D E C O D I N G T H E D A T E:

Some Calendar Notes on Eastertide

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Sometimes it's late. Sometimes early. But from one year to the next, one is never quite sure which. And as for knowing the precise date - a somewhat spectral art - well, that may be for others to divine.

At the Society's gathering in Paisley Abbey last October, the Secretary told how, once upon a time, Communion was celebrated of old in his parish but annually on Easter Day - "whenever that was" ! So how is it, one might ask, that such labyrinthine uncertainty over the date comes about ?

SHEER LUNACY

The events behind Easter are, of course, set in the context of the feast of Passover, and this is where the inquiry properly begins. (In most European languages other than our own, the link is obvious - as in the Italian *Pasqua.*

Now it was not unusual for ancient religious calendars to be based on the moon (hence the word "month"). The civil calendar which we use, however, is based on the sun. Consequently the two ways of measuring time are not in step with each other, which is why the date of Easter moves - that is, from our point of view.

Passover was fixed on the month of Abid (Deuteronomy 16:1), at the time of year linked to the vernal equinox (around 21 March), and celebrated at full moon.

Accordingly, the Council of Nicaea in AD 325 decided that the date of Easter should naturally depend on the full moon on or after the vernal equinox. Thus Easter Day is taken to be the Sunday after the Paschal full moon.

This generates a whole range of possible dates. The earliest Easter Day is 22 March, which happens if there is a full moon on the vernal equinox and if it is also a Saturday. (But of course.) And at the other end, allowing for about 29 days between full moons, the latest Paschal full moon is 29 days after 20 March (viz. on 18 April). If that is a Sunday, then Easter Day will be one week later, the latest possible, on 25 April. (Conventionally, an approximation is used for the lunar synodic period in determining Easter, so that the date of the 'ecclesiastical full moon' need not always agree with the real thing.)

CHAOTIC ORDER

So far, so good. But actually finding Easter Day for any given year is a different kettle of fish. Now it is a curious fact that every 19 years, within certain limits, the date of any full moon is exactly repeated - a pattern known as the *Metonic Cycle*. Alas, while the Paschal full moon falls on the same date every 19 years, the actual day of the week does not similarly oblige. And so the date of the Sunday in question is inevitably out of step. In fact it has been calculated that for Easter Days to repeat infallibly in our Gregorian calendar, a period of 5,700,000 years is required.

Yet all is not lost : sometimes after only eight *Metonic Cycles*, the days of the week may catch up with themselves again. This means that the same dates for Easter can, indeed, occur again in the same order after 152 years. But a handier rule of thumb is that Easter Days often repeat after only 11 years - sometimes as many as four in a row (as in 1991, 2002, 2013 and 2024, when Easter Day is due on 31 March).

HIGHER THINGS

Happily there are special tables to take care of the tricky details - one of the more unusual blessings of the Book of Common Prayer. Indeed, it can even be used to write a suitable computer program, which is desirable for calculating more than just a very few Easter Days.

What then do the years ahead have in store, *Deo volente*? The table shows a sample of the results. The earliest possible Easter (22 March) last occurred in 1981, and it cannot happen again before the year 2285. However in 2008, Easter is due on 23 March. The other extreme, 25 April, is due in 2038. Although some readers might recall this happening in 1943, it is unlikely that many will remember the previous occasion in 1886.

As a closing observation, there are within the Church those who would prefer to do away with the moveable date altogether. In this they make reference to Christmas, to business sense, and to the modern world. Some find it tiresome that the vagaries of the moon, in this day and age, should interfere with routine.

Perhaps, however, it is no bad thing that our calendar should be just a little irregular, arising from patterns that embody higher principles, and which are linked to more ancient motions. Modern convenience is not always best. And after all, might it not be a timely reminder about the nature of Easter ? About things which are, indeed, of truly astronomical significance.

Easter Days (DV) at a Glance

1990: 15 April	2000: 23 April	2010: 4 April
1991: 31 March	2001: 15 April	2011: 24 April
1992: 19 April	2002: 31 March	2012: 8 April
1993: 11 April	2003: 20 April	2013: 31 March
1994: 3 April	2004: 11 April	2014: 20 April
1995: 16 April	2005: 27 March	2015: 5 April
1996: 7 April	2006: 16 April	2016: 27 March
1997: 30 March	2007: 8 April	2017: 16 April
1998: 12 April	2008: 23 March	2018: 1 April
1999: 4 April	2009: 12 April	2019: 21 April

SOURCES

1. The Book of Common Prayer, eg 1940 pp 33 - 39 OUP
2. Sebastian Bullough, OP: *"De Anno Et Ejus Partibus"*, in The Clergy Review, January 1954, pp 8 - 15.
3. Explanatory Supplement to the Astronomical Almanac, pp 420 - 429 (HMSO)
4. Ginzel: *Handbuch ... Der Chronologie III, pp 411 - 421 (Leipzig, 1914)*

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