel of Peter which indicates that Jesus' crucifixion was on the day before the First Day of the Festival of Unleavened Bread, that is in the daytime on the 14th Day of Nisan (Mattison, 2018). However, there are some aspects of the Gospels which appear consistent with the crucifixion of Jesus being on a Friday, such as when Jesus said to some Pharisees regarding Herod Antipas: "Go tell that fox, 'I will keep on driving out demons and healing people today and tomorrow, and on the third day I will reach my goal.' In any case, I must press on today and tomorrow and the next day-for surely no prophet can die outside Jerusalem!" (Luke 13:32-33).

A date for the crucifixion of Jesus of Thursday 26 April 31 AD is guite late in the year. Does it fit in with the Passover date for that year? The official Jewish calendar was designed with the intent that the spring equinox always fell either in the month of Adar (the last month of the Jewish year), or at the latest on the 1st Day of Nisan (the first month of the Jewish year). The Jewish calendar (which was comprised of 12 or 13 lunar months with lengths of 29 or 30 days) in the 1st Century AD was variable. This was due to factors such as the start of each lunar month being dependent on the visibility of the crescent new moon and the insertion of an intercalary or "leap" month (an additional Adar I month with a length 30 days) every two to three years, aiming to keep this lunar calendar in step with the Sun (Humphreys and Waddington, 1992; Reis, 2019). In the 1st Century AD, the Jewish authorities had a fairly detailed knowledge of astronomy, such as the average length of time between each lunar conjunction (or molad), and calculations were made; though Jewish writings indicate that the purpose of the calculations were to assess the reliability of witnesses of the visible new moon crescents, not to determine when months and years began. The "calendar" that was held sacred by both the Jews and the Babylonians was the one determined by the clock in the sky, not that created by the calculations of men. The practice of establishing Jewish calendar dates by calculation alone was not instigated until about 358 AD (Beattie, 2012). Hence, there is some uncertainty as to the exact date of the Passover in each year in the 1st Century AD. In the year 31 AD, the spring equinox was on Friday 23 March 31 AD, so, whilst some scholars have assigned the Passover in that year to the time around Tuesday 27 March 31 AD (Humphreys and Waddington, 1992), others have assigned it to the time around Wednesday 25 April 31 AD (Nelte, 1998).

Assuming the late April Passover date, the actual 1st Day of Nisan would have been determined by the first sighting of the crescent moon after the new moon at time 14.14 on Tuesday 10 April 31 AD. Since this new moon was in the daytime, the first opportunity for seeing the crescent moon in Jerusalem would have been on the evening of Wednesday 11 April 31 AD. However, if the sky had been obscured by cloud or dust in Jerusalem on the evening of Wednesday 11 April 31 AD, such that the new moon crescent was not sighted until the following evening, then the 1st Day of Nisan would have been on Friday 13 April 31 AD, and the 15th Day of Nisan (the First Day of

the Festival of Unleavened Bread) would have been on Friday 27 April 31 AD (Hage, 2014). This would be consistent with people in Jerusalem having eaten the Passover meal on the evening of Thursday 26 April 31 AD. It would also be consistent with Jesus and his disciples having eaten the Last Supper as a private meal "before the Passover" on the previous evening of Wednesday 25 April 31 AD.

Hence, the apparent confusion regarding dates and whether or not the Last Supper was a Passover meal may have been because Jesus and his disciples ate the Last Supper as a private meal in preparation for the Passover, such as one of a Teacher or Rabbi eaten with his disciples or pupils. Such a meal would have taken place on the "eve of Passover" after sunset of the 14th Day of Nissan, or on the evening of Wednesday 25 April 31 AD by the chronology proposed here. Indeed, there is some evidence that the Last Supper in the early church was celebrated as an "Agape Meal" with fellow Christians (Reis, 2019). This would account for the Last Supper having some, though not all, of the characteristics of a Passover meal. There was bread, wine, and the singing of a hymn (Mark 14:16-26); though, crucially, no mention of a lamb being sacrificed at the Temple, nor of it being brought home and roasted. It would also account for how the Synoptic Gospels state that Jesus and his disciples prepared the Passover (Matthew 26:19; Mark 14:16; Luke 22:13), rather than stating that they actually "ate" the Passover (Reis, 2019). Jesus' instructions for preparation were quite elaborate and implied an element of covertness – going into the city, following a man carrying a water jar to a house, asking the owner 'The Teacher asks: Where is my guest room, where I may eat the Passover with my disciples?', and being shown a large upper room, furnished and ready, as the place to prepare the Passover (Mark 14:13-15). Interestingly, a few groups, most notably the Samaritans and the Essenes, probably ate the Passover meal on a different day to most people in Jerusalem, due to them still using a pre-exilic calendar (using a day that ran from sunrise to sunrise and the conjunction of the new moon to determine the 1st Day of Nisan) that was one to four days earlier than the post-exilic calendar that was the official Jewish calendar in the 1st century AD. The instructions to follow a man carrying a water jar (a task that celibate Essene men often did out of necessity) may have been a sign to enter the city through the Essene Gate and use an upper room of the Essene community for the "before the Passover" meal (Humphreys, 2011).

The key events of spring 31 AD are summarised in Table 2. From this table it can be seen that dates in spring 31 AD fit in well with events and beliefs expressed in the Gospels, the book of Acts, and the early letters of St. Paul.

Fig trees already in bloom and bearing "early figs" suggest a Passover during late April in the year Jesus died

A further aspect of the Synoptic Gospels which indirectly supports the late spring date of Thursday 26 April 31 AD for the crucifixion of Jesus, is the description of fig trees that they provide. Like all deciduous trees, fig trees change with the seasons. In Jerusalem and the uplands of Judaea, fig trees shed all their leaves by December and remain bare until the spring. Generally, from about the end of March onwards they put forth buds, followed by the appearance of larger green leaves in early April. When these leaves appear, every fig tree which is going to bear fruit from the "new wood" in August, will have some knob-like "early figs" on them, small figs that are also known as "taqsh" or "breba" figs (Figure 3) (Masterman, 1939; Bruce, 2003). These taqsh can

<u>Table 2. Key events in Jerusalem and its environs in April – June 31 AD</u>

Date (Julian calendar, year 31 AD) –	Event (with date in Jewish calendar, year 3792 Am, each day				
Approx. time using Universal Time	in the official Jewish calendar running from sunset to sunset				
+ 2 hours 20 mins for Jerusalem	or nightfall to nightfall)				
Tuesday 10 April 31 AD – Time 14.14	Conjunction of new moon (the molad) – First new moon after				
2 -	the spring equinox				
Wednesday 11 April 31 AD – Early evening	First opportunity to sight crescent new moon in Jerusalem missed due to cloudy or dusty sky				
Thursday 12 April 31 AD – Early	Crescent new moon sighted by religious authorities in				
evening	Jerusalem				
Friday 13 April 31 AD	1st Day of Nisan (first month of the Jewish year)				
Sunday 22 April 31 AD	10th Day of Nisan (five days before the Passover) – Probable date of triumphal entry of Jesus into Jerusalem (John 12:1 & 12)				
Wednesday 25 April 31 AD	13 th Day of Nisan – Jesus and his disciples prepared the Passover during the day and ate the Last Supper after sunset during 14th Day of Nisan as a private "eve of Passover" meal, eaten as a Teacher with his disciples (one day before most people in Jerusalem ate the Passover) (Mark 14:12-26; John 13:1-2)				
Wednesday 25 April 31 AD – Time 21.17 to 23.18	14 th Day of Nisan (evening/night) – Partial phase (darkest phase) of partial lunar eclipse – Jesus prayed in the Garden of Gethsemane on the Mount of Olives and Jesus arrested by a band of men guided by Judas Iscariot (Luke 22:39-53)				
Thursday 26 April 31 AD	14 th Day of Nisan (daytime) – Preparation Day for the Passover, with sacrificial lambs for the Passover meal killed in Jerusalem in the afternoon and eaten after sunset during 15 th Day of Nisan (Leviticus 23:4-6) – Trial of Jesus during night and morning (Jews did not enter Pilate's palace on the morning of 14 th Day of Nisan, as they wanted to be able to eat the Passover after sunset on 15 th Day of Nisan) (John 18:28) – Crucifixion of Jesus (the Passover lamb, 1 Corinthians 5:7) – As evening approached, Joseph of Arimathea asked Pilate for Jesus' body, wrapped it in linen cloth, and placed it in a new rock-cut tomb (Matthew 27:57-61)				
Friday 27 April 31 AD	15 th Day of Nisan – First Day of the Festival of Unleavened Bread, a "special Sabbath" for the Passover festival on which no regular or ordinary work was to be done (Leviticus 23:5-8) – Women who had come with Jesus from Galilee went home and prepared spices and perfumes (Luke 23:55-56)				
Saturday 28 April 31 AD	16 th Day of Nisan – Regular weekly Sabbath – Women rested on the Sabbath in obedience to the commandment (Luke 23:56)				
Sunday 29 April 31 AD – Early morning	17 th Day of Nisan – First Day of the Feast of First Fruits, first harvested barley sheaf waved by the priest before Yahweh (Leviticus 23:9-14) – Resurrection of Jesus (the firstfruits of those who have fallen asleep, 1 Corinthians 15:20-23) – Women found an empty tomb (Luke 24:1-3)				
Sunday 29 April 31 AD	17 th Day of Nisan – Two disciples met Jesus on the road to Emmaus on the third day since his crucifixion (Luke 24:20-21)				
Sunday 17 June 31 AD	7 th Day of Sivan (third month of the Jewish year) – Feast of Shavuot/Feast of Weeks/Pentecost (Greek meaning "50 th day") – Final Day of the Feast of First Fruits, two lambs waved by the priest before Yahweh together with baked wheat bread of firstfruits, celebration of the revealing of the Torah to the people of Israel on Mt. Sinai (Leviticus 23:15-22) – Holy Spirit came to the disciples in Jerusalem (Acts 2:1-5) (the firstfruits of the Spirit, Romans 8:23)				

be eaten if one is hungry and are an indicator that a specific fig tree is not barren, as sometimes the entirety of this first crop may abort so that by May there are no figs at all on the fig tree. It was a crop of taqsh figs that Jesus was most probably looking for when he was hungry and cursed the fig tree, causing it whither (Mark 11:12-14 & 20-25); particularly since the writer of the Gospel of Mark commented: "When he reached it, he found nothing but leaves, because it was not the season for figs" (Mark 11:13) (Masterman, 1939; Bruce, 2003).

Figure 3. Tagsh or breba figs



This happened shortly after the triumphal entry of Jesus into Jerusalem, which, if Table 2 is correct, would place it in late April 31 AD. To find a fig tree with leaves and be looking for taqsh or early figs on it makes good sense in late April, but considerably less sense in late March, unless it were an especially mild year. Also, at around the same time, Jesus said "Now learn this lesson from the fig-tree: As soon as its twigs get tender and its leaves come out, you know that summer is near" (Mark 13:28). Fig trees usually bloom in early to mid-spring, so **the crucifixion of Jesus was probably in a year of a late Passover during late April**, as the fig trees were already in bloom and summer was near. In Jerusalem and the Holy Land spring and autumn are only very short seasons, with the hot, dry summer effectively extending from about May to September (Alon, 1969).

Summary

In summary, this careful interpretation of the New Testament and nature strongly suggests that **Jesus was crucified on Thursday 26 April 31 AD**. This is a challenge to the view of those who consider that the memory of the precise details of the last days of Jesus' life had been lost to the collective memory by the time the Gospels were written (approximately 66 AD - 110 AD) (Perkins, 1998; Lincoln, 2005), meaning that the year of Jesus' death is probably not recoverable other than that it was

around the time of the Passover between about 29 AD and 34 AD (Bond, 2012, 2013). Whether the good coincidence of dates in 31 AD arises due to the Gospels being written mainly from eyewitness accounts, or due to the Gospels being written mainly to emphasise fulfilment of prophecy and theology, depends on one's point of view (Crossan, 1991; Martin, 1996; Wright, 2003; Beilby and Eddy, 2009; Ehrman, 2009; Bond, 2012; Bauckham, 2017). Either way, the year 31 AD is a good fit. Other dates for the death of Jesus, particularly Friday 7 April 30 AD (Dunn, 2003) and Friday 3 April 33 AD (Humphreys and Waddington, 1992), have been carefully researched and proposed. However, they do not fully account for the evidence given here, particularly a lunar eclipse that would have been clearly visible from Jerusalem. A chronology can be constructed for the spring of 31 AD which fits in very well with the New Testament accounts and theology (Table 2), including Jesus being crucified as the Passover lamb and rising from the dead as the firstfruits of those who have fallen asleep. The key exception to this is the assigning of the death of Jesus to a Thursday, whereas churches commemorate the death of Jesus on a Friday.

Why does the established church commemorate the death of Jesus on Good Friday? Most probably, the early church in the 1st Century AD celebrated the Passover, with the interpretation of Jesus as the Passover lamb (1 Corinthians 5:7; John 1:29), sacrificed on the 14th Day of Nisan (Exodus 12:6; John 18:28), and resurrected on the 16th or 17th Day of Nisan (the day after the Sabbath after Passover, the initial day of the Feast of First Fruits, when the first harvested barley sheaf was waved by the priest before Yahweh) (Leviticus 23:9-22). St. Paul described the resurrection as being firstly of Christ, the firstfruits of the harvest (as on the First Day of the Feast of First Fruits), then of those who belong to Christ, at his Second Coming at the completion of the harvest (as on the Final Day of the Feast of First Fruits) (1 Corinthians 15:20-28) (White, 2015).

The practice of celebrating Easter on a Sunday started around the time of Pope Sixtus I (c. 126 AD), as a repressive change from the Jewish lunar calendar to the Roman Julian solar calendar, and became a major issue during the "Quartodeciman Controversy" in which Pope Victor I (189 – 198 AD) threatened to excommunicate Polycrates, and other bishops in Asia Minor and Jerusalem, who celebrated the Passover for Christians on the 14th Day of Nisan. After the Council of Nicaea (325 AD), Quartodecimanism was outlawed under the Roman emperor Constantine I (306 – 337 AD) and persecuted under the Roman emperor Theodosius I (379 – 395 AD), and it was ruled that all churches should follow a single rule for Easter Sunday, computed independently of the Jewish calendar (Freeman, 2011). It seems probable that during this long, unedifying struggle to separate Christianity from its Jewish roots, the correct, historical tradition of Jesus dying on a Thursday was lost.

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