

The British Sundial Society

BULLETIN



VOLUME 35(i)
March 2023

HONORARY OFFICIALS OF THE BRITISH SUNDIAL SOCIETY

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BULLETIN

OF THE BRITISH SUNDIAL SOCIETY

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EDITORIAL

This issue of the *Bulletin* includes an Obituary for Mike Cowham, a founder-member of the British Sundial Society who served on the first BSS Council. He was a frequent contributor to the *Bulletin* and his annual reports on 'Dial Dealings' were always beautifully presented and illustrated and a regular feature of the March *Bulletin* until 2020.

David Brown describes an interesting example of an indoor sundial. This vertical dial hangs on the wall of the conservatory of a house and declines strongly to the west. An ingenious part of the design is that the dial as a whole can be moved to left or right so that it can be kept clear of the shadows of the rafters above.

Jackie Jones describes two delightful home-made dials which should be easy to make without the need for a large toolbox. Her elegant touches always seem so simple until you try to do something similar.

The longest article in this issue is the latest in John Foad's series on Newly Reported Dials. There are numerous stunning photographs of dials old and new.

Jackie Jones shows four dials that she saw on a recent tour of Bulgaria. Three of the dials are very old and one is nineteenth century.

Sue Manston once again recalls a Help-and-Advice enquiry, this time about the design of a new memorial sundial. The dial remembers coal miners who lost their lives in a North Wales colliery.

Ben Jones describes the design and construction of a most unusual sundial in Devon. Various challenges were encountered including a "stropy dog walker".

Finally, we publish a *provisional* version of the BSS Report for the calendar year 2022. This is an assembly of reports sent in by our much-appreciated volunteers.

The official version of the Report and Accounts, as sent to the Charity Commission, were not ready at the time this issue went to press. They will be published in the June *Bulletin*.

Sadly, this issue is rather slim. We miss Mike Cowham's Dial Dealings and we miss the adventures of Thomas Ross! Does any reader take an interest in sundials that pass through auction houses? A new series of Dial Dealings would be most welcome. The Editorial Team would also be delighted to hear about sundials encountered on trips and tours.

Frank King

A VERTICAL DECLINING INDOOR SUNDIAL

DAVID BROWN

In 2022, and during the very hot weather we were having, my wife was having casual conversation with a friend, Ruth, who was despairing about not being able to hang pictures, photographs or any other coloured items such as fabrics on a wall in her property because the intensity of the sun was causing them to fade. The obvious answer, said my wife, was to have a sundial there! This prompted further questions such as: what sort of a sundial? Have you got any pictures of what might be possible? How big could it be? Well, said my wife, let me talk to my husband, and he can visit you and see what the situation is, but meanwhile, there's a book that includes a section about a set of indoor sundials that you can look at to give you some ideas.

The book in question was written by one of our BSS patrons, Sir Mark Lennox-Boyd, in which his 'La Meridiana' sundial in Oliveto, Italy, is described.¹ We lent the book to Ruth, and we also included copies of the articles he had written in the *Bulletin* about it.² The response was very positive – but I had no doubt that any participation on my part would be limited by my total lack of sign-writing expertise that such a sundial would seem to



Fig. 1. The front aspect of the property.



Fig. 2. The wall on which the dial is to be placed.

demand, not to mention the prospect of prolonged on-site hours required for *in situ* painting. Moreover, it did not seem to be a situation where a reflection-type gnomon could be employed as in La Meridiana. A visit and a discussion had to be the next priority.

Our friend's house is a pre-Victorian one-up one-down terrace cottage in a narrow road of an urban setting in Somerset (Fig. 1). The front of the house faces approximately south. A previous owner had extended the full width of the rear of the property (about 4 metres) with a glass-roofed garden room. When I visited, the sun was flooding the white-painted wall in question which was completely devoid of any hangings but lit up the whole of the interior space (Fig. 2). Shadows were cast on it by the well-spaced rafters supporting the sheets of glass, which had the effect of breaking up the blank wall space. The room, as a whole, was clearly the brightest in the house and included a kitchen area and small dining table. Several timepieces in this and other rooms paid homage to Ruth's late husband who was a very keen horologist, so the prospect of yet another time-keeping device added to her enthusiasm. In

conversation we agreed that anything along the lines of Lennox-Boyd's creation was way beyond what could be achieved here, but that it would be possible to create a much less ambitious but functional dial to go on that wall. I suggested that rather than paint it directly onto the wall, I could paint it on a wooden surface that would just hang on the wall. This would mean that I could do all the work at home, and that in turn would mean less disturbance for Ruth. We agreed that the dial needed to be big enough to take up a good deal of space on the otherwise empty wall and thought that something of the order of 1 metre square would be about right. I took some measurements of the room and glass roof arrangement and said that I would do some sketches, but that I would need to call again to do some measurements of the declination of the wall and the height of the ridge of the house.

A search on Google Earth gave me some information about the orientation of the building and of the relevant wall (Fig. 3). On the basis of that, I was able to produce a preliminary sketch of how the dial might look. On my second visit, and with the sun shining again, I took shadow measurements on the interior wall to enable me to deduce a more reliable value for the wall's declination. Ruth had retired twenty or so years ago after many years of teaching science and mathematics, so she took quickly to the process, and provided me with further measurements over the following days to give me more data. The wall has a westerly declination of 74.3° . I had an old sextant in my kit and with it I measured the altitude of the ridge of the

house as seen from a measured distance from the front of the building. This enabled me to determine the height of the ridge. Combining this with the horizontal distance of the ridge to the proposed position of the dial on the wall in question allowed me to work out the minimum altitude of the sun for it to appear over the roof ridge to illuminate the dial. The outcome of all this was to accept that there would be no sunshine on the dial from approximately mid-October to approximately mid-February. When it did shine on the dial, the hours would be limited at best from about 11.30 am to 6 pm – the ridges of adjacent houses and large trees to the west would further limit the afternoon hours. Nevertheless, Ruth accepted the limitations and asked me to proceed with the project. She would have something of interest on the sun-drenched wall of her main living area, as well as adding to the many time-telling devices around her house.

We decided that the sundial should be 90 cm square on 9 mm marine ply within a plain frame. Hour lines and hour numerals would be black with seasonal date curves coloured red (summer solstice), green (equinoxes) and blue (winter solstice). A gilt cross would mark noon. The gnomon would be brass. An engraved brass plaque would carry an Equation of Time graph corrected for longitude. The frame would be painted gold to echo the gilt cross and polished brass within the dial.

I found a local picture framer³ who could make me a suitable frame; a local timber merchant sourced the plywood. I shaped the gnomon (Fig. 4) and a Bristol firm⁴

Fig. 3. An aerial view of the property (courtesy of Google Earth). The garden room wall is ringed.

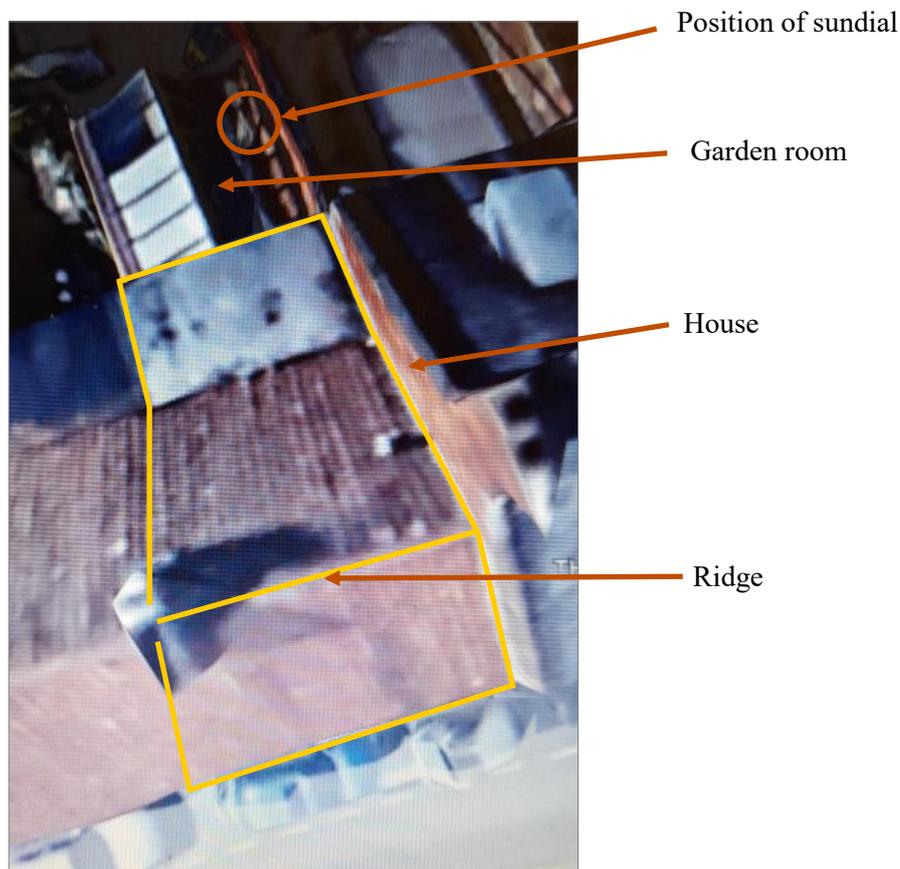




Fig. 4. The gnomon. This incorporates a semi-circular nodus at the top and a tenon at the bottom. The tenon penetrates the dial and is retained by three taper pins. The gnomon is held perpendicular to the dial plate by the slotted transverse support.

produced the plaque (Fig. 5). The next challenge – begun after the intervening Christmas and New Year celebrations – was to lay out and paint the dial details. I used ShadowsPro⁵ to delineate the dial and print it out full size on a series of A4 sheets which were stuck together. The plywood sheet was double-primed and top-coated, and when it was completely dry, I transferred the enlarged dial onto it with the help of carbon paper. Using decorators' high quality masking tape,⁶ I covered all the markings, which could still be seen through the tape. A black spirit marker pen and steel ruler (and some freehand) was used to define lines of constant width on the masking tape. Numerals and date-curve labels were transferred from computer printouts with the help of carbon paper. A sharp scalpel was used to cut through the masking tape along the edges of the marked-out lines, and the new cut-out edges of the areas to be painted were firmly pressed against the board (Fig. 6). Three coats of water-based acrylic paint of the appropriate colour were then applied with ample drying time between the coats. The scalpel was used to re-cut the edges of all the cut-outs before the masking tape was carefully peeled away. The whole process of painting the dial details took about a week.

With all the painting done, I took the painted frame and completed dial back to the picture-framer to have flat steel pins inserted in the frame to secure the frame to the board.

I had decided quite early on in the whole process that it should be possible to move the dial laterally on the wall in order to dodge shadows from the eaves that might interfere with the reading of the dial. To that end, I had glued and screwed a 50 cm-long wood batten to the back of the dial before the painting process so that the indents of the screw

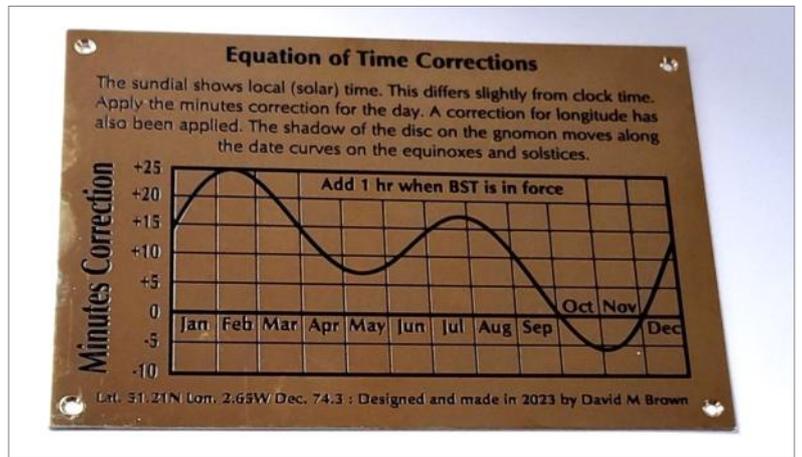


Fig. 5. The Equation of Time plaque.

heads on the front face of the dial could be hidden by being infilled and painted over. This piece of wood had a deep 45° chamfer taken off the bottom of the face that was attached to the back of the board. A second slightly longer batten was prepared for attachment to the wall. This had a corresponding chamfer taken from the upper edge of the face that had to be screwed to the wall. The thickness of these battens was the same as the gap between the back of the dial plate and the back face of the frame (Fig. 7). The dial hangs from the combination of these two battens interlocking with each other whilst allowing the whole dial to be moved about 15 cm laterally each way if the need should arise, to avoid unwanted shadows from the eaves of the glazed roof.

The fixing of the dial on the wall was a straightforward process. Having checked with Ruth where she would like it



Fig. 6. Ready for painting – the summer solstice line has had its first coat.

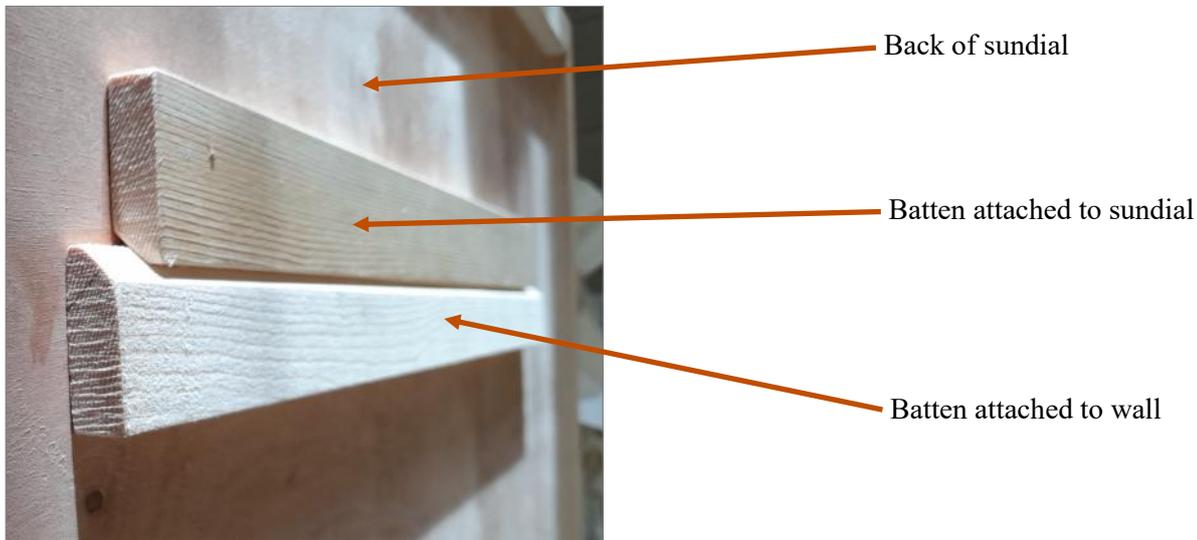


Fig. 7. The battens which support the dial.

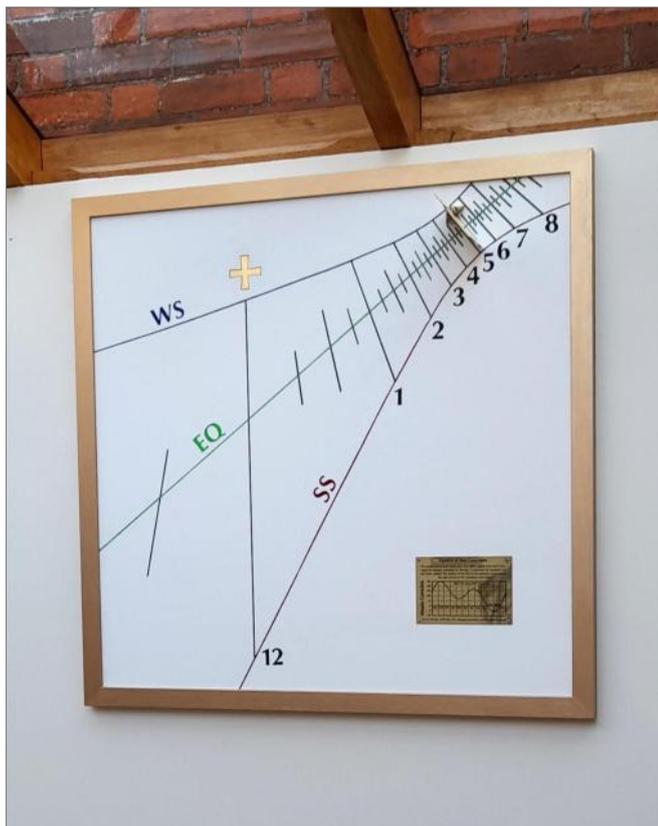


Fig. 8. The finished dial in place, awaiting the Sun.

to be in relation to the rafters, the wall batten was attached to the wall with stainless steel screws into cavity plugs and carefully adjusted to be horizontal. The dial was then lowered onto the wall lath and checked that it was flat against the wall but could still be moved laterally (Figs 8 and 9). This fixing job was done before the middle of February, when the sun will make its first 'appearance' over the ridge of the house, so we shall have to be patient and hold all our fingers crossed in the hope (expectation?) that it shows the correct time in due course.

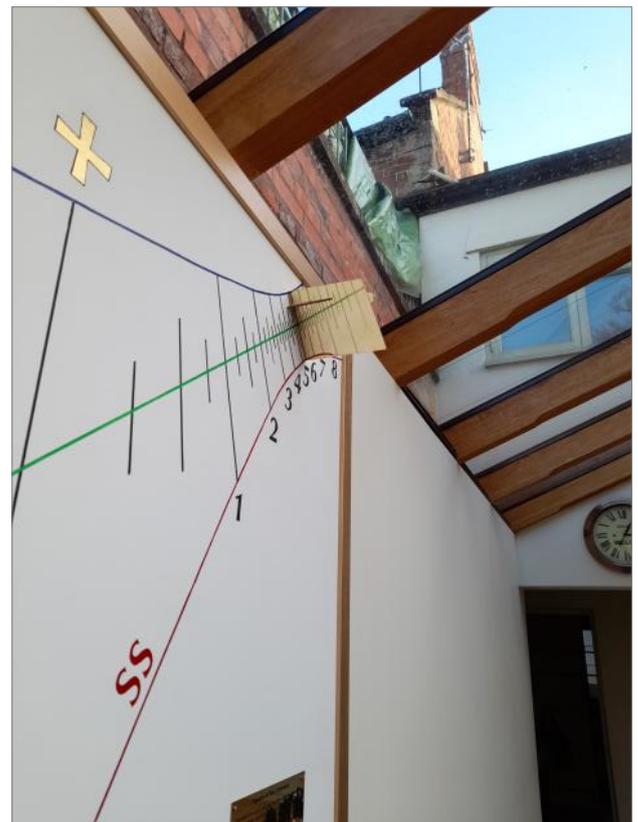


Fig. 9. This view looks upwards towards the gnomon. Beyond, through the glass roof, is the back of the house at first floor level. Compare with Fig. 3. The transverse support is seen edge-on against the highly polished surface of the brass gnomon.

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1. Mark Lennox-Boyd: *Sundials: History, Art, People, Science*, Frances Lincoln Limited (2005), pp. 80-83.
2. Mark Lennox-Boyd: 'La Meridiana – A Millennium Project', *BSS Bulletin*, 11(iii), 148-51 and 'La Meridiana', *BSS Bulletin*, 24(i), 23-27.
3. Martock Gallery www.martockgallery.com
4. AES Signs Ltd., Bristol, BS5 6DE.
5. ShadowsPro software by Francois Blateyron. www.shadowspro.com
6. Frogtape by Shurtape UK Ltd, widely available in Hardware and Decorators' Supplies stores.

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TWO SMALL, EASY TO MAKE, PORTABLE DIALS

JACKIE JONES

Some time ago I made some small dials for a local exhibition; the idea was that they demonstrated different types of dials. Those members who attended the day at Newbury in September 2022 may remember them as part of the display.

The first is an armillary equatorial dial made from an embroidery frame. These are two concentric hoops, normally made of plywood and are available in a number of sizes. I used quite small ones, about 10 cm diameter. The layout is not complicated; circles the size of the hoops were drawn on paper and 15° hour lines marked. The hoops could then be laid on this for marking (Fig. 1). On the inner hoop, all the hours from 6 am to 6 pm were marked plus a cutting line before and after the hours. The cutting line was marked on the outer hoop plus the noon mark and the two sixes. The exact hour positions were made with a small file and then marked with numbers from some Letraset rub-down lettering; the noon position had a hole drilled for the fixing screw.

On the outer hoop, holes were drilled at the 6 am and 6 pm marks to take the gnomon cord and a small hole at the noon mark for the fixing screw. The two hoops were turned at right-angles and screwed together (Fig. 2). The gnomons I used were different: on one a cotton thread with a fish-shaped bead to keep it taut and on the other a heat-blued titanium wire.

Using the curve of the outer frame as a template, a piece of plywood sheet was cut to form a stand and another piece



Fig. 2. Armillary equatorial hoop dials fixed and with hours marked.



Fig. 3. Finished dials fixed to their bases at the correct angle for the latitude.



Fig. 1. Embroidery hoops on layout for hour divisions. The tightening screw is on the part to be removed.

fixed with a cross-halving joint to keep the dial steady. Accurately measuring to ensure the gnomon was at the angle of the latitude where the dial was to be used, the base and dial were fixed together with a small screw. It was all finished with a layer of varnish to help preserve the wood and Letraset (Fig. 3).

It is easy to use: just place the dial on a horizontal surface facing south and read the time indicated by the gnomon shadow.

The other dial shown is an altitude card dial, sometimes known as a Capuchin dial due to the shape resembling the hood of Capuchin monks. I first drew the rough layout (Fig. 4), getting the details from that old classic of dialling, Waugh.¹ The design was then tidied; the hour numbers were made clearer, the months marked, construction lines removed and the shadow line along the top added.

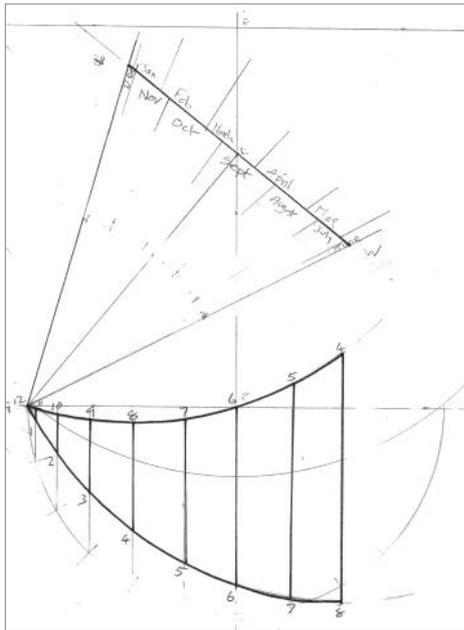


Fig. 4. First layout for altitude card dial.

It was then scanned into the computer and, using Adobe Photoshop, superimposed onto a scenic photograph to provide an interesting background. The printed image was then mounted onto 5 mm foamboard to provide a firm base for it.

A slot was cut along the centre of the month marks through which was threaded a thin thread and onto that a small bead. A larger bead was then attached to the end as a weight to straighten the thread. At the top right of the shadow line a small hole was made to insert the shadow-caster; I used the end of a tooth pick.

To use, slide the cord along the slot to the day's date and, having the thread over the noon mark, move the small bead to that point. Holding the card vertical with the sun to your right, tilt it until the sun casts a shadow of the tooth pick along the shadow line. The small bead will indicate the time (Fig. 5).

These dials will also indicate the times of sunrise and sunset. Set the upper end of the thread at the required date and hold it so the thread is parallel to the lines between the hours; it will cut through the curved hour lines to show sunrise and setting times (Fig. 6).

These two dials differ in style, method of manufacture and use, but both provide an introduction to less traditional dials. They also do not require great skills and are reasonably cheap to produce.



Fig. 5. Altitude card dial showing the time. The sun is on the right, casting a shadow of the stick along the top line.

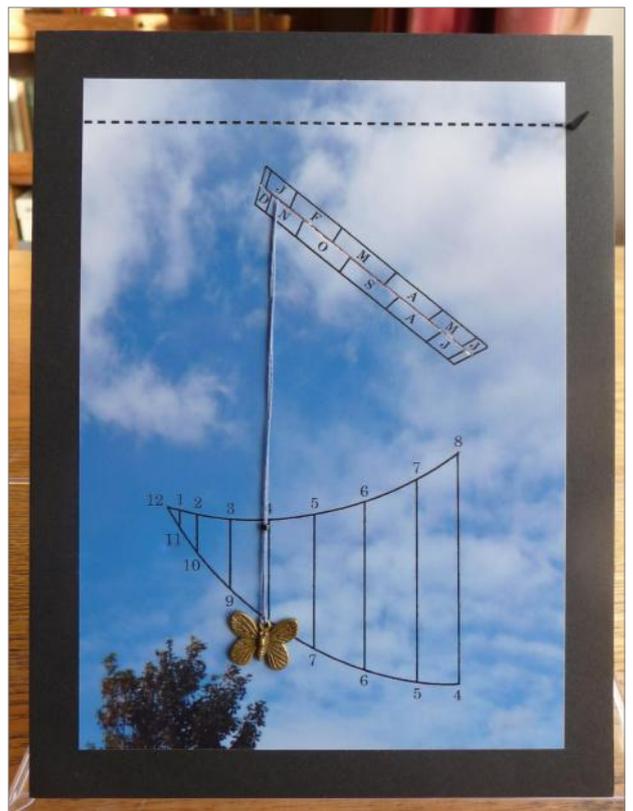


Fig. 6. Card dial showing sunrise and sunset times for mid-January.

REFERENCE

1. A.E. Waugh: *Sundials, their Theory and Construction*, Dover, New York (1973).

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MIKE COWHAM, 1942–2022

Regrettably we have to report the death in December, hastened by motor neurone disease, of one of our very long serving members (membership number 26). Mike Cowham was very much in at the beginning, and Mike and his wife Val even travelled to visit Andrew and Ann Somerville, in the company of Christopher Daniel, David Young, and Charles Aked, in 1989. This was before the Society's inaugural meeting in Exeter College, Oxford, in 1990.

Mike's education went via the vocational route with an HNC (Higher National Certificate) and an apprenticeship, and he joined Metals Research Ltd and then the Cambridge Instrument Company. It was not long after that he set up his own business making electronic equipment, specialising in accessories for scanning electron microscopes (SEMs). Typical customers were Cambridge Instruments and Philips in Holland. One outcome was a patent for increasing the sensitivity of a detector in an SEM. Following a birthday flight in a light aircraft, Mike got the flying bug, eventually owning his own light aircraft. He and Val would fly in the UK and to Europe, experience which manifested itself later in the safaris and articles on dials in France.



In at the beginning, 1990. Left to right: Richard Thorne, David Young, Gordon Taylor, Christopher Daniel, Andrew Somerville, Jane Walker, Michael Cowham and Charles Aked. Photo: Doug Bateman.

Mike became a prolific writer on the subject of sundials, with the archive entries in the *Bulletin* yielding a total of 103. Amongst the many articles were several on dials in different regions in France, and the useful summaries in 'Dial Dealings' of what was being bought and sold by the auction houses. He also wrote for *Antiquarian Horology* (five articles) and the *Bulletin of the Scientific Instrument Society* (seven articles). Amongst the articles, Mike wrote extensively about the Gatty family. In addition, he wrote



Mike at the Cambridge conference, 2007. Photo: John Davis.

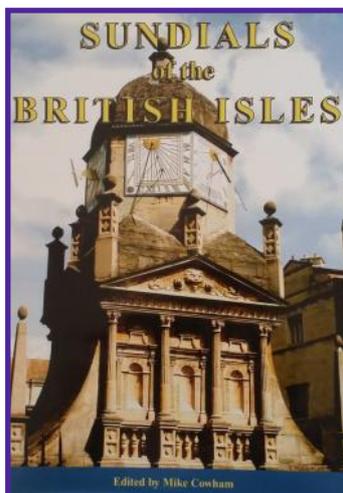
BSS *Monograph No 4, Altitude Dials*, and co-authored *Monograph No. 8. Timekeeping in the Medieval World*, a study of Anglo-Saxon and early Norman sundials. Even more memorable are his books. The first was *A Dial in Your Poke* (2004), privately published, followed by a second edition, *A Dial in Your Poke, a Book of Portable Sundials* (2011), again privately published. In between these books Mike acted as the coordinating editor for the much larger book, *Sundials of the British Isles* (2005), privately published. The book consists of 258 pages and colour illustrations of hundreds of dials. Mike selected



Mike in Catalonia, 2012. Photo: Ian Butson.

twelve regions and specialist topics and asked Society members in the different areas to contribute chapters. This was a very successful publishing venture.

In the early days of the Society, David Young organised week-long ‘Sundial Safaris’ to different parts of the British Isles and one to Austria. Mike followed this tradition and led four safaris – the first to Alsace, the second around East Anglia, the third to Le Mans, and a final tour of Catalonia. The visits were master classes in planning, from arrivals to the daily tours, timed down to the hour! Apart from the



serious aspects of seeing a great many dials and stylish lunches, time was found for some humour in the evenings. For the participants, they were memorable events.

Mike was a regular at conferences and attended many of the Newbury meetings. Speaking personally, a minor detail relates to the conferences: whilst we were organising the 2004 Oxford conference Mike suggested that instead of having the programme on a single sheet in the conference pack, it be printed on three columns and folded to fit in the pocket. I think of Mike every time I fold one of these leaflets.

Doug Bateman

Postcard Potpourri 62 – Welshpool

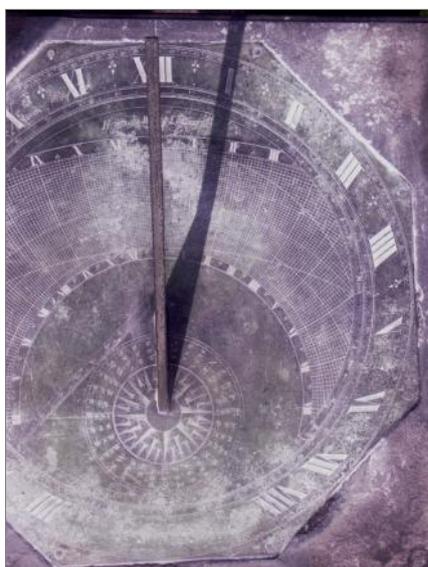
Peter Ransom

In 1996 I visited Powis Castle (a National Trust property) with my family, and as well as the two visible dials (SRN 1301 and SRN 3308) in the gardens around the castle, we noticed a gnomon on the skyline, high up on a terrace. I asked whether we could visit that to examine it further, but unfortunately it was out of bounds.

It has taken me a quarter of a century to find a picture on a postcard of this dial, shown here on a postcard of Frith’s of Reigate, published c.1955. In the foreground you can see the substantial pedestal with its east-facing scaphe dial, a gnomon on the south face and what looks suspiciously like the gnomon of a double horizontal dial. The Fixed Dial Register lists this as SRN 3416 – a multiple cube/prism dial in fair condition with south, east and west vertical dials together with a double horizontal.

The dial appears in *Sundials of the British Isles* and also in an article by Davis & Lowne, *BSS Bull.* 18(i), 33-34. John Davis and Harriet James studied it in detail in 2005. It is actually two dials mated together – a stone cube dial with, on top of it, a Henry Wynne double horizontal dial catalogued in *BSS Monograph No.5* as DH-35. The photograph on the right shows the dial plate from above.

Francis Frith (1822-98) was an entrepreneurial photographer who established himself as a retailer of scenic photographs. In 1859 he opened the firm of Francis Frith & Co. in Reigate and within a few years over 2000 shops in the UK were



John Davis

selling his postcards. His family continued the firm until 1971 when it closed. It was relaunched as the Francis Frith Collection in 1975 by John Buck, a Rothmans Executive who later bought the archive from Rothmans, and has run it as an independent business since that time – trading as The Francis Frith Collection <https://francisfrith.com>. In 2016 the company completed a two-year project to scan the entire archive and now holds over 330,000 high resolution digital images. The website lets you browse all 330,000 Frith photographs, depicting some 7,000 cities, towns and villages.

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NEWLY REPORTED DIALS, 2022

JOHN FOAD

The Register grew with 51 new finds this year, and very many corrections, updates, and new or improved photographs of existing entries. I am most grateful to all members for their contributions. A selection of the newly reported dials is shown below. They include one commemorating the servicemen who died in the Falklands conflict in 1982 (see item 11), a noon gun in a local museum (item 5), two stained glass dials (17th and 21st century, 22 and 21), a couple of unusual Francis Barker dials (3 and 4), a Scottish vertical by George Fa from 1633 (19), two dials from Madeira (15 and 16), the smallest fixed analemmatic in Britain (1), and the largest vertical (Piers Nicholson's in Fleet Street, 30).

1. This unusual small analemmatic dial is inset in the slate surround of the water feature in the inner courtyard of the Council building. It was initially provided with an apple-wood gnomon but the user now needs to provide a pencil or similar, as shown. GMT and BST hours are given on an elliptical time scale with a major axis of only 40 cm, the scale being offset by just over 6 minutes to allow for the longitude west of Greenwich. A detailed EoT chart gives mean-time corrections. The month scale has a chart on each side giving intermediate day positions for the gnomon. The motto at the south reads: "Cotide aliquid addisce" (Learn something new every day). SRN 8362, Civic Centre, Newcastle, NE1 8QF, Open.



C. Northeast

2. A more normal full-sized analemmatic dial, this one is near the Colonnade and Groyne no. 69. It was presented by the Rotary Club, and celebrates the Diamond Jubilee of HM Queen Elizabeth II in 2012. It shows the time with black Arabic numerals on square white marble plates, flush with the tarmac, for 3 am to 9 pm, using the 24-hour clock (e.g. 21 for 9 pm). SRN 8313, Promenade, Bexhill, East Sussex, TN40 1FH, Open.

3. There is no inscription on this dial, but it seems highly likely that it was made by Barker's, as an almost identical instrument, the 'Half Globe Sun-Dial', was advertised in



R. Jackman



G. Clarke

4



S. O'Brien

their 1907 catalogue. It shows the hours VI–VI divided into 15-minute intervals, and is adjustable for latitudes between 10 and 70 degrees. SRN 8338, Alfriston, East Sussex, BN26 5TE, Private.

4. This is definitely a Barker's dial, their 'Antique' pattern with Art Deco Arabic numerals, though it is signed only by the distributor "John Underwood & Son / 74 Baker St / London". The inscription around the perimeter is "Like as the waves make towards the pebbled shore: / So do our minutes hasten to their end" (Shakespeare's Sonnet 60). The gnomon is a poor replacement, too narrow and too far north. SRN 8337, Leighton Buzzard, Bedfordshire, LU7 3AE, Private.

5. The gun barrel and the 86 mm diameter burning glass are missing from this 'Noon Cannon' dial, but the marble base and the brass supporting framework for the lens remain. The base is signed by a well-known French instrument maker of the 18th century: "VICTOR CHEVALIER, INGr BREVte QUAI DE L'HOROLOGE 77. A PARIS". The small gnomon is a solid plate with a fimbriated northern edge, and its angle is 48° (Paris is at $48^\circ 50'$). The drawing is by Warrington Hogg from 1893 or earlier. SRN 8314, Maidstone Museum, ME14 1LH, Restricted.

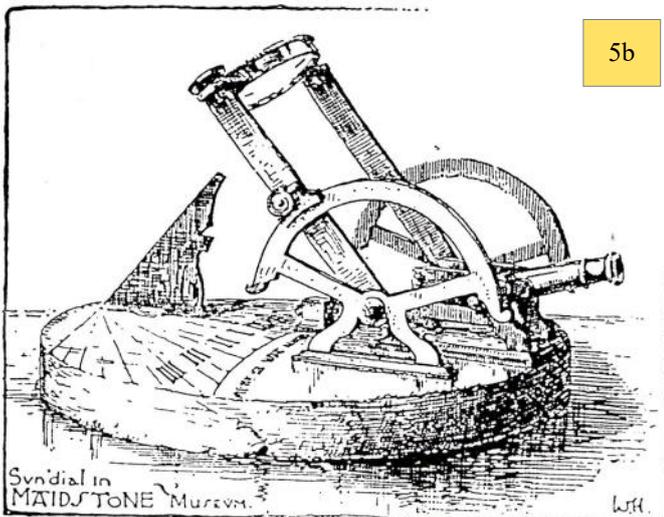
6. This soft paste porcelain dial is hand-painted in black and fixed to a metal base. It was made at Dr John Wall's Worcester factory and is inscribed with the name Josiah Holdship, a partner of John Wall and involved in the invention of printing on porcelain. It has a 32-point compass, labelled to NBE etc, and an anticlockwise EoT scale. SRN 8315, Porcelain Museum, Severn Street, Worcester, WE1 2NE, Restricted.

5a



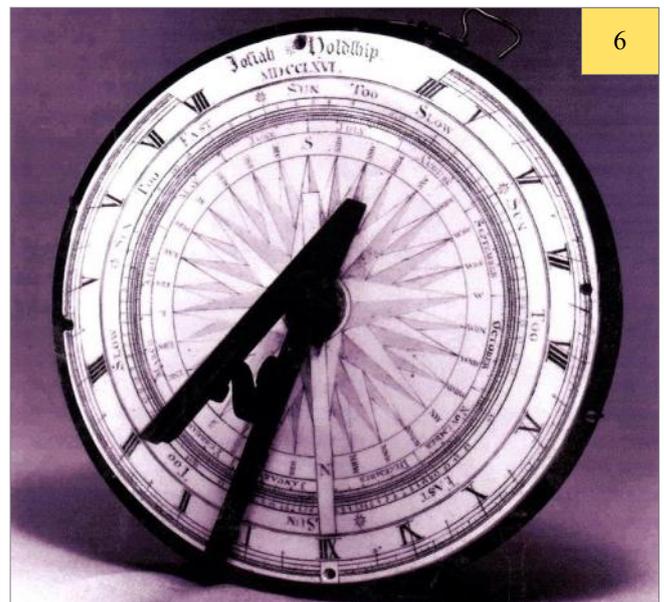
J. Foad

5b

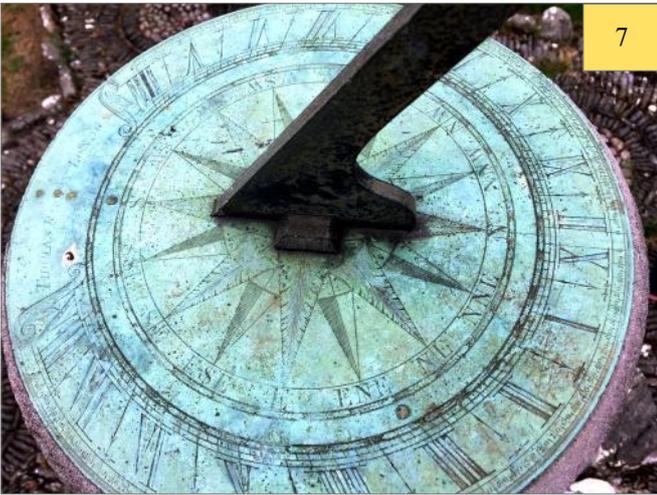


W. Hogg

6



W. Cook



P. Harris

7. This dial in the Sunken Garden is signed by Thomas Ripley, an 18th century London instrument maker, and this is the only example of his work as a diallist that we have in the Register. The 16-point compass rose is labelled to NNE etc, and the chapter ring is divided to single minutes. The gnomon angle is 55°, matching the location. SRN 8317, Knockbrix Castle, Kirkcudbrightshire, DG6 4UE, Restricted.

8. This recent heavy cast iron dial sits on a plinth of Bath stone, near the Horseshoe Walk end of the Widcombe flight of locks of the Kennet & Avon Canal. Around the northern edge is inscribed “Time is the waterway of all our days – we are dreamers on its banks”. The gnomon is closely covered with the raised names of goods and materials carried on the canal, and the professions of the men who



D. Brown



C. Northeast



C. Northeast

worked on it. The sculptor was Alan Dun. SRN 8328, Bath Deep Lock, Bath, BA2 4HL, Open.

9. One of a pair of dials by Brad Dillon with identical dial plates (apart from the inscriptions), made and installed as part of the restoration of the Boating Lake and Venetian Waterways in 2018-19. This one is inscribed “It is good people who make good places” from *Black Beauty* by Anna Sewell, who was born in Great Yarmouth. For more details, see *Bulletin* 34(iii) (Sept. 2022), pp.38-40. SRN 8319, The Waterways, Great Yarmouth, Norfolk, NR30 4EN, Open.

10. The other of the pair is inscribed “...it was well known (I suppose to those who had / the good fortune to be Bloaters) that Yarmouth was, / upon the whole, the finest place in the universe” (from *David Copperfield* by Charles Dickens). Sadly the good people of Yarmouth have now seen the destruction of this dial’s once fine gnomon. SRN 8320. The Waterways, Great Yarmouth, Norfolk, NR30 4ET, Open.

11. This dial commemorates the servicemen who died in the Falklands conflict in 1982. Around the perimeter is “AT THE GOING DOWN OF THE SUN AND IN THE MORNING WE WILL REMEMBER THEM”, and across



10

C. Northeast



11

Renfrewshire News



12

G. Jones



13

J. Davis

the base is “THE SHADOW OF THE BRAVE”. The half-hour lines are marked out with dots totalling 255, the number of the fallen. The Corten steel gnomon is modelled on the silhouette of a kneeling veteran paying his respects to his comrades. SRN 8326, Erskine Park Home, Bishopston, Central Region, PA7 5QA, Open.

12. This further memorial dial honours the many miners who died at the Bettisfield colliery between its opening in 1872 and its closure in 1934. The gnomon is in the form of a miner’s pick, and the dial is mounted on a large industrial gear wheel. The inscription is in Welsh, and translates as “In memory of the colliers who descended into darkness never again to see the light of day”. For more details, see this issue of the *Bulletin*, pp.20-21. SRN 8340, Wales Coast Path, Bagillt, Clwyd, CH6 6HF, Open.

13. This noon mark on the south wall of the Meridian Building in the Royal Observatory replaces an earlier version, which was in error. Chris Daniel delineated this corrected version in 2017, but by an oversight it has only just been entered in the Register. As on the original, the dial plate has an analemma curve with Roman numerals indicating the months of the year, and the gnomon is in the form of a 12-pointed star with a central circular hole. For the background to this story, see *Bulletin* 24(iv) (Dec. 2012) pp.47-48. SRN 8324, Royal Observatory, Greenwich, London, SE10 8XJ, Restricted. Sundial Atlas UK 000460.

14. This is a replica of a sunshine recorder by Brady and Martin of Newcastle (c.1880-1900) and can be found to the south-east of the conservatory at Cragside Park House. The



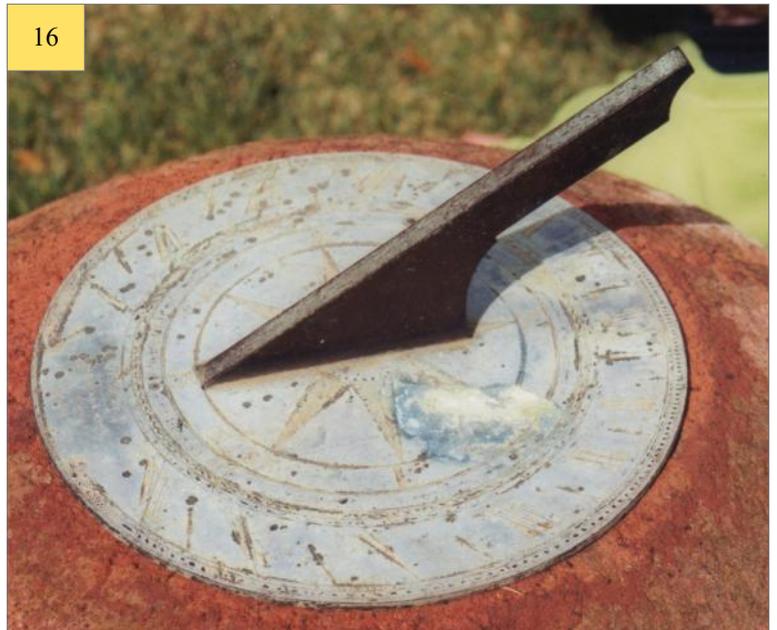
14

G. Jones

original was Grade II Listed (Entry 1025879) and was said to have a maker's plate attached. More information on this replica is requested. SRN 8354, Cragside, Rothbury, Northumberland, NE65 7PU, Restricted.

15. This dial is in the Estate of William Hinton, founder of the Sugar Refinery. It is inscribed "Pilkington & Webb, Preston, England", and is known only from this photograph by Frank Coe, as is the following entry. SRN 8351, Quinta da Palmeira, Funchal, Madeira, Restricted.

16. This second Madeira dial is inscribed with the latitude, and with the name of the 19th-century maker: "Craighead & Webb, Royal Exchange, London". The motto is: "Me



16

F. Coe

Lumen Vos Umbra [Regit]" – (The light [rules] me, the shadow, you). SRN 8352, Quinta da Palmeira, Funchal, Madeira, Restricted.

17. This slate break-arch dial is embedded in the street wall above the door of the cottage. The motto reads: "Time flies, Death hastes – a Moment / may be wishd / when Worlds want / Wealth to / buy", adapted from 'The Complaint' by Edward Young. The plate gnomon has decorative piercing, and a triple semicircle round the root. A date stone on the wall above the dial reads "1863". SRN 8312, Ocean Cottage, 33 Gwavas Quay, Newlyn, Cornwall, TR18 5BB, Visible.



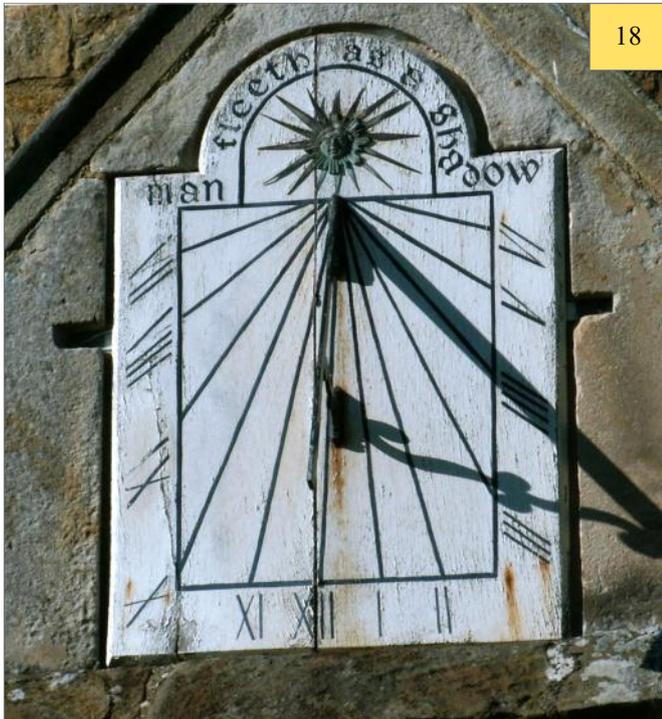
15

F. Coe



17

C. Northeast



18

P. Tarn

18. This painted wood dial is inset in the gable over the south porch. Around the arch is “Man fleeth as a shadow” (Job 14:2) and in the arch is an irregular 16-pointed star. The dial is now white, with all furniture in black, but it is said by Gatty to have been originally painted red with a green border. SRN 8327, St Mary’s Church, Wycliffe with Thorpe, Durham, DL12 9IS, Open.

19. The dial stands slightly proud of the west end of the stone south wall, at about 2 metres above ground level. Across the top in raised lettering is “GEORG FA FECIT /



19

W. Baxter



20

C. Northeast

ANNO 1633”. The gnomon is a solid iron sheet with an S-curved lower side. SRN 8360, Parish Church, Garvald, Haddington, Lothian Region, EH41 4LN, Open.

20. The dial is on the end wall of the house, facing the street, between two ground-floor windows. Across the top is the motto “Redeem the Time”, deeply inscribed and gilded, and in the bottom right-hand corner is lightly inscribed “D HARBER MCMXCVII”. The gnomon is an unsupported rod, painted blue to match the slate, and may have become displaced as it currently hangs vertically and the time keeping is consequently incorrect. SRN 8322, 12 Rodmill Drive, Eastbourne, East Sussex, BN21 2SG, Visible.

21. The dial at the top of a south-western bow window is a reconstruction by John Carmichael of an original of 1904 or 1905. The gnomon is attached magnetically, for prevention of any damage, should it be maltreated. In place of the commonly-used image of a fly, the design includes a



21

L. Smail

depiction of a worker bee (the symbol of Manchester). Full hour lines run to a yellow-bordered red half sun, and the area around the chapter ring is filled with formal five-petalled rose flowers and green leaves on a blue ground. SRN 8316, The Old Parsonage, Stenner Lane, Didsbury, Manchester, M20 7RQ, Restricted, Sundial Atlas UK 003780.



22

D. Bostwick

22. This fine painted glass dial from c.1688 is by Henry Gyles and is believed to have come from a townhouse in Horsefair, Pontefract. The motto is: "TENERE / NON POTES / POTES, NON / PERDERE [DIEM]" (You cannot hold [the day] back, but you can avoid wasting it). The lower right-hand corner is missing but has been very skilfully replaced with matching glass and lettering, at the 9 am point. SRN 8311, Nottinghamshire, Private.

23. The dial is one of a pair on the two chimneys of the almshouses, each stack built at 45° to the frontage. This one is to the west of the central archway. It is formed from powder-coated aluminium with the furniture black on a white ground. The gnomon is a thin rod with a straight rod support at the end. The story of their design and installation can be found at *Bulletin* 34(iv) (Dec. 2022), pp.10-11. SRN 8346, The Almshouses, Church Hill, Etwall, Derbyshire, DE65 6LT, Visible.

24. This is the second dial of the pair, to the east, of very similar design. SRN 8345, The Almshouses, Church Hill, Etwall, Derbyshire, DE65 6LT, Visible.

25. The dial is on the wall of the house between windows, overlooking the garden. It is in the shape of a superellipse, using the elliptical factor 2.7. The 3 mm brass gnomon springs from a gilt flaming sunburst and has a nodus disc on the style, parallel to the plane of the dial, tracing the date curve of a wedding anniversary. The motto is: "SOL ADVENIT" (the sun has come), and the arms of St Edmund Hall, Oxford, UK, are on the vertical noon line below the date curve, with a gilt cross and four choughs in outline. SRN 8343, 208 Davis Avenue, White Plains, New York, Visible.



23

J. Newton



24

J. Newton



D. Brown



G. de Bertodano



D. Brown

26. The dial is high on the tower, over the entrance, and is canted out on the west side to face due south. There is an inscription across the top but it is illegible now, possibly starting "C. W.". SRN 8347, St Peter's Church, Ilton, Ilminster, Somerset, TA19 9HR, Open. Sundial Atlas UK 000936.

27. The dial over the south porch is a replica replacement. An old photograph shows a dial in the same location with "GW 1864 WF / WW / 1736 / WR", so presumably there was originally a dial here in 1736, replaced in 1864 and 1919, and now again in 2022. SRN 8344, Old St Stephen's Church, Pasture Bank, Robin Hood's Bay, Fylingdales, North Yorkshire, YO22 4PN, Open.

28. The dial is very high on the west side of the tower. The gnomon is sound, but no markings remain. SRN



N. Owen

8355, St John's Church, 1 The Park, Keynsham, Bristol, BS31 2BL, Open.

29. The dial is mounted on the south-west corner of the tower at the east end of the frontage of the castle, on a level with the base of the first-floor windows. It is held in the hands or claws of a figure which may be a man or a lion, on an octagonal base stone which sits on the shoulders and head of a monk, well carved and well preserved. The rather eroded thick dial plate is shield-shaped, with Arabic numerals for 6 am to 6 pm in a ribbon around the sides and base. Hour lines run to a semi-circle around the base of the



29a

G. Kuhn



29b

G. Kuhn



30

P. Nicholson

gnomon which is missing. There has been an inscription around the curve of the semi-circle, but it is not now legible. SRN 8349, Borders region, TD11 3NW, Private.

30. The dial is at the entrance to Bouverie Street, painted on the east-facing side wall of 61 Fleet Street. It shows the hours from 6 am to 11 am, with Arabic numerals on the left-hand side. The titles of five early newspapers are displayed between the hour lines, which spread diagonally across the dial face. The gnomon is a 4-metre bar mounted at the top left corner. One of three plaques at eye-level gives information about the sundial including an EoT graph. The dial was designed by Piers Nicholson, delineated by Kevin Karney and Chris Lusby-Taylor, and painted by Steven Whitaker. For more details, see *Bulletin* 33(iv) (Dec. 2021), pp.7-9, 10-12 and 13-16. SRN 8333, 61 Fleet Street, London, EC4Y 1JU, Open.

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SUNDIALS IN BULGARIA

JACKIE JONES

Bulgaria is a beautiful and fascinating country with a long and complex history. I went there as part of a tour organised by the local archaeological society to look at the archaeology, concentrating on the periods between the Stone Age and the Romans. This roughly starts there in about 6,000 BC and runs until the end of Rome's rule in 376 AD when the Goths defeated the

Roman army. On our travels we found a few dials from various periods, mainly in museums.

The first (Fig. 1) is in the National Museum of History in Sophia. It is just described as a sun clock, IX–XI century. Made of limestone, it is from the Mogila village, part of the Kaspichon municipality.



Fig. 1. Sun Clock, IX – XI century.

We then went on to the town of Devnya to visit the Mosaics Museum. This was opened in 1986 as a result of a decade of archaeological excavations of the Ancient Roman and early Byzantine city of Marcianopolis. The museum incorporates the ruins, floor and wall mosaics of a late Roman villa. The sundial shows temporary hours and has no gnomon (Fig. 2). There was no other information.



Fig. 2. Ancient sundial of Marcianopolis.

The Archaeology Museum in the coastal city of Varna is stunning and vast. It contains over 100,000 artefacts from Prehistory through to Medieval. This includes pieces of a gold necklace at least 6,500 years old that are amongst the oldest worked gold jewellery in the world. Plus there is a sundial, described as “Marble, 2nd – 3rd c. A.D. Devnya (Marcianopolis)” (Fig. 3).

Plovdiv is Bulgaria’s second city and regarded as a cultural centre. The Thracians settled here about 5,000 BC; the Romans arrived in 46 AD and extended the city. The



Fig. 3. Marble sundial in the Archaeological Museum of Varna.

Roman stadium, built by Trajan, was only uncovered in 1972 after a landslide. The Dzhumaya Mosque is in the centre of the city and was built in 1435 by the order of Sultan Murad II. On the southwest corner of the mosque is a sundial, a gift from a Russian officer in 1878 (Fig. 4). Although there was a big conservation project to restore the building in 2007, the dial is in pretty bad condition. The gnomon is broken, only a section of bent metal remains and a palm obstructs the sunlight. This is a pity, as it could look quite impressive.



Fig. 4. Dial on the wall of Plovdiv Mosque.

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SUNDIAL MEMORIAL FOR BETTISFIELD COLLIERY MINERS

SUE MANSTON

The many lives lost down the mine at Bettisfield Colliery, North Wales, are now commemorated with a sundial sculpture, unveiled in July 2021 by Lady Hanmer of Bettisfield.

The Hanmer family opened the colliery in the mid-1800s, providing work for three generations of miners. At 850 ft it was the deepest of the many pits in the village and stretched far out under the Dee Estuary. The colliery was known locally as ‘y lladd-dy’, meaning ‘slaughter house’, as there were so many accidents.

A local community group, The Friends of Bagillt Foreshore, commissioned a local blacksmith and artist,



Fig. 2. The miner's pick gnomon. Good care was taken to ensure that the gnomon root was in the correct position. Photo courtesy of Graham Jones.

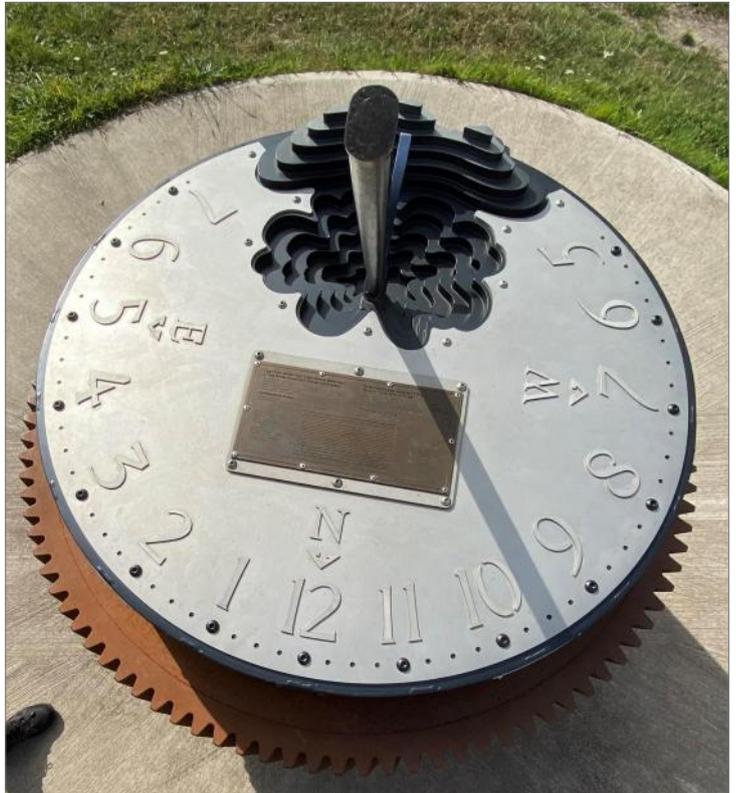


Fig. 1. Photo of the sundial taken at 10:40 am BST on 7 September 2022 (09:30 local time). Photo courtesy of Graham Jones.

Peter Carlyle, to design and manufacture a sundial memorial as a tribute to the miners who died at Bettisfield Colliery. Peter contacted the BSS Help & Advice Service to ask for assistance with the design and drawings. Advice and calculations were provided, along with a suggested graph for an Equation of Time plaque.

The sundial (SRN 8340) is situated at Bagillt Foreshore, Flintshire, on the North Wales Coast Path (53.275° N, 3.177° W). The stainless-steel dial plate (Fig. 1) is 5 feet in diameter, mounted on a large industrial gear wheel salvaged from a power station, making a very solid base weighing a couple of tonnes.

The gnomon represents a miner's pick with the business end in a spoil heap (Fig. 2). A plaque on the dial face shows how to correct for EoT and BST (the longitude difference of 12.7 minutes is included). There are two worked examples and the text is in both Welsh and English (Fig. 3).

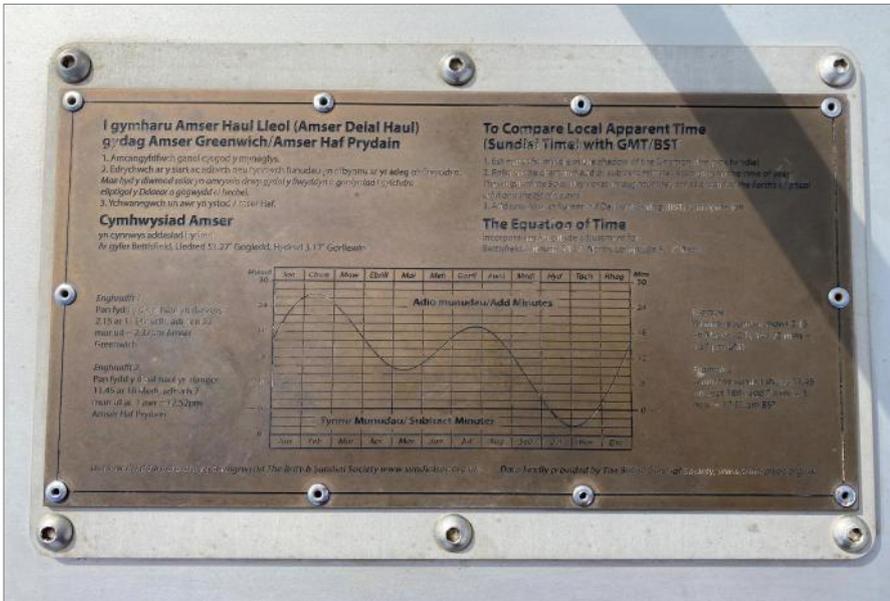


Fig. 3. The plaque showing the EoT graph with worked examples in Welsh and English. Photo courtesy of Graham Jones.

An inscription around the side of the dial, also in Welsh and English, is in lettering of Peter’s own design (Figs 4 and 5):

I’r Rhai a ddisgynnod o olau dydd daearol ac aros mewn tywyllwch y ddaear dragwyddol

and

In memory of the colliers who descended into darkness never to see the light of day again



Fig. 4. The Welsh inscription on the east side of the sundial. The lettering is Peter Carlyle’s own design. Photo courtesy of Graham Jones.



Fig. 5. The same inscription in English on the west side of the sundial. Photo courtesy of Graham Jones.

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THE ROADFORD LAKE JUBILEE SUNDIAL

BEN JONES

The sundial at Roadford Lake was made to celebrate the Queen's Diamond Jubilee in 2012. It was commissioned by the Lord Lieutenant of Devon, Eric Dancer. Sir John Cave was the Deputy Lieutenant who ran the project.

The dial is an ordinary horizontal dial but a large one: 30 ft in diameter with a polished 20 ft tall stainless-steel gnomon (Fig. 1). Although the sundial was to be a gift to the Queen from the people of Devon, it was to be sited in Devon and be of benefit to the people of the County.

Roadford Lake is a large reservoir just off the A38 in Devon. It is a very popular park attracting large numbers of visitors for outdoor leisure activities such as sailing, kayaking and walking. It is an almost perfect place for a large sundial, where it is seen by many people.

It was proposed that the dial should stand on a peninsula (Fig. 2) that runs out into the lake, be large enough to be visible from the visitors' centre 200 metres to the south, and be made of Devon granite.

Alas, there is no granite quarried in Devon any more, and to use pieces of reclaimed granite would have made the dial too small and costly. The uncertainty about what size blocks would be available made designing anything very difficult and I was glad when the idea was abandoned.

It was then decided to make a large horizontal dial with a polished metal gnomon (Fig. 3). Though stainless steel is



Fig. 1. The finished dial.

not exactly from Devon, it was felt to be suitable because it is not identified with any particular county in the way that stone is. In the end Devon granite was used for the hour markers (Fig. 4). These were made from gate posts that had been removed from the farms that now lie beneath the water.

To get the sundial built many companies contributed their time and skills. Midas Ltd the house builders ran the whole show on site, which was a complicated task. Babcock Engineers at Plymouth Naval docks made the gnomon. South West Lakes Trust provided the site and maintain the



Fig. 2. The dial from the visitors' centre.



Fig. 3. Reflections.



Fig. 4. Devon granite hour markers, Devon brick hour lines, lots of Devon rain.

dial. There were also surveyors, sign makers, local hauliers and landscapers involved.

Under the gnomon is a huge and fabulous concrete foundation. It bears the weight of the gnomon and stops it from being blown over. This is the only dial I have worked on where wind pressure was a significant factor in the design.

The six bars of the gnomon represent the six decades of Her Majesty's reign at the time. The bar gnomon design was chosen for its looks and symbolism, but having the gnomon in sections certainly helped transporting it down narrow Devon lanes and over rough ground to get it into position.

Very early on there had been half a suggestion made that the military might fly the gnomon in by helicopter as an exercise. This would have been spectacular but was impractical for all sorts of reasons.

When the surveyor set out the meridian line for the gnomon to stand on, I was amazed at how precise the GPS could be (Fig. 5) especially as the site was very rough and overgrown. He started from a centre point and marked two further points to the north, one at the edge of the circle and one further out. He then marked another pair to the south. I stretched a thin cord across them and found them to be



Fig. 5. Setting out the meridian.

absolutely perfectly aligned. Having two marks outside the area where the dial was to be built was a sort of insurance against losing our datum; there were a lot of people, dumper trucks and diggers etc. about. A stropky dog walker who objected to these obstructions proved to be the datum's greatest threat. If you ever use a GPS for setting out a dial, take Frank King's advice and ask for true north, grid north and magnetic north. This will avoid you being given the wrong one and save you a lot of worry.

Local noon at Roadford is nearly seventeen minutes later than noon at Greenwich so I designed the hour lines to



Fig. 6. The EoT stone with the visitors' centre behind it.



Fig. 7. A cold and windy May unveiling.

allow for longitude. Another surveyor using GPS marked out the hour lines on the ground. Allowing for longitude in this way does make the dial asymmetrical, which I know displeases many diallists. My reasoning was that this is a public dial, and the nearer it shows to clock time, the fewer visitors will leave confirmed in the surprisingly strongly held belief that sundials “do not work”.

There is an equation of time (EoT) graph carved into the ‘midnight’ stone (Fig. 6), and another on the information board sited by the path leading to the dial.

Having said I wanted the time from the dial to be close to clock time, I did mark the ‘noon’ stone as XII and not I. It was surprising how many people insisted the time it showed in the summer was wrong even though they readily agreed they had added an hour to their watches in the Spring.

The most common question I was asked about the sundial was why it had two VIs? The tricky bit about answering



Fig. 8. The dial as it is today.

was not to make the questioner feel daft because as soon as I had said ‘sunrise east’, and before I could say ‘sunset west’, the penny would drop and the questioner was surprised to find that they actually knew the answer all the while. With vertical dials the question is often why is the XII at the bottom and not at the top (like a clock)?

Consternation was caused by pointing out to visitors that the moving shadow was caused, not by the Sun moving across the sky, but by that so-solid Earth beneath our feet spinning on its axis.

After much torrential rain, high wind, and a lot of hard work by a lot of people, the dial was unveiled in May 2012 (Fig. 7) and accepted on behalf of the Queen in August by Prince Edward.

Fig. 8. shows the dial as it is today.

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In Need of Restoration

David Brown



I spotted this sundial on a recent visit to a nearby retail outlet (Clarks Village) in Street, Somerset. It is over the doorway to what I assume was the barn near a fine house called The Grange where I was attending a Covid booster clinic. The dial is dated 1811 and most of its elaborate ornamentation is still discernible, although the Blue Lias from which it is made is heavily weathered. The gnomon appears to be original. I’m tempted to make a bid to create a like-for-like replacement for them!

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TWO ARMILLARY SUNDIALS IN TENNESSEE

Frank H. King

I often find armillary sundials something of a disappointment. There are many beautifully made examples which nicely illustrate the principal circles on the celestial sphere but when it comes to telling the time it can be hard to pick out the shadow of the gnomon from the shadows cast by the enveloping rings. On the bus tour at the NASS Conference in August 2022, I was delighted to see two armillary dials which really appealed to me.

Fig. 1 shows an exquisitely-crafted armillary dial in the garden of the official residence of the Governor of the State of Tennessee.

The design incorporates all kinds of symbolism. The Eastern Box Turtle below the dial is the state reptile. The state fruit is the tomato and there are several of them below the turtle though most are hidden in this view; three are red and these correspond to the three stars in the state flag. The upper end of the gnomon extends into a branch of a Tulip Poplar Tree, the state tree. Standing on the top of this branch is a Mockingbird, the state bird. There are no false shadows on the chapter ring and it is easy to see that the time is coming up to 10 o'clock.

The other armillary dial was just a ten-minute walk from the conference venue and I went to see it several times in the days following the bus tour. The dial is outside the Student Center [sic] of Vanderbilt University and is shown in Fig. 2.

The two-ring sphere rotates about its polar axis in a mount furnished by a three-quarter fixed ring in the meridian plane. The low point on the fixed ring extends to support a plate with two arrows on it labelled CST and DST, Central Standard Time and Daylight Saving Time. The *outside* surface of the equatorial ring serves as a chapter ring. A hole is punched through the equatorial ring at the 12 o'clock position and, to determine the time, the user rotates the sphere so that the hole shines a spot of light onto the analemma engraved on the internal surface opposite. This is seen more clearly in Fig. 3.



Fig. 1. Armillary sundial in the garden of the Tennessee Governor's Residence, with close-ups of the Mockingbird standing on a Tulip Poplar Tree branch, and the Eastern Box Turtle contemplating tomatoes.



Fig. 3. Close-up of the Vanderbilt University dial showing the spot of light on the analemma.



Fig. 2. Dial at Vanderbilt University, Nashville, Tennessee. The curious camera angle makes it easier to compare with the view in Fig. 3.

Daylight Saving Time applied during my visit and the DST arrow indicates that the time is about 09:20. The craftsmanship doesn't match that of the State Governor's dial and the CST/DST plate is particularly poorly executed. The use of a spot of light makes it easy to ignore all extraneous shadows and eliminates problems at the equinoxes. The main problem was that the dial is surrounded by trees. Intriguingly, on each of my several visits to this dial, it was always in the position in which I had left it. This dial is clearly not much used by members of the University.

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TRUSTEES' ANNUAL REPORT 2022

Although the first few months of 2022 were subject to Covid constraints, the Society was able to hold its first regular conference for three years. This took place in York in April 2022 and we were able to hold a full programme of talks and organised a do-it-yourself tour of notable sundials in the city. A conference has been arranged in Exeter for 2023.

We were also able to organise our regular meeting in Newbury in September 2022 and, as in 2021, we held our AGM at this meeting.

Many members of the Society have constructed new sundials in public locations and completed some restoration projects too. Our public benefit is greatly enhanced on a national and global basis by our Website and our Help-and-

Advice service which provides guidance on a huge range of sundial-related topics to anyone who asks.

The Society's finances remain capable of supporting current activities and plans for the foreseeable future.

The entirety of the Society's activities is conducted on a voluntary basis by members. We were very sorry to hear of the death, late in 2022, of our Librarian, John Wilson. We are most fortunate that our former Librarian, Nick Orders, has agreed to return to this post. As always, the trustees wish, on behalf of all members, to thank all those who contribute to our continuing success.

More detailed information is annexed below.

*Ben Jones, Jackie Jones, Frank King,
Graham Stapleton, Bill Visick*

ANNEX

Examples of Individual Projects and Dials

Extracts from the 2022 public benefit submission to the Charity Commissioners:

- Research findings on a particular local sundial were shared with its community in: Bolam (Northumberland); Great Yarmouth (Norfolk); multiple locations in Scotland; Stroud (Gloucestershire); Carrog (Clwyd); Westminster (Greater London); Longwood (West Yorkshire); Hawkshead (Cumbria); Abbotsford (Borders); Old Warden (Bedfordshire); Conwy (Clwyd).
- Assistance in identifying an archaeologically-recovered 17th century pocket sundial (Cambridge).
- Talks given to the Solent Astronomical Association (Hampshire) and Christ's Pieces Residents' Association (Cambridgeshire).
- A scheme opened for students of the London City & Guilds stonecarving course to receive specialist advice on design and conservation.
- Creation of a geographical reference line to assist amateur astronomers at Toothill Observatory. (Hampshire).
- Locating old sundial texts and rendering them in language accessible to contemporary readers.
- *Pro bono* design and advice for a new interactive sundial on Kings Langley Common (Hertfordshire) and three other locations.
- Conservation and restoration advice for sundials at: East Harptree Church (Somerset); Etwell

Almshouses (Derbyshire); Faversham Guildhall (Kent).

- Continued operation of a Help & Advice service, reported separately.
- The digital mapping of sundials in the British Isles continued.

The Bulletin

In 2022, the usual four quarterly issues of the *Bulletin* were published. These included Reports on all the talks at the York conference and the Newbury meeting. The Editorial team now use home-based desktop publishing facilities to produce the *Bulletin* and continue to contract out the printing and distribution of copies.

The *Bulletin* Team includes John Davis, Frank King, Christine Northeast and Bill Visick. We are delighted to have appointed Nick Orders as our proof reader. He takes over from Fiona Vincent, who died in 2021.

The Team are most grateful to all members of the Society who supply us with articles and to those whom we call on for expert comment and advice.

The Editorial Team

Fixed-Dial Registrar

The Register continues to grow slowly, with 51 new finds this year, plus very many corrections, updates, and new or improved photographs of existing entries. The newly reported dials include one commemorating the servicemen who died in the Falklands conflict in 1982, a noon gun in a local museum, two stained glass dials (17th and 21st

century), a couple of unusual Francis Barker dials, a Scottish vertical by George Fa from 1633, two dials from Madeira, the smallest fixed analemmatic in the UK, and the largest vertical (Piers Nicholson's in Fleet Street). The Register now records 7,781 dials.

John Foad

Mass Dial Registrar

There were twenty six reports of Mass Dials made in 2022. Most were an email with digital pictures showing the dial and its location on the building.

There were four articles about mass dials in the press this year. These were in *The Guardian*, *Current Archaeology*, *The Buckinghamshire Archaeological Society Newsletter*, and *The Church Times*. None was written by a BSS member and I only got to speak to one author before the article was written. All produced reports of previously unrecorded dials or really good photographs of previously recorded dials.

In Matthew Champion's book *Medieval Graffiti*, he mentions the dials at Ratcliffe-on-the-Wreake in Leicestershire and at Worthing in Norfolk. Neither is on the register. I have now photographed the dials at Ratcliffe and Geoffrey Harris has taken some beautiful pictures of the dials at Worthing.

Very interesting 'dial like' graffiti inside the church at Ashwell in Hertfordshire have been photographed but not yet fully recorded.

There has been no progress with getting the paper records held in The Borthwick Institute for Archives into the Mass Dial database. With a bit of luck some progress might be made next year as I hope to quit full-time work.

Ben Jones

Website

The website remains popular although without landmark events such as the Zoom conference there has not been the surge in visitor numbers that we saw in 2021. Discussions are continuing about what sorts of online event might be of interest to both members and non-members and, in particular, how to resource such activities.

As ever, offers of help, contributions and suggestions for new topics for the website are always welcome.

Bill Visick

Conference

As in other years we ran a successful conference, this time in a hotel in York (a different location is chosen every year). A total of 34 attended and we had a series of lectures, and, reinforcing our international appeal, we had speakers from CERN and the USA. Again, as in other years we had exhibits of sundials and projects, a photographic display and book sales. A list was provided giving directions for members to visit a number of sundials by an informal walking tour.

During the year, planning has gone into arranging the next annual conference with the promise of a tour of local sundials.

Doug Bateman

Newbury Meeting

Newbury one-day meetings continue with Sutton Hall, Stockcross, Newbury booked for 2023 on Saturday 23 September. The numbers attending were down in 2022, but the talks were as good as usual. Those who came were very keen to attend and tell us their 'tales'. Look forward to seeing you all in September.

David Pawley

Help and Advice Service

The BSS Help and Advice Service dealt with 105 enquiries in 2022 – roughly the same number as in 2021 but with several requiring considerably more effort.

Queries fell into the following categories: where/what to buy (1), restoration (10), replacement gnomon (1), valuation (1), delineation (8), information about an existing dial (71) and other (13).

There were 36 enquiries from overseas: USA (14), France (10), Ireland (3) and one each from Canada, Germany, Greece, India, New Zealand, Poland, South Africa, Switzerland and Uruguay.

Major efforts included delineation advice for:

- two sundials on chimneys at Etwall almshouses;
- a landowner in New Zealand building a large dial in his declining/reclining field so he can read the time from inside his house (which is on a hill overlooking the field);
- replacement of a dial on a 16th century house in Yorkshire;
- a PhD student in Greece studying the eight dials on the Tower of the Winds in Athens (accurate measurement of the dials has been established using drones and LiDAR);
- a ring dial for a maker of children's wooden toys.

Interesting discoveries included two double horizontal dials, two Francis Barker dials (a horizontal and an equatorial) and six finds from metal detectorists (including three lead dials and part of a Gunter's quadrant).

About 80% of our replies received an acknowledgement – a thank-you or further discussion.

Enquiries have resulted in two new BSS members (one of whom also joined the North American Sundial Society) and four articles and a back cover for the *Bulletin*.

Sue Manston

Library

It was with sadness that we learned of the death of John Wilson, who had been the BSS Librarian since 2015. I had

held the position for a few years prior to John taking over and now, having retired from full-time work, I have found myself with time to take on the role again, which I very much look forward to.

It is still early days for me, but I recently visited Bromley House subscription library in Nottingham, where the BSS collection of books is kept. I was met and shown around by Anja Thompson-Rohde, Bromley's Collections Manager and was hugely impressed with the renovation work that has been done on the building in the past few years, and the re-siting of the BSS collection of books in a cabinet located in the Standfast Room that has their meridian line running across the floor.

Anja informed me that they are proud to be looking after the BSS collection and are keen to engage with the society further, maybe in terms of a public talk or demonstration. As far as she was aware, there are few (or no!) visitors from the BSS to the library, apart from John's occasional visits. This is a shame: Bromley House is a gem of a place and worth a visit in its own right. To be able to view so many books on sundials is an added bonus! Access to the library is free to BSS members and you can view their entire collection, not just the BSS section, although you won't be able to take any books out.

Please contact me if you would like any further information.

Nick Orders

Biographical Projects

As last year, details of newly discovered makers have been recorded, together with downloaded pictures. In 2022, fourteen submissions were received from Sue Manston (Help and Advice); although not all are new names, pictures add to the information we have.

Peter Ransom

Education

It has been another quiet year, education-wise, with no enquiries since last year.

As before, I have continued to work with one of the members of the sundial commission of the SAF (Société Astronomique de France), in tracking down some old texts and translating them into modern English that he can then get translated into French more easily.

The last two years of the *BSS Bulletin* (volumes 32 and 33) and the *NASS Compendium* (volumes 27 and 28) were bound for the BSS Library and sent there in February. I hope to do the next two years in 2024.

In January I used a sundial to establish a North–South line at Toothill Observatory to assist with rapid setting up of portable telescopes, used on open nights. Later in the year, I gave a talk to the Solent Amateur Astronomers on 21 June entitled 'Fun with the Sun: sundials for stargazers'. Vectis

Astronomical Society have booked the same talk in April next year. I let them know about the BSS!

Peter Ransom

Photographic

As previewed in last year's annual report, the 2022 Annual Conference at York included a display of photographs that had previously been seen on-line only. The photographs were from the Sundial Design and Restoration Competition that should have been displayed at the postponed Exeter Conference together with photographs from the 2020 Photographic Competition that had also been seen online only.

Twenty-two photographs from the Design Competition were selected for display from a large number available and the ten photographs received for the 2020 competition. They were displayed on three display boards in the Conference room. There were nice comments made about the display and it was well visited.

The Photographic Competition will resume at Exeter in 2023. I would like a really good entry and look forward to receiving lots of photographs.

David Hawker

Sales

This has been a very quiet year for sales with a total of 13. Sales for preceding years were as follows; 2021: 16, 2020: 19, 2019: 28. This shows a dramatic drop over the last four years and it is difficult to see how to improve matters. Sales at both conferences are also limited.

I have a good stock of non-BSS titles on sundials and some other scientific publications that I will try to find time to catalogue before the Exeter Conference. Should anyone have a book they are particularly looking for it might be worthwhile contacting me before searching the Internet.

Elsbeth Hill

Membership

During 2022 we had 11 new members; they found us either online via our website or from our Help and Advice service. But, unfortunately we had more leaving – 31. Of these, 6 died, these have been mentioned in Newsletter reports; 4 left due to ill-health and the rest gave no reason. Sometimes not paying their annual subscription and not responding to reminders; I therefore have no idea as to why.

As at December 2022 we had a total of 269 members. This is broken down into 190 in the UK of which 8 receive a free copy; Europe had 43 of which 9 get a free issue; and the rest of the world is 36, 3 are free. These free issues are sent to other organisations and societies with which we often have a reciprocal arrangement.

Jackie Jones

Treasurer

The Society's 2022 accounts will be published in the June issue of the *Bulletin*.

Graham Stapleton

NOTES FOR DIAL RECORDERS

I am grateful for the number and quality of dial reports that members send in, whether updates to dials already recorded, or new sightings. If you have never sent me a report, please don't be reluctant to get started. The report form can be downloaded from the Society website. Go to Sundials / Fixed Dial Register / Dial Recording Forms, and click on 'MS Word' in the second paragraph. (Please do not take the 'pdf' option unless you have no choice.) Alternatively, just contact me and I will send you a form.

Most members now send emailed reports with digital photographs, but the traditional paper report and printed photographs are still used by some and are very welcome. If you are using email, attach the report as an MS Word document, and photographs as jpgs. In more detail:

Email

- Subject Line: Include the location briefly, and the SRN (Sundial Register Number) if you know it.
- Content: There is no need to include any message but of course put in anything you wish to say.

Report

- Format: Attach as an MS Word doc or docx, or use a compatible format such as odt. Please try to ensure that the report does not stretch to two pages. Please do NOT send your report as a pdf – pdfs are very difficult to reformat to the Register requirement.
- Name: Can be what you like, but it is helpful if you use the same as the email subject line.
- Addenda: Exceptionally you may wish to add a further sheet or sheets giving greater detail, using the same name as the main report plus 'b', 'c', etc. Addenda will usually be in doc or similar format, but may if desired be jpegs (maybe of printed text, or sketches) or Excel spreadsheets. Please only use if they add significantly to your report.

Photographs

- Coverage: As well as a general shot of the dial, please include close-ups of any interesting inscriptions or other details, a longer shot including the pedestal or wall, and a photograph showing the location of the dial.
- Format: Please send your photographs as attachments to the email. Do NOT embed them in the email – they are difficult to view and to extract for the Register structure.
- File type: Please send jpg files only, NOT jpeg, tiff, bmp, pdf, heic or any other graphic format.
- Resolution: As it comes out of the camera. I used to ask members to reduce the file size to around 0.5 MB but this no longer applies, and high resolution photographs are often very helpful.
- Name: There is no essential format for the name, but please make the names of all the photos with one report start the same. For example IMG_56789.jpg, IMG_1234.jpg etc is fine, as are Ruston.jpg, Ruston sig.jpg, Ruston pedestal.jpg. But please avoid choosing names that do not start with the same few letters, such as Gnomon.jpg, Plate.jpg, Pedestal.jpg.

John Foad
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Front cover: This double horizontal dial was unrecorded (now DH-86) but reported to the Help & Advice desk by the lady who inherited it, having found it in her late uncle's shed in Norfolk. The dial is unsigned and undated but is probably c.1660. John Davis has restored it by fitting a proper replacement to the tail of the gnomon, cleaning off some spots of white paint and generally tidying it up. Photo: John Davis.

Back cover: The painted glass sundial now in a north-facing window in St Mary's Church, Bucklebury (Berkshire), clearly not its original location. The shield of Thomas Stephens of Lypiatt Park, Glos. is in the centre, with inscriptions "S:S: me fecit" "1649" above, and "Th.S. & St" below. There is a realistic fly motif with the body and legs painted on the outside and the wings on the inside of the glass. SRN 1266. Photo: Sue Manston.



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