On the Coligny Calendar and the Neolithic Calendar in Plato's *Critias*

An article published in SIS Review similar to the previously unpublished 2006 paper.

Summary

Evidence of a calendar within the Critias of Plato; and extant evidence of the calendar used by the Druids of Gaul can both be reconstructed according to an eleven-year lunisolar cycle of 5+6 years and may in fact be the same calendar. This short article summarises the author's previously published work on these subjects.

Introduction

The existence of astronomical alignments at Neolithic monuments such as the stone circles, once itself controversial, is now virtually accepted; somewhat intuitively these may be associated with various Celtic seasonal festivals and yet without any real understanding of how their calendar worked. Did they have a system of calendar dates and an era such as we do?

Recent DNA studies have largely overturned the old notion of a wave of Iron-Age Celts invading Neolithic Britain and Ireland. Neither may we any longer talk vaguely about a 'Celtic' calendar as if continental invaders had introduced their religion and culture, including their calendar, at some convenient period just prior to the Roman invasions. When we read Julius Caesar, who says that the Druids and their culture were 'found existing' in Britain, then we need to take such a statement by a contemporary chronicler far more seriously. We may now only use the term 'Celtic' as a loose linguistic grouping.

It is not my intention here to go too deeply into source references in what is intended as an interesting article for a general audience rather than a scientific paper. I explored these themes in much greater detail some years ago in my books *Atlantis of the West* and *Under Ancient Skies* and in a further unpublished paper; where all the source references may be found for anyone who wishes to verify my conclusions.[1] There is nothing here that I have not published previously.

The Calendar of Coligny

Clues to the calendar of the Gaulish Druids, and thereby of their astronomy, come from the "Calendar of Coligny" (Fig. 1), discovered in a French vineyard in 1897. It was part of a wall plaque clearly designed for display, similar to the annual calendar on your own wall. Its notation displays a five-year cycle of lunar dates. Conventional academic assessment has been inconclusive because a five-year period does not work as a lunisolar cycle. This has led to a conclusion that the Celts had only a poor knowledge of astronomy.

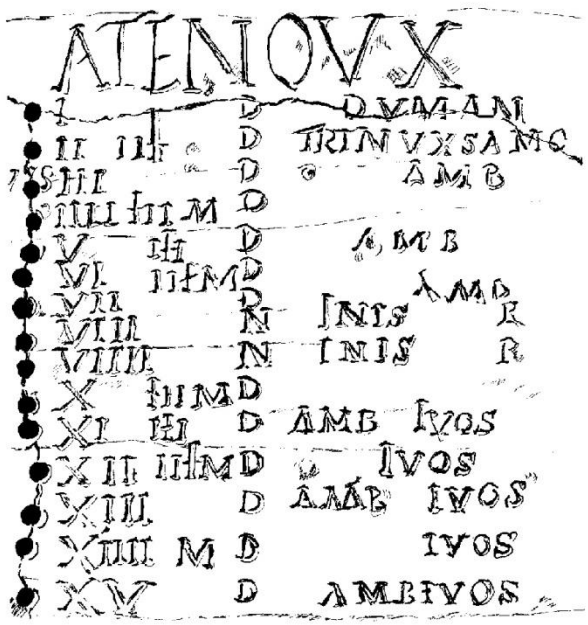

Fig.1. A fragment of the Calendar of Coligny

The structure of the calendar shows 62 months of 29 and 30 days arranged as follows:

30	30	29	30	29	30	30	.	29	30	29*	29	30	30
.	30	29	30	29	30	30	.	29	30	29*	29	30	30
.	30	29	30	29	30	30	30	29	30	**30***	29	30	30
.	30	29	30	29	30	30	.	29	30	29*	29	30	30
.	30	29	30	29	30	30	.	29	30	29*	29	30	30

Total: 1831 days

The month called *Equos*, 'horse', had nominally 29 days and was variable according to rules that cannot be determined from the fragment alone. It may sometimes have been 28 or 30 days, so the 5-year cycle could have been anything between 1826 and 1835 days.

Other Ancient Calendars

Conservative academic opinion will only allow that the Calendar of Coligny was devised by the Iron-Age Druids in Gaul just prior to the Roman invasion. A moment's thought will show the problem here. The Gregorian calendar on your own wall was printed last year, but the printer did not devise it! It holds months named after Roman emperors and days named for Germanic gods that are thousands of years old; the structure is but a revision of the old Latin calendar. Therefore, we may assume that the devices on the Gaulish calendar similarly evolved from much earlier roots. This would take us back to the Neolithic and the era of the megalith builders.

The basis of any such calendar is a natural lunisolar cycle, which arranges the months so that they stay naturally in step with the seasons. Ideally, festivals should repeat at roughly the same season every year without requiring constant revision by priests and astrologers. In a solar calendar, such as our familiar Julio-Gregorian calendar, it is the solar year that is held and the lunar phases are allowed to appear as they fall. However, in a lunar calendar the months must begin strictly with a phase of the moon and be arranged as either 29 or 30 days long. Consider the following (*current astronomical data used here and subsequently*):

One lunar month =	29.530589 days
62 lunar months =	1830.8965 days
One solar year =	365.2422 days
5 solar years =	1826.211 days
Difference:	4.6855 days

As the month and year are not integral, the best arrangement is therefore to use a cycle where a multiple of lunar months is almost equal to a multiple of solar years. There is no precise equivalence, but some of the closest available are 8 years, 11 years and 19 years. The Greeks used the 8-year *Octaeteris*; the Babylonians used the 19-year Meton Cycle; but no culture is attested to have used an 11-year cycle.

In the Greek Octaeteris, 3 extra intercalary months were added to make the lunar years equate (roughly) to the solar years; in the Meton Cycle 7 extra months; and in an 11-year cycle 4 extra months would be needed; so, all lunisolar calendars must employ some lunar years of 13-months in addition to the 12-month years. If these are evenly spaced, then solstices and equinoxes never slip too far from their proper season. A good analogy here is Christian Easter, which shows us the opposite case of a lunar date wandering within a solar calendar, but always held in springtime.

However, the five-year period of the Calendar of Coligny is not a natural lunisolar cycle. 62 lunar months are 1831 days; 5 solar years are 1826 days. This is an accumulating 5-day slippage. And yet the notation shows provision for two intercalary months inserted every 2.5 years. *This suffices to tell us that the 5-year cycle is not the entire calendar*. The Intercalary months serve no purpose unless they were intended to hold the months in line with the seasons. So which cycle were they using? Was it 8 years? 11 years? 19 years? Or perhaps they used some longer cycle.

Another factor to consider is how to make the days add-up. Every calendar must employ a month of variable length inserted according to established rules. In the Julio-Gregorian calendar we add a day to February each fourth year and because this is still inexact the Gregorian reform added a century rule. In the Coligny Calendar we similarly see notation for a variable 29-day month. There is not enough evidence to say how the rules were applied – but we know that there *must* have been such rules or these extra days, like the intercalary months, would serve no purpose.

Other clues are offered by ancient writers who tell us a little about the Gauls; also, about the ancient Britons; and of their priestly cast known as the Druids. Some other clues may come via myths and legends. If one may quote Pliny the Elder here: [2]

> *Mistletoe…is gathered with great reverence, above all on the sixth day of the moon (it is the moon that marks out for them the beginning of months and years and cycles of thirty years) because this day is already exercising great influence even though the moon is not half-way through its course*
>
> (Pliny, *Natural History*, XVI, 250).

The historian Plutarch also tells us that the Britons held their most important festival each thirty years as the planet Saturn returned to the constellation Taurus. [3] Consider:

One synodic period of Saturn = 378.09 days

29 oppositions of Saturn = 29 x 378.09 = 10964.61 days = 30.02 solar years

In my earlier reconstruction of the Coligny Calendar, I therefore also considered whether the Druids tried to base it on a precise thirty-year cycle held to Saturn's rhythm. So, I investigated how the extant five-year 'Coligny' cycle could be alternated with a six-year cycle. This would allow the short-term calendar to mesh both with the thirty-year ages and also the 11-year lunisolar cycle.

This brings us on to the 5 + 6-year calendar intimated in Plato's *Critias*. To recap his Atlantis narrative, he tells us that the Egyptian priests remembered an island in the Atlantic that was struck by a geological catastrophe at a time just before the beginning of the Egyptian state. The ancient dynasty of kings who ruled this island and the Atlantic coastal regions would gather together "*every fifth and every sixth year alternately*" to discuss policy. If they were all to know when to meet, then they must have used the same calendar; and Plato is giving us a clue how it worked.[4]

The Coligny calendar gifts us a detailed knowledge of how a real 5-year cycle was constructed. From this it is possible to work-out how a 6-year cycle *must* be arranged in order to make use of the 11-year lunisolar cycle.

In the Coligny fragment the intercalary months are evenly spaced at 2.5-year intervals; one at the start of the five-year cycle; the other in the middle of the third year. If we reconstruct a six-year cycle using the same month layout, then the intercalary months should naturally be spaced at the beginning of the cycle and at the start of the fourth year. Therefore, we may propose:

30	30	29	30	29	30	30	.	29	30	29*	29	30	29
.	30	29	30	29	30	30	.	29	30	29*	29	30	29
.	30	29	30	29	30	30	.	29	30	29*	29	30	29
30	30	29	30	29	30	30	.	29	30	29*	29	30	29
.	30	29	30	29	30	30	.	29	30	29*	29	30	29
.	30	29	30	29	30	30	.	29	30	29*	29	30	29

Total 2184 days

Here, for simplicity, I have assumed that the variable month always has 29 days, so accuracy is down to how you wish to organise the number of days that it has in each cycle; i.e. whether the calendar is to be held strictly lunar; strictly solar; of perhaps to follow Saturn.

These two cycles, alternated, give 4015 days, whereas 11 solar years require approximately 4018 days; so, the variable month would need an extra 3 days to be added each 11 years. One cannot know for sure how the calendar rules actually operated, but it doesn't really matter *where* you put the extra days; so long as the number of days in the cycle add-up to your objective and this is fixed by astronomy.

So, the 5+6-year cycle casually mentioned by Plato can produce a very accurate calendar and the reconstruction of the Calendar of Coligny yields a similar result. Is this a coincidence? Decide for

yourself. Of course, the Neolithic calendar would not look exactly like that of Iron Age Gaul, it's a process of evolution, just as our Gregorian calendar has evolved from its original Roman roots.

It was this detail, hidden in plain sight within the *Critias*, that convinced me of the authenticity of Plato's narrative – but you must decide for yourself how much of his catastrophism you wish to accept alongside the description of ancient geopolitics.

Classical scholars, if they are to remain respectable, may only discuss Plato's Atlantis narrative as if it were a classical Greek story. They are not allowed to look beyond Crete, or the volcanic destruction of Thera, for the inspiration behind Plato's lost island; yet its own internal content states that it was based on history told to Solon, as recorded by the Egyptian priests. The story is *Egyptian*, not Greek; they recorded the organisation of an island in the Atlantic and of the Atlantic coastal regions. They tell us that this was contemporary with the earliest period of the Egyptian state (pre-dynastic). Egyptologists determine this was the late fourth millennium BC.

Archaeology tells us what was going-on along the Atlantic coasts of Europe in the late fourth millennium BC. This was the middle-Neolithic; a time when the people began to build megalithic monuments with calendrical alignments; in Britain, in Ireland, in Brittany and as far away as Malta. Is it therefore so far out to equate the two? Is it so unacceptable to say that if you have a calendar on your own wall with notations that are thousands of years old, then perhaps the first century Gauls also used a calendar that was thousands of years old?

My own research has taught me always to believe what the ancient sources actually say, rather than what academics think they are saying.

Notes and References

[1] *Atlantis of the West* (2003) and *Under Ancient Skies* (2005) Both books are now available again in Kindle editions and an unpublished paper intended for *C&C Review* is available (see previous), or via www.third-millennium.co.uk

[2] The Latin is genuinely ambiguous here; some translators give that the months actually began on the sixth day after new moon.

[3] This shows us that the Druids were observing the Synodic Period; the time required for a planet to return to the same position relative to the Sun as viewed by an observer on the Earth.

[4] If you doubt the importance of using a common calendar, then recall when, in 1805, the Russian Tsar sent his army to join with the Austrians before the Battle of Ulm, only to find that Napoleon had already defeated them! The Russians were still following the unreformed Julian calendar which by then was 11 days out of synchronization with the Gregorian calendar used by the Austrians.

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