

Notes on the Oughtred Society's 2007 Fall Meeting

Once again, Oughtred Society members and guests enjoyed a fascinating and enjoyable Fall Meeting. The 2007 Fall Meeting took place on Saturday, 10 November, at the Water's Edge Resort and Spa in Westbrook, Connecticut. From the brilliant autumn foliage to the launch of a submarine, there was simply not enough time in the weekend to see all of the wonderful things available in Westbrook and its surroundings.

Arriving by plane, train, and automobile, 23 people converged at Westbrook, on the shore of Long Island Sound. Those attending were Ed Chamberlain, Bob DeCesaris, Debbie Douglas, Michael Ellis, Zach Fluhr, Tom Frank, Louis Gotlib, David and Betty Hanssen, Chris Howe, Bob and Yvie Klancko, Leighton Lee, Kate Matthews, Kate's brother and her parents, Paul McConnell, Bob Otnes, Conrad Schure and Sharon, Joe Soper, and Tom Wyman.

The morning session began at 0830 as people gathered to set up their displays and socialize with their friends. There was something of interest for everyone, including Ed Chamberlain's collection of Troger circular rules, Michael Ellis' selection of rules and books from his late father's collection, Tom Frank's transparent slide rules for overhead projectors, Paul McConnell's instruments and books for celestial navigation, Conrad Schure's group of rare and interesting slide rules and planimeters, and Tom Wyman's rules and glass spheres for gaugers.

At mid-morning Leighton Lee, our host and benefactor, needed to leave the meeting for a while. He left to attend the launching of a submarine. Students at the Old Saybrook High School had constructed a fully operational copy of the "Turtle", David Bushnell's Revolutionary War-era submarine, and it was to be launched that morning. As a sponsor of the project, Leighton did not want to miss the event. Upon his return, Leighton described the successful launch, during which a trained diver propelled the craft around the harbor, then submerged, traveled a distance under water, and finally resurfaced. What a wonderful way to engage students in the study of American History.

Good conversation and interesting displays delayed the start of the auction, so bidding was suspended while the group moved to the dining room.

At the luncheon presentations Conrad introduced Leighton Lee, who served as master of ceremonies. Leighton began with an overview of the Bushnell House and the Museum of Early Engineering Technology, then introduced the other speakers.

Kate Matthews gave a presentation about the evolution of K&E cursors, describing the several known types, the reason for the changes from one to another, and the time the changes are thought to have occurred. A tangential discussion began when Cursor Rot was mentioned. Kate's evidence shows that K&E rules made from 1937 through 1947 are significantly more likely to fall prey to the destructive condition.

Bob DeCesaris reviewed the goals of the Oughtred Society and elicited comments and opinions about the best ways to:

- Increase membership
- Assist members or their survivors in dispersing collections
- Collect, preserve, and share information about slide rules
- Educate the public on numeracy via slide rules and related topics.

Bob Otnes gave an interesting talk about Mechanical Fourier Analyzers, describing three examples:

- Lord Kelvin's Tide Predictor
- The Henrici Harmonic Analyzer
- The Yule, Mader, Ott Analyzer.

Debbie Douglas gave an update on the growth of the MIT Museum. Highlights of her presentation include:

- The acquisition of additional space – a 50% increase
- The progress made in cataloging the K&E collection
- A description of the catalog database, which will offer online access to the collection.

After the meal and the presentations concluded, the group returned to the conference room to complete the auction. Michael Ellis made a memorable comment during the auction of a rare K&E 4053-3F slide rule. The auctioneer, Bob Otnes, described the rule as having the same number of graduations as a 20 inch rule. Michael said yes, but it “didn't have the psychological advantage of the 20 inch rule.” He said whenever there was a dispute about a value during an engineering meeting, he always settled the conflict by pointing to the results on his 20 inch slide rule.

Later, when someone commented to Joe Soper that he was not bidding on any items, Joe replied that he was not a collector and was “trying to fight it”.

After the auction there were a few last minute swaps, then folks packed up to leave. As in 2006, a wedding party was enthusiastically wishing us gone.

After leaving Water's Edge, many of the attendees spent a few hours as guests of Leighton Lee at the David Bushnell House. With his wife Marie's encouragement, Leighton acquired the Bushnell House to ensure it would be preserved for the future, and to house his remarkable collection of historical technological artifacts. Leighton's collection ranges from calculating instruments and devices, including an impressive assortment of specialized slide rules, to a major collection of artifacts related to the United States' space program. Leighton was an enthusiastic host, taking small groups through the various rooms of the house, explaining one fascinating device after another. He took special delight in operating a player piano, demonstrating a fuel cell, and spinning up a 19th century steering gyroscope from a Whitehead Torpedo.

Some of the artifacts that caught my eye include:

- Punch cards and plug-boards from card-based DP systems
- A vacuum-tube flip-flop
- A delay-line memory device
- A clock with a Nixie tube display
- A multi-slide Frequency Response slide rule with a set of 25 slides. Each slide had

scales on both sides, yielding 50 scales. Each scale was for a specific equation. The scales were arranged in a frame which gave the appearance of a spread-sheet.

- A Center of Gravity Computer for a British Avro Vulcan jet bomber.
- A "Satellite Orbit Computer" by North American Aviation, circa 1962. The wall-mounted device sported a transparent disk a cubit in diameter and lots of wavy lines.
- Numerous artifacts from the Mercury, Gemini, and Apollo programs, from samples of heat shields, spare examples of Lunar Command Module windows, a "tail light" from the Lunar Command Module, to the huge exhaust nozzle from a Saturn H-1 rocket engine.

After enjoying Leighton's hospitality, several people continued the evening over dinner. Bob DeCesaris, Debbie Douglas, Tom Frank, Leighton and Marie Lee, Paul McConnell, Bob Otnes, Conrad Schure and Sharon, and Tom Wyman went to Lenny and Joe's Fish Tale Restaurant for some excellent food and extraordinary conversation.

Thanks to Leighton Lee and Conrad Schure for their contributions toward making this year's Fall Meeting a memorable one.

Paul McConnell