

# An introduction to Biblical Chronology

## *Scripture References and Notes*

### Session 3

#### Years, Months and the Calendars

*Note: all scriptures are from the AV (KJV)*

The aim of these Chronology Studies is to be able to work out dates. When we eventually finish them we will be able to work out one particular date, **to the day**, the birthday of our Lord. After that it'll get very mathematical and I am happy to go on as far as I can for those who want to know more. However, we will get there at the end of the **sixth** session on Chronology and it will be wonderful to get to that one date. Nevertheless tonight I just want to go as far as the Jewish calendar and the annual Feasts that they were told to keep, as these will help us with the End Times studies. I'll try to keep it simple and straightforward!

**Review** — First, let's review the principles we've already seen:

#### Principle

- 1 The Six Plus One Pattern**
- 2 One Day is as A Thousand Years**
- 3 The Jubilee Cycle**

Discovered by Sir Edward Denny. The 50<sup>th</sup> year overlaps 49 & 1. Whereas man called it 49 years; God actually called it 50. That's the cleverness of God. Multiplying them up we get 490 years, and eventually 1,960 years — a very important number. Multiplying up again, to God there are 6,000 years, whereas to man the pattern gives us 5,880 years.

#### **4 Counted and Unreckoned Time Periods — Times of Forgiveness**

In the gospels Peter says "I'm tired of forgiving my neighbour, Lord, how many times do I have to forgive him? Is it seven times?" And the Lord says "No, but to seventy times seven times" and actually that was an expression meaning you've ALWAYS got to forgive him.

Now seventy times seven comes to 490. And 490 years is the time of forgiveness. And Sir Edward Denny received tremendous light on that figure. He realised that 490 was a figure of forgiveness, and 490 years was a period of forgiveness, and that God would forgive Israel for periods of 490 years, but after that he would not count any years out of fellowship — and then he would start judging them.

The greatest judgement was when they were taken out of their land and taken to another land. This is the 5<sup>th</sup> cycle of discipline (*BBS 24*). Nebuchadnezzar took all the inhabitants of Judah away to Babylon and ruled over them. This was real judgement from God, as the Jews hate being ruled over by anyone.

God never counted the periods of judgement. He would forgive them for 490 years, and count it as 500 (remember the Jubilee Cycle) but he never counted the periods of Judgement. They were just added to the total for each period. It was a wonderful principle of God. We looked at all four sections last time:

#### **See Chart 8**

We can see that the total comes to 2,176 years for the period we call The Age of The Jews. If these unreckoned periods are not correct then you've got a problem — as you've got to explain the apparent contradiction between 1 Kings 1 and Acts 13.

What we saw last time was absolutely miraculous. We looked at all the times they were judged by God during the period of the Judges, and when they were ruled by the Philistines, and we find that the times out of fellowship added up to exactly the difference in time between the two periods. Exactly the time that was over the 490-year period. Now we have to start using these principles and times. We have to start doing some maths. We've come tonight to start to apply the principles we've learnt. Glory to God. He's hidden his truth in the Bible. It's all there — we don't need to go outside the Bible for any of this. We've managed to see all these glorious things already, and we haven't left the Bible.

If you'd asked me to find the scripture that explained the Jubilee Cycle, or the 490 years of forgiveness I couldn't — and you couldn't either, but based on the digging we've done together — look at the glory. And there are glories hidden under the glories!!

**We have not scratched the surface of the chronology yet.** There is an amazing amount more for us to find ..... we just have to keep on digging. At the end of the series we will be able to see some tremendous patternings. You may have thought that the 147 years of Jacob was good, and the 70 Jubilee

sabbaths since creation that God lumped together for the land was interesting.....but "you ain't see nothing yet"!! Sometimes the Bible is amazingly accurate. We saw one last time when it said **even the selfsame day it came to pass** — in Exodus 12:

### Exodus 12

**40.** Now the sojourning of the children of Israel, who dwelt in Egypt, was **four hundred and thirty years**.  
**41.** And it came to pass at the end of the **four hundred and thirty years**, even **the selfsame day** it came to pass, that all the hosts of the Lord went out from the land of Egypt.

So there are times when it gives very precise details, of the day and sometimes of the very hour. Now so many Bible scholars just zip over these passages, the genealogies, etc., but if only we would dig a little deeper we would see that and that these things are put there for a reason the glory is there. Every one of those figures means something; there is a date that we can attach to it. You've got to search, you've got to dig, and also, you've got to know your Bible and the principles it contains. But it is so wonderful when you find those nuggets, the wonderful dates and time patterns. What we are going to do now is (knowing the principles we discovered in the last two sessions) we are going to try to fill in some of the gaps.

Now, in places the Bible is so obviously accurate. In other places there is not a whisper, not a whisper, of some important date. This is amazing. This is because God doesn't want the things that we've been discovering, and are going to see tonight, and over the next few studies, He doesn't want it all on the surface for anyone to say "Oh I see ... it's *x* years for this and *y* years for that." The secret things he hides for us, as kings, to search out. Let's see an example. Say someone said to you: "I want you to go to the Bible, and I want YOU to work out every date in the Bible." And you (foolishly!) say "OK". You'd be silly to take the challenge, but you say "You're on". And you sit down with blank sheets of paper and you write 'CREATION' at the top of the first one. And you are going to write down all the time periods and add them all up. Have any of you tried to do this? Right, starting at Adam. 7 days of creation, easy. Now, how long was Adam in the garden for before he fell? It could have been a day, a month, two months, a year, or even a thousand years!!! And you go here and there, searching the Bible for references to the Garden of Eden. And you find an obscure reference in Isaiah 51, or in Ezekiel:

### Isaiah 51

**1.** Hearken to me, ye that follow after righteousness, ye that seek the Lord: look unto the rock whence ye are hewn, and to the hole of the pit whence ye are digged.

**2.** Look unto Abraham your father, and unto Sarah that bare you: for I called him alone, and blessed him, and increased him.

**3.** For the Lord shall comfort Zion: he will comfort all her waste places; and he will make her wilderness **like Eden**, and her desert like the garden of the Lord; joy and gladness shall be found therein, thanksgiving, and the voice of melody.

### Ezekiel 31

**9.** I have made him fair by the multitude of his branches: so that all the **trees of Eden**, that were in the garden of God, envied him. *and*

**18.** To whom art thou thus like in glory and in greatness among the **trees of Eden**? yet shalt thou be brought down with the trees of **Eden** unto the nether parts of the earth: thou shalt lie in the midst of the uncircumcised with them that be slain by the sword. This is Pharaoh and all his multitude, saith the Lord God.

And you find that they don't help you at all!! Anyway you soldier on ..... but you find that by the time you get to the middle there are so many gaps that you don't know what to do!! Well, you're stuck ..... and you haven't even started yet!! So you carry on regardless — but by the time you get to the end you've got many gaps and you don't know what to do about them. But, did you know? Biblical Chronology explains them all.

The principles of Biblical Chronology that we've been studying tell you how many days that they were in the garden, exactly, there is no question about it. Once you've established all the wonderful principles you find the end, yes the end, and it isn't when you think it is at all !! and you find the beginning, and then the dates in between just start to fall into place as you put everything in. Did you know, the Chronology tells you exactly how many days Adam and Eve were in the garden? Exactly! Once you've seen the patterning and how it all fits then there is no question about it. That is actually a small gap, but some of the big gaps that are left are large, but we can work them all out.

### See Chart 8 **3 x 2,000 years**

Remember we found out the number of years from the Birth of Abraham to the Crucifixion was 2,176, based on this pattern on 2,000 of God's years. However, the other two are 2,000, or 1,960 in man's time if you account for the jubilees. The end of this last period is the Second Advent, once the rapture and seven years of the tribulation are taken into account. HOWEVER.. You CAN NOT work out, I repeat, CANNOT, work out the date of the rapture or Second Coming of the Lord from these times. Anyway, we end up with two periods of 1,960 years, with the middle period actually 2,176 years, and we saw last time when you counted in the periods that the Jews were out of fellowship.

### Summary

**The Birth of Abraham was followed 490 Grace Years later by the Exodus**

**The Exodus was followed 490 Grace Years later by the Dedication of Solomon's Temple**

**The Dedication of the Temple was followed 490 Grace Years later by Nehemiah's Decree\***

**Nehemiah's Decree was followed 490 Grace Years later by the Crucifixion**

\* or Artaxerxes Longimanus's Decree or the Decree to Rebuild Jerusalem, found in Nehemiah 2.

Now in between these dates were all sorts of interesting dates; e.g. the date that Jacob was born, and Joseph. The actual year that they entered the Promised Land. Can you find them out? Yes, you can.

**The Birth of Abraham** — because we know the principles we can find the gaps:

- 1) Jacob & Joseph 90
- 2) Joseph to Moses 65

God left that gap so we could find it out from the principles. Isaiah says "He's the God that hides himself":

#### Isaiah 45

15. Verily thou art a God that hidest thyself, O God of Israel, the Saviour.

He hides His glory; He hides His truth. We are regal — it is the glory of kings to search out a matter. Let's look at the next period:

#### The Exodus to the Dedication of Solomon's Temple

We had three gaps here:

##### 1) To the Division of the Land

We did the **40** and **7** years last time — remember the **2** and the **45** ?

##### 2) At the start of the Judges

This is given by the work we did on the apparent contradiction between 1 Kings 6:1 and Acts 13:20. We don't know the first period of the 450 — from the division of the land to the time they came and judged. We have all the other dates that we went through last time. These add up to 430, so it must be 20 years that is missing from the division of the land to the first judge.

##### 3) Samuel to Saul

The Philistines took the ark away; Eli died and Samuel came onto the scene. They took it away for 20 years 1 Sam 7:2

1 Samuel 7

1. And the men of Kirjathjearim came, and fetched up the ark of the Lord, and brought it into the house of Abinadab in the hill, and sanctified Eleazar his son to keep the ark of the Lord.

2. And it came to pass, while the ark abode in Kirjathjearim, that the time was long; for it was **twenty years**: and all the house of Israel lamented after the Lord.

1 Kings 6:1 says there were 480 years to the 4<sup>th</sup> year of Solomon's reign from the Exodus. There were years of Forgiveness. From this we can work out the gap. It is a good job it didn't say '490' years, as we would have been stuck. We needed the extra 10 years to work out another gap in a minute!! If you count all the blue years in the right hand column you will see that we need a total of 480. However, if you ignore the 20 you will see that we need a total of 30 years, so this is the gap — the period of Samuel, from the death of Eli to Saul. Now we need to take out the 20 years that weren't reckoned when the Philistines had the Ark, so there are actually 10 years to add here. This is shown here as +30 and -20. The total therefore comes to 480. We are dealing with periods of 490 years, so there must be ten years getting the Temple built and ready — until the 14<sup>th</sup> year of his reign when it was dedicated. We see from 1 Kings 6:37-38 that he took 7 years to build the temple. (By the way he spent 13 years building his own house. I won't comment!) What is missing is the furnishing. A whole chapter deals with it: 1 Kings 7 But you are never told how long it took. You are told it took 7 years to build it, but not how long it was to furnish it. God had concealed it again. But all we have to do is to discover that 10 years are needed to make up the 490 Years of Forgiveness in the Chronology of Redemption, and take away the 7, leaving 3 years to furnish it.

We have dug down and discovered it. Hallelujah! We need to get the structure established FIRST, then we can fill the gaps and get the detail completed. We had three gaps here, and we have been able to fill every one. God had given us THREE FIGURES:

**450 years** of Acts 13      **480 years** of 1 Kings 6:1      and the principle of **490 years**

The total is 621 years. And we saw from the end last time that, putting the periods for the Age of The Jews together we get to 2,176 years See Chart 8 again.

It is important to come to an understanding of these things, and really know the principles, and be convinced in our own minds exactly how we get to these figures and principles. I know that Satan hates us discussing these treasures of God and will have worked to try to rob you of the blessings of this work. So I wanted to make sure that you really understood it and could go through it afterwards and explain it all to someone else. Well, I can guess the question you are all asking now. I have gone through all these charts, and we have come to understand the overall time period, right from Creation to the end of time. But the big question you want to be answered is:

#### WHAT IS A YEAR ??

I have been very inaccurate in my use of the term 'year' up to now. I have had to, as we can't go into the detail before we get the structure and principles established. Nevertheless, now is the time to answer your question. It does get a bit more mathematical from now on in. Don't let that put you off. There is even more glory to be seen, and I will endeavour to keep it as simple as possible. The use of the term 'year' has been inaccurate. However, before we can work out when Jesus was born we have to define exactly what is meant by the term 'year'. This may be an obvious statement, but actually this is the hardest part of Chronology. We need to know what sort of year we are talking about. We do need to be accurate in the use of our terms.

There are two basic types of years: **SOLAR YEARS** and **LUNAR YEARS** and we also have to define **LUNAR MONTHS**.

We in this day and age measure by solar years. We know now that the earth goes round the sun. A solar year is the time it takes the earth to go round the sun and to get back EXACTLY the same position. The word EXACTLY is very important, as, in general we aren't exact. Stop someone in the street and ask them how long a year is and you'll get more than one answer. Most will say 365 days. In a leap year many may say 366 days. Some clever ones may say 365¼ days. But they're all wrong. They're all inaccurate. We know it to the exact second how long it takes to go round the sun and get back to exactly to the same spot.

A true solar year is therefore **365 days 5 hours 48 minutes 46 seconds**.

Nothing else but accuracy will do when dealing with Biblical Chronology: That is our basic unit!!

Now you may think it is now going to get very complicated, and it is, but people have done the work ahead of you and there are solar tables and computer programs all worked out for you to drop your figures in and get the exact numbers of days, and even seconds in any given time period. However we do need to know the basic units we are using. It has been difficult get to this degree of accuracy in measuring. To arrive at this figure has been very difficult, and we have only had timepieces accurate enough in the last 100-150 years that have been able to record this easily and mechanically, or atomically.

Now the ancients were extremely knowledgeable, but they didn't have the technology that we do. Nevertheless we do know that they were able to get to very accurate records of the time of a year. You only have to look at Stonehenge and other stone circles and see that they are very accurate records of the solar and astronomical cycles; the sun, the moon and the planets.

Some civilisations weren't so accurate ..... the Assyrians and the Babylonians used a 360-day year. Now that's fine for the first few years, but after 10 years you are over 50 days out. And if you book you're holiday for early June, you'd end up going in the middle of April without realising it !!

It's even worse if you're sowing seed. 20 years on and you're 100 days back. "Well I sowed it at the same time before. Why isn't it growing properly??" !! You'd end up sowing at harvest time. What they used to do was to add a few extra days every now and again. They recorded their years on a calendar by drawing a circle on the wall. And they split it into 360 parts, one for each day of their year. What they did was to put a sum at the end of each line, to record each day. In each segment they used to write their history. And that is where we get 360 degrees in a circle from. The symbol for a degree is a little  $^{\circ}$ , a little sun. So the Assyrians have affected our mathematics, by their misunderstanding of the solar year.

Aren't you pleased they didn't know there were **365 days 5 hours 48 minutes 46 seconds** in a year?!! Geometry would have been impossible!! The Egyptians also thought it was 360 days. However they corrected their years as they knew that the Nile flooded at the same time every year.

The man that we owe our calendar to was a brilliant mathematician, although you may not have realised it. It was Julius Caesar, and his calendar was called the **Julian Calendar**. He began it on 1<sup>st</sup> January 45 BC, with the phasis, or first appearance, of the New Moon. **PHASIS** — I'll explain that later.

Rather than making it **365 days 5 hours 48 minutes 46 seconds** he made it 365 days and 6 hours, or **365¼ days**. As you may realise, this quarter day was added by including a leap year day every four years. This made it 11 minutes and 14 seconds longer than a True Solar Year. Now that may not sound much, but over 128 years it adds up to one whole day. So, from 45 BC, the Julian calendar has been slipping forward by 11 minutes and 14 seconds every year.

The Venerable Bede in around AD 730 noticed that there was a three day discrepancy, and saw that the calendar was out. However, no-one did anything about it until the 16<sup>th</sup> century, when Pope Gregory 13<sup>th</sup>, or actually one of his aides, did. He noticed that one day was gained every 128 years. He decided to correct it in AD 1582. He took it from AD 325, which was the Council of Nicea, when they decided the final canon of the New Testament. So from AD 325 to AD 1582 he worked out that the elapsed time had been 1,527 years, which he approximated, to make things simple, but not helping with the accuracy, he approximated it to 1,280 years. They were gaining one day every 128 years, so by choosing 1,280 years he decided to correct the calendar by 10 days, as one day had been gained in every 128 years.

We can see that one day in 128 years = 10 days in 1,280 years. So he corrected the calendar by dropping 10 days in AD 1582. He should have gone back to 45 BC to do the correction. He was therefore 2 days out. This means that our calendar is now **two days out**. We are two days further ahead than we should be. This is a very important point, and must be taken into account when working things out in chronology.

To correct the calendar Pope Gregory just dropped the 10 days from the calendar in AD 1582. He issued an edict that October 4<sup>th</sup> should be followed by October 15<sup>th</sup>.

This is a quote from a website about the Gregorian Calendar:

Others, including mathematician and astronomer Christopher Clavius agreed with the ten-day correction but believed that they should be dropped all at once. Gregory took this advice and shortened October of AD 1582 by ten days. Thursday, October 4, 1582 (Julian) was followed immediately by Friday, October 15, 1582 (Gregorian).

It should have been 12 days, but it wasn't. It was only 10 days that were dropped.



The way the Gregorian Calendar differs from the Julian one is that there is a further correction made by dropping three leap year days every 400 years. This makes it accurate — to about one day in 3,500 years. Not enough to normally notice, but our calendar is still wrong by 2 days in the 7000 years, which is very interesting for reasons you'll understand in a later session.

The British didn't obey the Pope and correct their calendar at this time. They carried on with the Julian one until 1752, being naturally conservative. In Great Britain the calendar wasn't corrected until AD 1752 (170 years later)! By that time there was a need to drop another day, so an 11-day correction was needed to bring it into line with the rest of the world. It was therefore announced that September 2<sup>nd</sup> 1752 should be followed by September 14<sup>th</sup>, the gap being 11 days inclusive. It didn't pass unnoticed and there were demonstrations and riots in the centre of London. People thought that 11 days had been stolen from their lives! However, it still was corrected only to the Council of Nicea, so we remain with an inaccuracy of two days.

## Chart 9

We have **True Solar Years**, **Babylonian Years**, **Julian Years** and **Gregorian Years**.

### LUNAR MONTHS, a LUNATION

A lunation is the time it takes for the moon to go once around the earth.

A lunation, or true month is about **29½ days** long. Or, to be precise, the accurate time is:

**29 days 12 hours 44 minutes 2.8 seconds**

This is one lunation. Just over 29½ days.

A **True Lunar Year** is **12** lunations of the moon.

All we have to do is to multiply **29 days 12 hours 44 minutes 2.8 seconds** by **12**.

This comes to

**354 days 8 hours 48 minutes 33.6 secs**

This is a True Lunar Year — exactly the time that the moon takes to go round the earth 12 times.

**12 lunations = 354 days 8 hours 48 minutes 33.6 seconds**

Now the Jews, who used a lunar calendar, couldn't work out these odd fractions of a day, etc., Obviously they couldn't. We don't with our calendar. We adjust with whole days at differing times, mainly once every four years. They knew that a lunar year was 12 lunations, so they came up with a **Civil Lunar Year**

which was **354 days exactly**

And notice that it is around 11¼ days short of a true solar year, as we know it. **354 days exactly.**

### AND HERE'S THE POINT:

**This is type of year God uses in the Bible when measuring the Chronology of Redemption.**

A Lunar Year, known as a **Civil Lunar Year** of **354 days exactly** — also known as a **Bible Year**

So whenever I've talked about a year, it's been a LUNAR YEAR. So when I mentioned 490 years on Charts 4 or 8, say during the Age of the Gentiles or during the Church Age, I've meant LUNAR YEARS (of 354 days).

Let's review the charts showing 2,000 years of time to God, broken down into four periods of 490 years to Man, the Times of Forgiveness. The year used there to measure those periods of 490 years has been a Civil Lunar Year of 354 days. This is a **very** important point. We've learnt three major points, and I hope you've fully understood them, for without an understanding of these marvellous patterns and concepts, all revealed from an understanding of scripture, you will never understand the secrets of Time in the Bible.

**The first and second principles** are that all time, days, years and thousands of years, follows the pattern of the week, the sabbatical pattern, of  $6 + 1 = 7$  (Principle 1). 6 periods of work and 1 period of rest. A day is as 1,000 years (Principle 2) so 6,000 years + 1,000 years makes the 7,000 years of history. This is absolutely fundamental to any understanding of time, and of God's Plan for us in history as well as in our daily lives.

**The third principle** was that the Jubilee Cycle of seven sevens, 49 years, had an extra sabbatical year of rest, and jubilation even, (see where the word comes from?!), jubilation at the proclamation of liberty, when the silver trumpet of redemption was sounded. This cycle of  $7 \times 7$  was not broken by this extra year. And, as a result God counted 50 when man counted 49 years, plus one Jubilee Year. As long as man was in fellowship and did celebrate it.

**The fourth principle** was that there were unreckoned periods to be accounted for. When man wasn't in fellowship and didn't celebrate the Jubilees, then God still had his Jubilees, and his sabbaths for the land another way, as we saw before when they were dragged off screaming to Babylon for 70 years. The Jews also had extra years in their calendar when they were out of fellowship, as God only counted the years of forgiveness. He didn't reckon those that were out of fellowship. They were unreckoned years. We've seen all that. If it doesn't quite yet make sense then get a tape and go over it again.

### Types of Year and Month

#### Solar Years

Babylonian Year	360 days	<i>(also used by Assyrians and Egyptians)</i>
True Solar Year	365 days 5 hours 48 mins 46 secs	
Julian Year	365 days 6 hours	<i>exactly (Leap Year day every 4 years)</i>
Gregorian Year	365 days 6 hours	<i>(with 3 days dropped in every 400 years)</i>

#### Lunar Months

True Lunation	29 days 12 hours 44 mins 2.8 secs
Jewish Month	29 days 12 hours <i>exactly</i>

*(First month 30 days, 2nd 29 days, 3rd 30 days, 4th 29 days, etc.)*

#### Lunar Years

True Lunar Year <i>(12 Lunations)</i>	354 days 8 hours 48 mins 33.6 secs
Civil Lunar Year	354 days <i>exactly</i>
Luni-Solar Year	12 lunations with intercalation months

*(To keep in line with Solar Calendar)*

**And now the fifth principle** is that God counted the Years of Forgiveness in the Chronology of Redemption in **LUNAR YEARS**. The Civil Lunar Year of 354 days is the Year that God used for MOST of the 6,000 years of the Chronology of Redemption.

There was a slightly different sort of lunar year that God showed the Jews to use after the Exodus, and this itself was wonderful, and there's glory in understanding how they used this lunar year in a practical way to count both lunar years and solar years, but don't concern yourself with this at the moment. I'll explain soon. The **main point to get here** is that, again, in the Chronology of Redemption, the Chronological unit that God uses to measure time for mankind in the overall Master Plan he has to get you and I redeemed and to restore all things to their former glory, to put an end to sin, to restore all things, to be the fulfilment of God's Plan, bring to completion His plan for all creation, the Chronological unit that he uses is a **LUNAR YEAR**. This is a very important point. **GOD USED THE LUNAR YEAR**. The **CIVIL LUNAR YEAR** was 354 days.

God used a 354-day year to measure time in the Chronology of Redemption. I will fill in the detail in a minute, but basically, the key to the understanding of Biblical Chronology is that the year used by God when establishing the Chronology of Redemption was the Lunar year. And, again, I'll repeat that, in the main, the type of year that was used was known as the Civil Lunar Year.

Which is **12 lunations** of the moon, rounded to the nearest whole day, being **354 days**.

### **Exactly 354 days**

This is what A E Ware and his associates discovered when working out all the time periods. So when we look at our pattern of 6,000 years, for most of the time the years are actually Civil Lunar years of 354 days. This is an amazing revelation, and something, once again, not on the surface of scripture. There is, however, one amazing clue. For the kings that are doing the searching God always gives at least one clue, doesn't he? !! It was given as the time of the flood. Turn with me to Genesis:

#### **Genesis 7**

**11.** In the six hundredth year of Noah's life, in **the second month, the seventeenth day of the month**, the **same day** were all the fountains of the great deep broken up, and the windows of heaven were opened.

The flood **started** on ..... the **17th** day of the **2nd** month of the **600th** year of Noah's life

#### **Genesis 8**

**12.** And he stayed yet other seven days; and sent forth the dove; which returned not again unto him any more.

**13.** And it came to pass in the six hundredth and first year, in the first month, the first day of the month, the waters were dried up from off the earth: and Noah removed the covering of the ark, and looked, and behold, the face of the ground was dry.

**14.** And in **the second month, on the seven and twentieth day of the month**, was the earth dried.

The flood **ended** on ..... the **27th** day of the **2nd** month of the **601st** year of Noah's life

The flood ended ..... 1 year 10 days after it started ..... So the flood lasted **1 year 11 days**, inclusively. If the Biblical year was **354 days** then the flood, being 11 days longer, lasted **365 days = 1 Solar Year**

A simple but very helpful clue. The year used at this time, and in fact for the whole of the First Age, the Age of the Gentiles (or the Age of The Patriarchs, as some call it to avoid confusion with the Times of the Gentiles, which comes much later, and is a totally different time period) the year used at this time was the 354-day lunar year. So the Civil Lunar year of exactly 354 days was used during the first period (look at Chart 8 from last time) and it was discovered that it also was used for the final period, marked as the Church Age. We will deal with this later.

The first 500-year part of the middle section, the age of the Jews, (that's 490 years in the Chronology of Redemption) was also a period where the years were reckoned as 354 days each. But remember, there is a complication here, as there were actually 505 years in this period. Remember that Abraham was out of fellowship for the 15 years from the time he took Hagar as his wife right up to the birth of Isaac. So there were 505 years of 354 days to be counted in this period, up to the Exodus.

Now I'll talk about the other three 500-year periods shortly, but first let's look at the 354-day year in detail. It was 11¼ days short, approximately, of a true solar year. So now we have a rather difficult question:

**If the Jews used that year, the civil lunar year of 354 days, what did they do to stop their years going out of line with the sun?** Eleven (*and a quarter*) days a year is a big difference. Their seasons would be all wrong very quickly. After only 16 years their autumn would be back in the spring and it would mess up their entire crop planting and harvesting cycles. This was a really big problem. So what did they do to stop their months getting out of line with the sun? And here we come on to the brilliance of God behind their calendar. This is so wonderful. It is truly brilliant. It really is.

To understand this we need to learn about their months. There were 12 lunations in a Civil Lunar Year of 354 days, so they had 12 months. And each month started at new moon. In fact it was proclaimed at the phasis, or first appearance of the moon in the sky, as a very thin crescent.

## The PHASIS of the Moon

Do you remember when you've seen the moon hanging in the sky, just above where the sun's set? It's a wonderful sight, the **phasis** of the moon. A very slender sliver of silver just hanging there in the sky at dusk. And if you look very carefully, especially with binoculars, you can probably see the rest of the moon, the 'dark side' to the left of the sliver of light. This is called 'earth-shine' and you are seeing the moon, the part not yet lit by the sun, in reflected light which has bounced off the earth. A truly wonderful sight. You don't always see it. It does depend on the exact position of the moon in the sky that evening, but do watch out for it. (By the way, I said 'left' side of the moon. If you're upside down in South Africa or Australia it would appear on the right side, as the sun and moon would predominantly be in the north all day, not the south, before setting in the west. So the sun and the moon would go from right to left in the sky and the thin crescent would be on the left, not the right.) However here's how we see the **phasis** and the dark side in the Northern Hemisphere:

It is a wonderful sight, and the Jews looked out carefully for the phasis of the moon every month. As soon as they saw it the 'New Moon' feast was proclaimed and the new month began.

Now there's a bit of astronomy here, which does later on become very important chronologically. The Jews were **ALWAYS** at least one day late in proclaiming the New Moon. The true New Moon, the time of which is actually very important to God, who is incredibly accurate in these things, the true New Moon is when the moon is directly in line between the sun and the earth. It is impossible to see it at that time, except during an eclipse when it gets right in front of the sun.

The rest of the time it is either above or below the sun in the sky and you can't see it, until about a day has gone by and there is enough light reflected off it that you can see it hanging in the sky at sunset. Now you may think "well, sometimes you could see it the same day" — especially if the true New Moon was, say, very early in the morning of that day. Well, that might just be true with our calendar. You could, just, in favourable circumstances see a new moon only 18 hours old. But God is cleverer than that. He made sure it was always a day late (at least). How?

Well, when did the Jewish day start? Yes. At **SUNSET**. At 6pm (in the evening), as we would say. To the Jews 'the twelfth hour' — that's 12 hours since daybreak, and the length of their days doesn't change anything like as much as they do in our northern latitude of 51° N.

So, as a new day started at sunset it was always to them at least one day after the after the astronomical new moon that they proclaimed their new moon at the phasis, or first appearance of the new moon in the sky. That day's delay was deliberate, and a design of God, but put that to one side for now. The important thing was that their calendar was accurate to the first appearance of the moon, and as long as the moon kept the same time then their calendar was accurate.

Do you see now why God set the sun and the moon in the sky. The moon to be the great witness in heaven? Turn to Psalm 89:

### Psalm 89

**34.** My covenant will I not break, nor alter the thing that is gone out of my lips.

**35.** Once have I sworn by my holiness that I will not lie unto David.

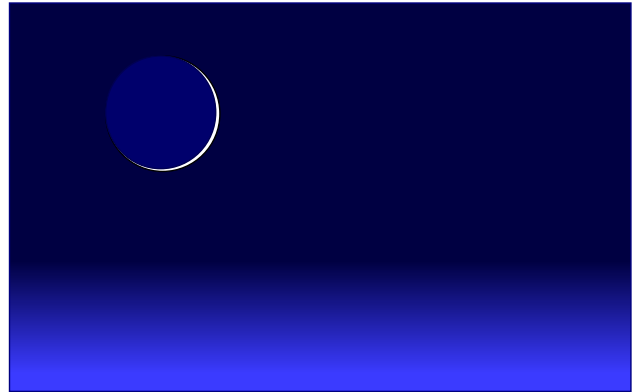
**36.** His seed shall endure for ever, and his throne as the sun before me.

**37.** It shall be established for ever as the moon, and as **a faithful witness in heaven.**

So the moon is referred to as a faithful witness in heaven. The only way you can see this in the Bible is to look at the names of the months of the Jewish year.

Look at the bottom of **Chart 9**, where all the months are listed.

These are all mentioned at different points in the Bible, and here I have shown the number of days in each month. Basically the pattern is 30 days, then 29 days, then 30 days and so on, as a month is about 29½ days long, as we have said.



### The Jewish Lunar Year

Nisan or Abib ( <i>"Aaviv"</i> )	30 days
Iyyar (or Ziv)	29 days
Sivan	30 days
Tammuz	29 days
Ab ( <i>pronounced "Aav"</i> )	30 days
Elul	29 days
Tishri	30 days
Bul	29 days
Chisleu ( <i>"Chislev"</i> )	30 days
Tebeth	29 days
Sebat	30 days
Adar	29 days
Total	354 days
Intercalation month	
Ve-Adar	30 (or 31) days

## Look at the Jewish Luni-Solar Calendar — Chart 10

If you count up the variance you will see there is only one day out, and it was actually much closer than that.

Then see **Chart 11A The Metonic Cycle**

Year	Days	Variance from 365	Net Variance
1	354	11	11
2	354	11	22
3	354	11	33
Intercalation →	Add 30	Ve-Adar	3
4	354	11	14
5	354	11	25
6	354	11	36
7	Add 30	Ve-Adar	6
8	354	11	17
9	354	11	28
10	Add 30	Ve-Adar	9
11	354	11	20
12	Add 30	Ve-Adar	1
13	354	11	12
14	354	11	23
15	Add 30	Ve-Adar	4
16	354	11	15
17	354	11	26
18	Add 30	Ve-Adar	7
19	354	11	18
Intercalation →	Add 30	Ve-Adar	29
			-1

## The 19 Year Cycle - The Metonic Cycle

The Sun and Moon line up after every 19 years with a time difference of only 2¼ hours

### Solar Years

19 True Solar Years  
 = 19 × 365 days 5 hours 48 mins 46 secs  
 = 6939 days 14 hours 26 mins 34 secs

### Luni-Solar Years

19 Luni-Solar Years i.e. 19 lunar years with 7 intercalations  
 = 19 × 12 (= 228) lunations + 7 intercalations  
 = 235 lunations altogether  
 = 235 × 29 days 12 hours 44 mins 2.8 secs  
 = 6939 days 16 hours 40 mins 58 secs  
 After 1078 years the difference is only about 2 minutes

## The 1960 Year Cycle

The Jubilee Cycle gives 2000-year periods which equate to 1960 years plus 40 Jubilees

Counted in Civil Lunar Years of 354 days

1960 Lunar Years in terms of the Solar Calendar

= 1960 × 354 days ÷ (length of Solar Year)

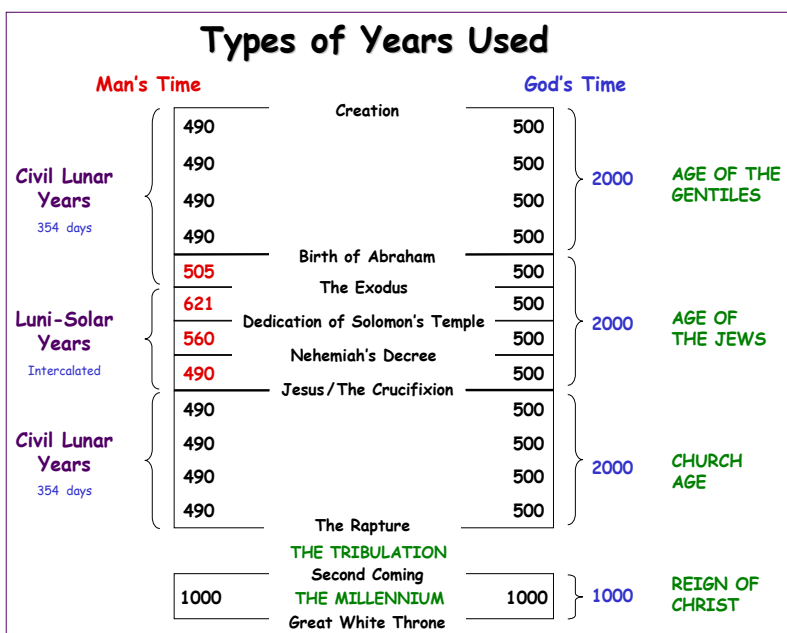
So in True Solar Years it is

=  $\frac{693,840 \text{ days}}{365 \text{ days } 5 \text{ hours } 48 \text{ mins } 46 \text{ secs}}$

= 1899 Solar Years and 245 days (to nearest day)

or **1900 Solar Years minus 120 days**

and **Chart 11B The 1960 Year Cycle**



Finally **Chart 12** shows the types of years used throughout the 6,000 years — normally the **Civil Lunar Year** of **354 days**.

The exception is during the Jewish era from the Exodus to the Cross. Here the Jews used another lunar calendar, the **Luni-Solar** one. This allowed for a correction to bring it into line with the sun, by intercalating and adding an extra month approximately every three years. This brings it back to a **Solar Year** of **365¼ days**. The result was that their crops sowing and harvesting remained in line with the annual and monthly cycle of feasts, sacrifices and offerings.