



Currie Toll 1897

Currie & District Local History Society

... CURRIE CHRONICLE ...
(The Journal of the Society)

March 2017 ... No. 87

Hi, folks

Whilst lying in bed one morning, in the very early part of this year, 'under doctor's orders' I began thinking doesn't time pass quickly the older one gets !!

This - for no apparent reason - set me thinking, probably for something to do ... how did people know the time before the days of clocks and watches.

When I felt a little better and was up and about, I started to investigate the Internet about all early timekeeping and found that Sundials were the earliest form of timekeeping.

Therefore, I do hope you enjoy reading the 'sundial story' which follows and, also, the very interesting Currie connection.

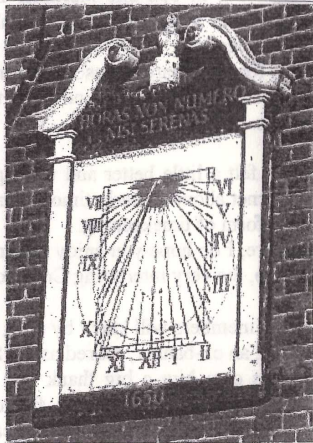
As most members will know by now, following the 2017 AGM, Robert Whitton, an ex-banker, retired as the Society's Treasurer. I think Society members owe him a big thank you for his many years of meticulous service keeping the Society's finances in order, and also, on a few occasions, his 'catering abilities' I cannot recollect a year when Robert was in charge when we did not finish with a surplus!

A very big 'THANK YOU' to Robert from all members of the Society for his valient efforts over the last 10/11 years.

Ron Dickson, Editor

SUNDIALS

A **sundial** is a device that tells the time of day by the apparent position of the Sun in the sky. In the narrowest sense of the word it consists of a flat plate (the *dial*) and a *gnomon* which casts a shadow on to the dial. As the sun appears to move across the sky, the shadow aligns with different *hour-lines* which are marked on the dial to indicate the time of day. The *style* is the time-telling edge of the gnomon, though a single point or *nodus* may be used. The gnomon casts a broad shadow, the shadow of the style shows the time. The gnomon may be a rod, a wire or an elaborately decorated metal casting. The style must be parallel to the axis of the Earth's rotation for the sundial to be accurate throughout the year. The style's angle from horizontal is equal to the sundial's geographical latitude.



Sundial on Moot Hall Aldeburgh
Suffolk, England

In a broader sense a sundial is any device that uses the sun's altitude to show the time. In addition to their time-telling function, sundials are valued as decorative objects, as literary metaphors and as objects of mathematical study.

Sundials are perhaps the most ancient of scientific instruments and the earliest known form of time-keeping. They probably started life as poles in the ground with the direction and length of the shadow giving an approximate time of day. However, by the middle of the second millennium BC there were already fixed and portable versions of more accurate sundials being produced in the Middle East, Egypt and China. These early sundials relied on the height of the sun in the sky to indicate the time by the length of the shadow it produced.

More sophisticated forms were developed by the Greeks and the Romans - these were normally bowl-shaped dials with vertical or horizontal gnomons (shadow-casters) and hour-lines marked in the hollow of the bowl. The Romans also produced new forms of portable dial, such as the pillar dial and the ring dial; like all others, they depended on the altitude of the sun to tell the time.

During the medieval and Renaissance periods various more elaborate designs appeared. There were either intended to be more accurate or were intended to encompass more forms of sundials, such as the astronomical compendium. Sundials from this period are often particularly ornate, having been made for wealthy patrons or rich merchants. Few of the cheap wooden versions used by the lower classes have survived.

In the more modern versions there are several different types of sundials. Some sundials use a shadow or the edge of a shadow while others use a line or spot of light to indicate the time.

The shadow-casting object, known as a *gnomon*, may be a long thin rod or other object with a sharp tip or a straight edge. Sundials employ

many types of gnomon. The gnomon may be fixed or moved according to the season. It may be oriented vertically, horizontally, aligned with Earth's axis, or oriented in an altogether different direction determined by mathematics.

Given that sundials use light to indicate time, a line of light may be formed by allowing the sun's rays through a thin slit or focusing them through a cylinder lens. A spot of light may be formed by allowing the sun's rays to pass through a small hole or by reflecting them from a small circular mirror. Sundials also may use many types of surfaces to receive the light or shadow. Planes are the most common surface, but partial spheres, cylinders, cones and other shapes have been used for greater accuracy or beauty.

THE SUNDIALS OF ROBERT PALMER, Schoolmaster

Robert Palmer was Schoolmaster in Currie for forty years from 1828 until his death in 1868 at the age of seventy-one. By all accounts he was an exceptional man of great character and intellect, full of enthusiasm for everything he did, and he had abilities that would have made him stand out in any profession that he chose. He excelled in English, Latin, Greek and mathematics. He was the local Registrar, responsible for recording births, marriages and deaths. Additionally, he was also the Inspector of the Poor, and in this capacity he would examine requests for poor relief from within the parish. In his spare time he was an excellent and passionate curler.

He was a founder member of both the Currie Curling Club and the

Caledonian Curling Club, later to become the Royal Caledonian Curling Club, the governing body of the sport in Scotland. His fame as a skip in that sport is illustrated in Charles Lee's famous painting of the Grand Match at Linlithgow in 1848, where he is seen welcoming the stone as it is making its way to the tee. He invented the tee-ringer, said to be one of the most useful of curling appliances.

He was also a keen astronomer, but it is a maker of sundials that he was locally well known. In the *Book of Sundials*, a Mrs. Gatty writes "at Riccarton Castle, Midlothian, there is a dial of grey stone inscribed 'Robert Palmer fecit 1829'; most scientifically constructed, and another by the same maker is in the neighbouring churchyard of Currie. This was presented by Palmer to the parishioners and heritors in 1836"



Robert Palmer

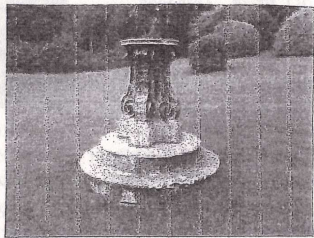
He is mentioned in *The Castellated and Domestic Architecture of Scotland* where Thomas Ross says "two dials of very scientific construction one at Currie and another at Riccarton were made in 1836 and 1829 respectively by the village schoolmaster, Robert Palmer, who taught the elementary principles of astronomy, and had the walls of his schoolroom painted with astronomical diagrams"

When the old school was renovated around 1989, hemispheres of the world were found painted on the walls underneath layers of wallpaper. One room had the Americas on its walls whilst another room had Asia. The Society was lucky enough to have the opportunity to photograph the wall paintings of the hemispheres before new wallpaper

covered them. These are now in our photographic archives. There are no sketches of Palmer's sundials, probably because they were not ancient sundials; they were considered at the time to be fairly modern and not architecturally important. Thomas Ross probably referred to them only to illustrate the teaching of the scientific principles of dialling and other mathematical studies in the Scottish parish schools of the time.

Palmer was known to have been friendly with Sir James Gibson Craig, the owner of the Riccarton estate, Currie, who shared his interest in curling. Palmer was new to the area having left the south west of Scotland to take up his teaching appointment in Currie. He probably wanted to make an impression with the local landowner, so perhaps it is not surprising that he made a sundial for his new friend, given that his extensive knowledge of astronomy and mathematics would surely have been discussed.

Palmer's sundial for Sir James was placed in the sunken garden at Riccarton adjacent to the curling pond. The curling pond no longer exists, although its outline can still be clearly seen today.



**Riccarton sundial pedestal now
without its dial**

Riccarton Castle was originally a 16th century tower which was extended in the 17th century and altered and added to between the years 1823 and 1827. The estate was requisitioned by the military in 1939, but by the mid-1950s the house had fallen into a state of disrepair and had become structurally unsound and was demolished in 1956. Unfortunately nothing more is known of this

sundial after its departure (to Somerset) from Riccarton and it is presumed lost.

The estate was sold to Midlothian County Council who subsequently gifted it to Heriot Watt University in 1969. The estate now forms the Edinburgh Campus of the University and the sundial pedestal is still in place and is a prominent feature within the sunken garden. Fortunately we do know the whereabouts of Palmer's second sundial which is still in the churchyard of the parish church of Currie. It has an extremely detailed circular metal dialplate on a moulded stone shaft sitting on a circular plinth. It includes Roman numerals from 4am to 8pm with a one minute scale and has noon markings for around fifty places all over the world including Trafalgar, Waterloo, Quebec, Mecca, Mauritius and London.

Unfortunately the dial face is now rather weathered and some parts are difficult to read. Palmer gifted the sundial to the parishioners of Currie in 1836. But these two sundials were not the only ones made by Robert Palmer. He made another one, recorded by neither Ross nor Gatty.



The Currie Sundial

Palmer made an earlier sundial in 1826 in Kirkbean, a few miles south of Dumfries (near Palmer's birthplace). The sundial is situated just outside the churchyard at Kirkbean. This is also the birthplace of American naval commander, John Paul Jones, the so-called father of the American navy. Palmer was the schoolmaster in nearby Southwick and his sundial was possibly a wedding gift to Thomas Grierson, who was minister of the church in Kirkbean at the time.

These are the only three sundials that Palmer is known to have made. He is buried in the churchyard at Currie not twenty yards from his sundial. He was obviously a highly respected member of the community; - Palmer Road and Palmer Place in Currie - reflect this, both having been named in his honour.

He appears to have been a remarkable man.

Ron Dickson, Editor.

Acknowledgement to Dennis Cowan of the British Sundial Society who researched much of the technical detail in the 'Palmer' section of this article.

Reference:

- (1) Mrs. Gatty: *The Book of Sun-Dials*, George Bell and Sons, London (1890)
- (2) D. MacGibbon and T. Ross: *The Castellated and Domestic Architecture of Scotland*, David Douglas, Edinburgh (1892)

For further details or information
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DOUGLAS LOWE on 0131 449 4349

included with this Chronicle is a draft copy of the
proposed Syllabus 2017/2018