

TENTH ANNUAL NASS CONFERENCE IN TENAFLY, NEW JERSEY  
AUGUST 19 – 22, 2004

John F. Schilke, MD with photos by Mac Oglesby & Fred Sawyer

Hidden away from the ken of most NASS members is a small city in northern New Jersey, host to the 10th annual NASS Conference. As several members and spouses discovered, it is a reasonable ride on the bus to downtown New York City and its many sights, but Tenafly has its own attractive charm. A block away from the town green and Victorian-era railroad station is the Clinton Inn, which provided comfortable accommodations for us.



Larry McDavid

There were 39 people in attendance, many of whom arrived in time for the reception on Thursday evening. (Some who drove had gotten lost but did join the fold again!) Fred Sawyer again brought several lovely prizes, including replicas of 1776 Continental Currency notes, which served also as tickets for the drawings. Larry McDavid won a copy of Frank Cousins' *Sundials*. Paul Lapp received Winthrop Dolan's *A Choice of Sundials* and his wife Jan now owns a copy of A. M. Earle's *Sundials and Roses of Yesterday*. Mac Oglesby's prize was a lovely small silver pillar dial necklace. John Carmichael's CD on stained glass sundials went to Robert Adzema. Then Bob Terwilliger acquired a fine hand-painted reproduction of Holbein's portrait of Nicholas Kratzer.

After a continental breakfast, Friday's program began with a formal welcome and then Larry McDavid told of and demonstrated his PowerPoint presentation, "Sundials: Prehistory to the Digital Age." Directed at adult audiences with little or no previous contact with dials, the program, filled with diagrams and pictures and available to NASS members, is excellent for an introduction to dialing for such audiences. A companion presentation, "Beauty in Dialing," is also released for non-commercial educational use.

Then Bob Kellogg showed us how PowerPoint can be used to construct dials on paper, and walked us through construction of digital and graphic dials, including one for Freedom High School 9-11 Memorial Dial. The user can modify the programs, as needed.

In a blaze of entertaining wizardry Bob Terwilliger then described Bion's 17th and 18th century techniques and his laser trigon "sciatorium" (which



Bill Gottesman demonstrates his dial for Margaret Stanier

"will draw a sundial on a Buick"). Then he gave us a hilarious tour of the serendipitous design, construction, and ultimate deconstruction of his garden hot-tub dial, truly a bizarre but wonderful creation.

Many people have difficulty in perceiving the 3-dimensional dial given the 2-dimensional sketches and plans. Steve Luecking demonstrated programs for deriving hour lines and day lines from shadow planes and other CAD techniques. These allow construction of visual and actual renderings of dials onto a variety of surfaces, not just planes.



Mac Oglesby's vertical declining Foster-Lambert dial

Archaeological digs in Newfoundland were quite a change in pace for us. Sara Schechner has been consulting on one of these, at which sundials and fragments dating from the 17th century have presented all sorts of intriguing problems for the investigators at the sites. The tale involves many tangled threads, including Lord Calvert (who abandoned the Feryland site in favor of the Chesapeake Bay in the 1620s). We must await more news from the digs, but the introduction was delightful.

With only one website (Chris Bell's) in the US from which to work, John Carmichael researched and then began construction of dials from stained glass, including skylights. Although such dials (painted) were in Europe earlier, the first known dial was a 19th century work of Lee and Joann Abden, and the last known one, now needing restoration, dates from 1909. He described the techniques and told of how easily one can set up a shop. (He did a most engrossing hands-on demonstration on Sunday morning, as well.)

Following lunch and the Annual General Meeting, Bill Gottesman described his Focusing Sundial. Part of the ingenious design involves the convenient property that an angle whose apex lies on the circumference of a circle subtends an arc on that circumference twice that angle. Such geometric tricks permit constructing an aesthetically pleasing dial that works well (as he demonstrated outside) in spite of presuppositions to the contrary. It includes adjustments to bring it to his goal of a dial that will accurately show clock time.



Robert Adzema with a celebratory cake!

Billed as "light-hearted," the paper by BSS and NASS member Martin Jenkins (University of Exeter, England) left us all aghast. The gnomonic world does indeed owe him a great debt for outlining the horrendous difficulties anyone setting out to erect a dial must face! Only the most intrepid would dare to tackle such hilariously



presented problems of gravity, heat transfer, and time. We left wiser, more sober, and grinning!

Fred Sawyer returned to a more serious topic, constructing a new variety of polar dial. Thijs de Vries (not Fer) had devised a cycloid polar dial with a linear scale on the east-west line, but Fred's helical design actually has the time scale aligned along the meridian. This dial, using a helical gnomon, not only has self-orienting and mean time versions, but Fred demonstrated that it allows one to play with the very definition and presentation of the equation of time. Imagine a sundial with a completely new equation of time – which in some instances even improves on the one given us by Mother Nature.



Gina Ferrara on the West African xylophone

Paul Nibley then presented a discussion of his journey through the world of miniature cannons, searching for ways to substitute solar light for heat in the trigger mechanisms.

Fred Sawyer then announced the Sawyer Dialing Prize for accomplishments in or contributions to dialing or the dialing community. The award this year was a foregone conclusion at the inception of the prize some years ago, but has awaited the success of the Mars landings. The Prize is now awarded to Bill Nye (the Science Guy) and to Woody Sullivan for successful implementation of the Mars Dial and Earth Dial projects.

Unfortunately, neither recipient was able to attend the conference, but a descriptive paper was read explaining the project in Utah, Honduras, Ohio, Virginia, Chile, the South Pole, Canada, the UK, and Spain. (The reader is referred to [www.planetary.org/earthdial](http://www.planetary.org/earthdial).) Fred noted that at the winners' request the \$200 cash prize will be used to thank and compensate Hilda Taylor, the undergraduate student volunteer who did most of the computer work for the Earth Dial project. Bill and Woody will each receive a prize dial, a spectra dial by Jim Tallman, with the signature motto of the prize and with a declination line for the date of their choice.



Robert Adzema's tile dial at Thorpe Village



At the Hyatt Hotel in Jersey City

The Conference Dinner, held at the Inn, featured entertainment of an unusual sort. Local performers Gina Ferrara played a West African xylophone and then Steve Deats led an Africo-Caribbean drum ensemble (to which several NASS members belong!) in a charming concert.



Robert Adzema explains his sundial in a pond

Saturday was the day of the Sundial Tour. In a word, the weather was inclement, in spite of Robert Adzema's and Hal Brandmaier's best intentions and plans. We started out with a busload of the intrepid, going first to the bank of the Hudson River, where Bob had constructed a large equatorial - horizontal dial at the Hyatt Hotel in Jersey City (NJ). The view was impressive but somewhat obscured by clouds and fog. We also had a visit to Bob's fabricator to see a project almost completed. The technical details were fascinating for this dial, which will find a home on Long Island.

Onward. We stopped to see a bronze and concrete analemmatic sundial constructed by Sara Schechner and Hal Brandmaier at the Greater Newark (NJ) Conservancy's Urban Environmental and Ecological Center. Adjacent to a new teaching garden, it was an impressive sight.



Ominous thunderclaps heralded our arrival at the Lamont-Doherty Earth Observatory in Palisades, just over the state line in New York. This former estate is now part of Columbia University, and is a center for research into seismology, palaeomagnetism, tree-ring analysis, and marine and rock sciences and mechanics. We did see a charming equatorial dial (by Bob Adzema) set in a small pond. Bob's home, adjacent to the Observatory grounds, contains his studio, and his wife Jane's pottery workshop is nearby.

Robert's daughter ushered us to a wonderful barbecue that was set out for us on the lawn of his home. Just as we were about to begin lunch, the skies opened for a deluge! Though our clothes were damp, our spirits were not. The food was superb, and everyone seemed to enjoy the visit in spite of the wet.

The rain did not deter most of us from a short walk to see a lovely vertical declining dial at Thorpe Village, a senior residence, not far from the Lamont-Doherty Earth Observatory. The sun did peek through, but only after it had passed behind the plane of the dial. It is a large, colorful design, made of small tiles by Jane and Bob Adzema. Not far away is Rockland Cemetery, in which are the graves of Henry Gorringer, the man who brought the obelisk from Egypt to Central Park in New York City and of William Ewing, the first director of the Lamont Observatory. There is no ready access, so there was no opportunity to see these.

Our next stop was at the large horizontal sundial in Midland Park, NJ. The dial plate is the millstone from a local 18th century grist mill, and it boasts an attractive aluminum gnomon. The designer, Ted Vanderwalt, of the Dutch ethnic background of the region, won the competition for the dial to commemorate the bicentennial of the American Revolution.



Gnomon at Washington Memorial Cemetery

The last stop was in Paramus (NJ) to view a horizontal dial in the George Washington Memorial Park Cemetery. The gnomon of this dial is based on Washington's coat of arms. In the 1980's the gnomon was stolen, and we readily ascertained that the replacement was incorrectly placed on the dial.

The trip left us a bit soggy but delighted with its variety. Having dried ourselves out, we proceeded to make our own dinner arrangements in what turned out to be rather large groups.

Following breakfast on Sunday morning, Ken Clark discussed and illustrated building an Earth Dial with a 40 mm ping pong ball as the top of the gnomon. He spoke of the official website for earthdials:

[www.planetary.org/mars/earthdial/list.html](http://www.planetary.org/mars/earthdial/list.html).

Steve Luecking discussed Albrecht Durer, the Renaissance mathematician and artist and his relationship to Regiomontanus and his improvements upon Ptolemy. Steve adapted the straightedge and compass techniques and extended them to the construction of dials not demonstrated by Durer himself.



John Carmichael's hands-on demonstration

"How do you move an obelisk?" asked Hal Brandmaier. He proceeded to explain the history of the move of the "Cleopatra's needle" from Egypt to its present location in Central Park, New York City. He then went on to discuss recent attempts to move one from the Vatican to Ethiopia.

Bob Adzema presented the story of the Turtle Bay Sundial Bridge in northern California. This structure was designed and then thought of as a dial, and the attempts to create a working dial were most intriguing. It is still not complete, but the curious plan is quite beautiful.

For want of time, Hal Brandmaier did not describe his matrix methods of dial construction, nor did Fred Sawyer have the opportunity to tell the story of the 17th century figure Capt. Samuel Sturmy. With heartfelt thanks to Hal Brandmaier and Bob Adzema for the success of this Conference, it closed with the hope of another excellent event in Chicago next year.

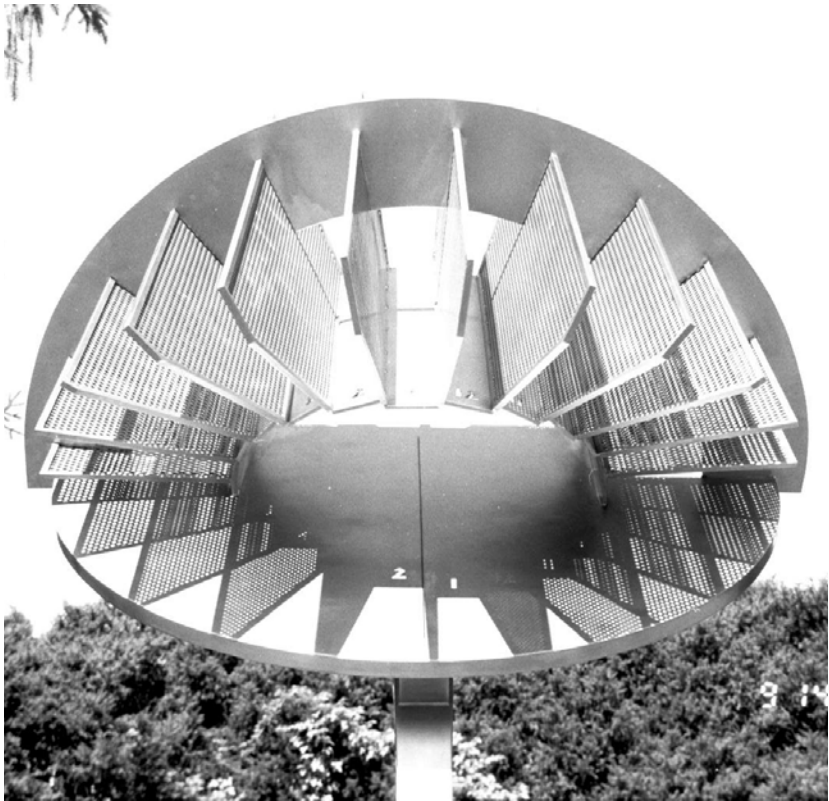


Robert explaining the workings of the foundry that does much of his work





The Washington Memorial Cemetery sundial



Post-conference photos of Robert's new dial completed.





A busy workshop!



Gathering at the Greater Newark Conservancy's Urban Environmental and Ecological Center and Analematic Sundial