

Sundials



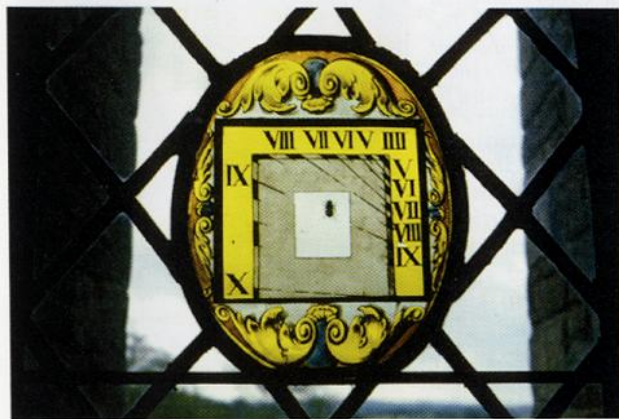
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enabled *local mean time* to be read directly off the dial. The Green College noon dial is furnished in this manner and thus demonstrates the means by which clock time can be obtained. In this case, being at Oxford, the correction curve is offset to allow for the difference in longitude from the prime meridian at Greenwich and hence shows GMT. In fact, most sundials can be corrected for the difference in longitude (that is, the time difference between the standard time zone meridian and that of the sundial) and can be furnished with equation of time curves for all hours. Such dials are rare, although fine modern examples, the work of the Reverend Father George Fenech, may be seen on a number of churches in Malta.

STAINED-GLASS SUNDIALS

Of all the common vertical sundials, the least common and the most beautiful are the stained-glass sundials that were built into the windows of mansions and churches in the seventeenth century and occasionally later. In these dials may be seen the mathematical skills of the diallist combined with the talents of the glass-painter. The dials are calculated and delineated in exactly the same way as for ordinary vertical dials, direct or declining, except that they are made of glass and built into a suitably situated window. The gnomon is fitted on the outside of the window, but the numerals are reversed and read from the inside, so that the viewer need not leave the comfort of the room on a sunny but cold winter's day.

Stained-glass dials became popular in the latter part of



Above: A beautiful rare seventeenth-century south-east declining glass-window sundial at Berkeley Castle, Gloucestershire. Note the painted fly, an ornamental feature frequently found on stained-glass dials, seemingly being a glass-painter's pun on 'time flies'.

The earliest known stained-glass sundial in England, an exquisite little roundel only $2\frac{3}{4}$ inches (7 cm) in diameter, signed by the artist Bernard Dininckhoff and dated 1585, set into the magnificent heraldic window in the Great Chamber of Gilling Castle, North Yorkshire.





Above left: Perhaps the most famous of all stained-glass sundials, depicting a bird, probably a skylark, on the branch of a tree looking at a fly as a prospective meal! The winged hourglass, within the framework of the glass oval medallion, and the motto 'Dum spectas fugio' ('Whilst you watch, I fly') reinforce the message that 'time flies' and that life is short. The dial has been variously dated at c.1620 and (more probably) 1660 and was evidently made originally for a manor house in Devon. For many years it was in a window at Nailsea Court in Somerset but has since disappeared. The dial was copied for an office in Derby in 1888 by Frederick Drake of Exeter, while sketches and drawings of the copy appear in numerous publications. A copy has been reproduced by glaziers in New York.

Above right: A simple and beautiful glass-window dial, depicting a cornflower, at Gray's Court, York, attributed to the well-known glass-painter Henry Gyles of York (1645–1709).

the seventeenth century, when puritan prejudice against colourful windows in churches obliged glass-painters to look elsewhere for business, towards secular buildings, such as university colleges, civic halls, city mansions and the country houses of the landed gentry. One noted glass-painter, Henry



Probably the finest complete glass sundial, undamaged and with the gnomon intact, at Tong Hall, near Bradford, West Yorkshire, also attributed to and wholly typical of the work of Henry Gyles.



A modern stained-glass sundial in seventeenth-century-style, designed by the author and made by the York Glaziers' Trust in 1998 for the chapel of the Merchant Adventurers' Hall in York. It depicts a young sea-going gentleman, standing on the deck of a ship and using a cross-staff to measure the equinoctial meridian altitude of the sun in order to obtain the latitude.

Gyles of York (1645–1709), apparently appealed to his friend Francis Place, the well-known London engraver, who replied: 'I made Inquiry at Mr Price's about glass painters: he tells me there is 4 In Towne but not enough work to Imploy one, if he did nothing Else.' Nevertheless, as a result of this sad state of affairs, the glass-painter became more creative in his designs, turning from biblical scenes to heraldry, history, portraiture and so on, including glass sundials.

Since they are made of glass, there are not many of these dials in existence. Over the years, many have been broken or removed and they have usually disappeared without trace. The glass was thin and fragile, and it had to be drilled through in two or three places to allow the gnomon to be fixed in position. Consequently, it is fortunate that there are any examples at all of these glass sundials left.



A modern vertical declining stained-glass sundial, designed by the author and made by Goddard & Gibbs of London for Buckland Abbey (National Trust) in Devon, to commemorate the four-hundredth anniversary of the death of Sir Francis Drake. The dial declines by 66 degrees from the south towards the west and represents a sixteenth-century period chart of the Atlantic, with Drake's famous ship, the 'Golden Hinde', on the 8 o'clock evening hour line, on course from Plymouth to Porto Bello, where he died and was buried at sea in 1596.