

Journal of the Oughtred Society



A Tribute to Robert K. Otnes

Special comments



Photo courtesy of Jim Cerny

BOB OTNES, EDITOR OF THE JOURNAL OF THE OUGHTRED SOCIETY

Without a doubt, Bob has been a primary inspiration to me in my collecting of mechanical calculating devices and unusual and interesting calculating rules. Like others, I initially thought that I was alone in this hobby, which I pursued when I had time, by attending antique and collectibles shows, street fairs and by developing a small network of dealers who showed some interest in this area. One such dealer, Bob Soares, told me of a person who had interests similar to mine, and gave me Bob's name and phone number on one fateful day in 1992.

I called Bob and discovered that he lived relatively close to the Intel Campus in Santa Clara, which I visited on a monthly basis at that time. Bob promptly invited me to visit him and on my next trip, I thought I would drop in for perhaps a half hour on my drive back to Sacramento. Well, the half hour turned into many, many hours, and his mind-numbing collection of so many, many fascinating and rare devices and rules that I had never seen before impressed me to NO END!

Our interests mirrored one another very closely, both with rules and with the early mechanical devices. And thus

began Bob's role as my friend and mentor in these and related areas. From that first visit, I can still vividly recall seeing my first Arithmometer, the Baldwin calculator, a very early wooden-cased Comptometer, and dozens of rules with multiple hairlines and all-metal cursors and those made entirely of fine boxwood. Then, of course, there was also this poor, poor calculator that had been mercilessly relegated to his garage; he could not stand to even look at it, since it had been packed very carelessly in the same box with a very early Odhner Arithmometer, which had been damaged as a result. I can still recall Bob's wistful comment, "I can't even look at that thing; it would be the same as if they had packed an anvil with a Ming vase!"

Bob's service over the years to the Oughtred Society has been outstanding! He has been the editor of our fine Journal for eighteen years and this represents a labor of love that is simply without equal. His passion for knowledge about early calculation, early rules, mechanical devices, logarithmic tables, and other areas related to early calculating history makes him uniquely qualified as an editor, author, reviewer and composer of our Journal. I sincerely hope that The Oughtred Society remains at the head of the line for his next literary endeavors and I wish him the best on the completion of his many projects concerning early K&E and Dietzgen catalogs, early American small calculators and adders, and other interesting topics that we have shared throughout the years simply too numerous to list here.

On a personal level, Bob is always extremely generous with his knowledge and advice and I have found that he shares notes, references, and documentation without question, that often represent countless hours of his personal research, when he finds someone with the same interests. His knowledge goes far beyond early calculating devices and rules as we have spoken of planimeters, jetons, verge and fusee pocket watches, early clocks, sectors, Napier's *Mirifici Logarithmorum Canonis Descriptio* (of course, Bob owns and has shared with me his very early and rare copy from ca. 1620).....the list goes on and on and on.

He has introduced me to so many new items of keen interest to me that there is simply no way in which I can thank him for helping me to discover a collecting fever and thirst for knowledge that is more persistent and permanent and interesting in variety and scope than any other from my collecting and professional past!

Thank you, Bob, both for your service to the Society and for your invaluable friendship throughout the years.

Bob De Cesaris
Granite Bay, California

Dr. Robert Otnes, Pioneer

For two decades Bob Otnes has been among the pioneers who engaged in research and wide ranging discussion of slide rules and their importance to the history of mathematics and technology.

Along with a few others, he closed the gap that developed in 1975 when the slide rule came to its end and passed into oblivion. As a result of his efforts many members of his generation are once again interested in the slide rule. They are not only collecting slide rules, but they are engaged in preserving and passing on knowledge of the slide rule for future generations.

Bob Otnes has provided essential impetus for this.

He is one of the cofounders of the Oughtred Society. As the dedicated and skilled editor of the OS Journal he has made essential contributions to the success and continuation of the Society. The members of the Society include not only collectors and other individuals but also prestigious international institutions. This certainly speaks to the high level of the Journal.

The OS Journal carried Bob's distinctive mark. The Journal has been and remains authoritative as a result of the creative contributions the world's slide rule community. One should not forget (and I know where of I speak) when the first issues of the Journal appeared, much information about this interesting theme was not widely known. Bob and other authors have done much research and transmitted their findings to the readers of the Journal. As a result, today a vast amount of information about the slide rule is available – especially on the Internet. (For example, who would have thought that the German website rechenschieber.org would receive over 70,000 “hits” up to now.) Bob himself has written numerous articles. He has also presented several papers at international meetings.

Bob is among the great experts.

(Rod Lovett's literature search engine lists Bob's contributions to the Journal. His presentations are mentioned at the end of this tribute.)

His areas of special interest include the American slide rule manufacturers, but he is also interested in their links to the German makers (e.g. K&E to Dennert & Pape) around 1900. He has also written about the log log scales, their origin, and their arrangement according to various makers – a topic which needed much research. He wrote about various special slide rules, (e.g. Robertson's slide rule with runner, 1788), he also was actively interested in Tavernier-Gravet slide rules. His market reports and exciting accounts of international meetings (most of which he attended) kept readers current.

Bob's diverse and well-researched publications show his substantial role in this field.

The first report by him that I read was his article in *Historische Bürowelt* (1989) about K&E slide rules. For the article's time, it was already a comprehensive and seminal study of the most important American slide rule maker.

I met Bob at the International meeting in Utrecht in 1995. I encountered him again at the meetings in Cambridge (1996) and Stein/Nuernberg (1997) as well as other meetings. The incomparable atmosphere of the Faber-Castell Castle, the new impressions, new friendships, the magnificent exhibit of IJzebrand Schuitema, the lecture by Hans Dennert all impressed Bob very much – as he repeatedly assured me. In Stein he was able to acquire one of his favorite slide rules (a Yokota by D&P) from Hans Dennert himself. Three years later he made that same slide rule and other rare specimens available to me for the cover design of my book “Slide Rules, A Journey....”.

During three West Coast meetings in the USA I and other participants were invited to Bob's home, and we marveled at his impressive collection of slide rules and planimeters. His library of related books and periodicals was likewise very noteworthy. I was impressed by his vast knowledge of slide rules, and I was taken with his friendship, his calmness, and the quiet way that he discussed subjects with me. Contact with him by email is still stimulating and pleasant.

Those are my personal impressions of the editor of the OS Journal.

PS: I should point out that Bob Otnes has critics, and he knows that. He wrote once in the Journal “Mea culpa.” (*JOS* Vol.11 No. 2, 2002).

His dissatisfaction with his accomplishments was ongoing. There were private burdens. There were the self-imposed dual responsibilities as both editor and author. These dual responsibilities compromised the management of the Journal. As a result there were authors who were disappointed about communication with Bob and about deadlines. There were also impatient readers. However these things cannot diminish his great accomplishments. Now that he is handing over this task that he has discharged, it seems proper to offer him gratitude and recognition. He has truly made a contribution to the slide rule world that should be respected. Let us now look forward to his having more time for further discoveries regarding slide rules, their variations, and their history and to write articles about these discoveries.

Papers presented by Bob Otnes:

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|----------------------|---|
| 1995 IM Utrecht | Presenting the Oughtred Society |
| 2001 IM Munich | American Small Adders |
| 2003 IM Greifswald | Small adders |
| 2004 IM Bad Driburg | The Rosetta Stone Reference |
| 2004 IM Bad Driburg | My special item (Made by D&P or?) |
| 2007 IM Lelystad | Notes on Mechanical Fourier Analysers |
| 2008 IM Warwickshire | The curious slide rule of Benjamin Bevan |
| 2008 IM Warwickshire | The table of sines and cosines employed by Napier |
| 2008 IM Warwickshire | Pocket Cash Registers |

Stay healthy and good luck, Bob!

Dieter von Jezierski
Germany

The Robert K. Otnes Era

With Vol. 18, No.1, Bob closes out his 18 years as Editor of the *JOS*

Tom Wyman
for the Board of Directors

As Bob Otnes moves from being Editor of the Journal of the Oughtred Society to becoming Editor Emeritus, the Society's Board of Directors are keenly aware of the immense contribution he has made to the understanding and appreciation of his readers of the history of the slide rule. It has been a mission, yea dedication, of Bob's to ferret out this history and to share it with his many readers. We are all the richer for his curiosity and devotion to learning more about the history of slide rules and other calculating devices and for his willingness to share what he learned.

The first *JOS* (Vol. 0. No. 0) appeared in August 1991 and was identified as the "prototype issue." It was produced by Editors "Bob Otnes and Rodger Shepherd for the purpose of demonstrating what can be done." It was a 16-page undertaking, and the first two paragraphs of the first article outlined the vision of the founders:

This Journal is being brought forth as a result of the meeting of slide rule collectors held in Oakland on June 29, 1991. The article after this one describes the meeting. Suffice to say, it was the consensus of nine collectors present (now founding members) that a slide rule magazine and some slide rule publications are in order.

The magazine was seen as having two purposes: the first be that of making information available to the subscribers; the second purpose is to bring the hobby to a larger group of people: collectors, dealers, museum curators and historians working in the history of science. This latter function is most important if the purpose is to succeed; more readers mean more articles and, most important, a larger pool of material for trading and collecting.

The Editors went on to state, "The consensus of the June meeting was not to immediately form a club with membership. Thus, the first thing attempted is a magazine to which interested parties can subscribe. If the magazine succeeds and people feel comfortable about a membership type of arrangement, then the scope will be increased to that of a club or society."

Clearly, the vision of those nine founding members was well conceived and was implemented when Volume 1, Number 1, a 28-page issue of the *JOS* appeared in February 1992. The subscription rate at the time for the semiannual publication was \$10 per year in the U.S. and \$15 elsewhere. Over the next few years the page count of the Journal gradually increased from 28 to 60. Bob recognized that the original small *JOS* format measuring 7 inches x 8½ inches was limiting when it came to depicting slide rules and thus supplemented the publication with foldouts. The Journal

first appeared in its present larger format in 1996 and has grown to a standard 64 pages per issue.

It is a credit to Bob's leadership and to the quality of his product that today, after 18 years, the Society has over 400 members, and subscribers to the *JOS* include prestigious libraries in the U.S. and abroad. During his time as Editor, Bob has personally penned well over 100 articles and shorter items. Almost without exception, these have been substantive contributions reflecting Bob's broad and in-depth knowledge of slide rules and related topics. For example, beginning with the first issue and over his tenure he has written at least four articles on log-log scale slide rules.

"Log-Log Scales" Vol. 1, No. 1, February 1992

"Log-Log Scales Revisited" Vol. 4, No. 1, March 1995

"The Thomson Log-Log Slide Rule" Vol. 5, No. 1, March 1996

"Update on Log-Log Slide Rules Before 1910" Vol.17, No 1, 2008

Bob's serious slide rule research reflects someone who is devoted to developing new information and then sharing it with others. He was no "caretaker editor" content simply with getting each issue out, but rather he was intent advancing our understanding and appreciation of slide rule history. In that sense he challenged each of us to do more than we might otherwise have done in researching and preparing our own articles for publication.

After producing 36 issues of the Journal and as Bob turns over the editorship of the Society's flagship publication to a new team, we certainly want to see him continue as an active Board member and contributor to this publication. We look forward with eager anticipation to the papers and stand-alone publications that Bob will produce in his new position as Editor Emeritus.

Thank you, Bob, most sincerely for all you have done for The Oughtred Society. You leave a unique record from which all of us have benefited. Moreover, as a result of your endeavors The Oughtred Society enjoys world-wide preeminence among slide rule groups. In short, it has "nae peer."¹

We would be remiss if, as Bob moves into his role of Editor Emeritus, we did not recognize the many contributions Don Black has made over the years in assuring that both Bob and the Oughtred Society "look good." He's been an indispensable member of our team in organizing and proofing each issue of the Journal, preparing it for printing, getting it to the printers and making certain that it gets mailed. In addition, he manages our growing inventory of publications and assures that orders for those publications are filled promptly. In short, Don is our invaluable facilitator.

¹ This expression derives from the unverified story that Bob Otnes tells from time to time of an ancestor of John Napier who performed an outstanding deed of valor during a now-forgotten Scottish war. The King, in recognizing his act of heroism, spoke in his heavy brogue of this man who had "nae peer" thus memorializing the Napier name.

Tabula Gratulatoria



Bob presenting a lecture on Fourier Analysis and Historical Fourier Equipment

Names of all congratulants

| | | |
|------------------------------|--------------------------|----------------------|
| Amin Aur | Edwin C Jones Jr | John Mosand |
| Jim Appold | Jon Jones | Thomas Muenstermann |
| Bruce E. Babcock | Heinz Joss | Jürgen Nestler |
| Colin Barnes | Lloyd Kannenberg | J.G. Owen |
| Brian Borchers | Joe Keller | Joseph C. Paradi |
| Paul Baygell | Billy Kerr | Bryan Purcell |
| Clay Castleberry | Gerd Keuffel | David Rance |
| Trevor Catlow | John Kimec | Jim Rogers |
| Ed Chamberlain | Don Kline | Dick Rose |
| David Coffeen, Ph.D. | Mike Konshak | Werner H. Rudowski |
| Barbara Cooper | Bob Koppany | Thomas A. Russo |
| W. Richard Davis | Klaus G. Kraemer | Robert Sauer |
| Philippe Deau | Klaus Kühn | Tom Savage |
| Bob De Cesaris | Cyron T. Lawson | IJzebrand Schuitema |
| Prof. Dr. Joachim Fischer | Wayne Lehnert | Conrad Schure |
| Gary S Flom | Timo Leipälä | Walter Shawlee 2 |
| Zack Fluhr | William Lisowski | Rodger Shepherd |
| Jay Francis | Reinhild and Brian Lloyd | Derek Slater |
| David Gamble | Rod Lovett | Sherrick Slattery |
| Ken Goetz | Carl D. Lowenstein | Winton Teter |
| Herb Gold | Dick Lyon | Charles Tomlinson |
| Alex E. S. Green | Dennis Maack, Ph.D. | Dick Tomkins |
| Dr. Brent Gutierrez, PE, CEM | PA (Tom) Martin | Otto van Poelje |
| Charlie Hall | Peter Maslowski | Pierre Vern |
| Mort Hans | Albert D. Mason | Dieter von Jezierski |
| Leroy Hausler | Kate Matthews | Warren Weisberg |
| Charles A. Hilton | Jerry McCarthy | Carl R. Wern |
| Peter Holland | Paul McConnell | Michael J. Williams |
| Pete Hopp | Clark McCoy | Tom Wyman |
| Joseph Hower, PE, DEE | David D. McFarland | Nathan Zeldes |
| Ted Hume | Gary Miller | Detlef Zerfowski |
| Curtis Jones | Marion Moon | |

Comments

Some seventeen years ago I started casually collecting slide rules for a few pence at flea markets etc. Although my collection at the time consisted solely of English made rules it soon became very apparent that there was more to this eccentric hobby than I had ever imagined. Not only that but I also thought I must be the only person to have such an interest but, as it took hold, I started making enquiries of companies who had made slide rules in the past in the hope of finding unsold stock. I had a fruitful result when I wrote to the Unique Slide Rule Company and the helpful company secretary suggested I contact Bob Otnes of the Oughtred Society. This I promptly did and became a member opening up a new world. When I received my first Membership Directory it was clear that I was not alone and that the Society had a worldwide membership which led to my contacting and meeting many members in the UK. From this came the UK Slide Rule Circle and, at about the same time, the Dutch Circle (Kring) and the German RST, all thanks to the encouragement of Bob Otnes. Those of us in these groups consider Bob as our "Founding Father" without whose work in the establishment of the OS and his Editorship of the Journal this would not have come about. As a result of his time in office Bob has spawned a truly international organisation with regular domestic and international meetings to which he has attended on many occasions. His successors have a hard example to follow but will no doubt rise to the challenge. Thank you, Bob.

Colin Barnes
Cambridgeshire, United Kingdom
Editor – *Skid Stick* the UKSRC's newsletter
Co-editor – *Slide Rule Gazette*

Bob Otnes is responsible for my membership in the Oughtred Society. He and Tom Wyman welcomed me to their homes and convinced me of the Society's worth. Without Bob's encouragement and editorial scrutiny, I would not have offered the may little articles I've shared. I thank him once again.

Clay Castleberry
Oroville, California

I have had a great time with Bob at OS meetings, communicating over articles for the Journal of the Oughtred Society, and in the hunt for slide rules in foreign lands. Bob has always been the person to give a new perspective to a very old subject. I have great appreciation for all the hard work he

has given to the OS and its Journal. He will get a well deserved rest, but I am sure that he will still stay doggedly involved.

Ed Chamberlain
Etna, New Hampshire

My husband, Justin F. Cooper, was a member of the society. He passed away June 10th. He thoroughly enjoyed the information he received via the Journal and it added a great deal to the information about all the slide rules, great and small, in his collection. Dr. Otnes is to be congratulated for his expertise, knowledge and enthusiasm. Justin would have sent him the same wishes.

Barbara Cooper
Austin, Texas

I owe much of my enthusiasm for collecting and learning about slide rules and mechanical calculators to Bob. He is always open to my phone calls and I am amazed by how much he knows about these mathematical tools. Not only is he an authority in this area of knowledge, but has been an outstanding editor. The JOS is one of the premier publications in the world of slide rules and mechanical calculators due to his tireless efforts. Bob, I wish you all the best in your retirement from this responsibility you performed so well.

Gary S. Flom
Stockbridge, Georgia

Everyone who has consulted Bob over the years about the fine details concerning the history of instruments and publications related to calculating has without hesitation received the benefit of his considerable learning, but what's so very special is that that wisdom is spoken with a soft voice and delivered with the friendliest of smiles.

Best regards,

Raymond Giordano
Southampton, Massachusetts

I have published technical articles in many international

journals. Few have rivaled the Journal of the Oughtred Society in the efficiency, quality and friendliness of its publishing service. We have much to thank Bob Otnes for the valuable contributions of the JOS to the preservation of the history of an instrument that has played a major role in the development of science and technology.

Alex E. S. Green
Gainesville, Florida

I've always appreciated Bob's comments about the occasional article I've written and his suggestions and encouragement for follow-on articles that have appeared in the journal.

Mort Hans
Great Neck, New York

Congratulations, Bob! You created and built a highly acclaimed technical journal which is enjoyed and prized by Oughtred Society members in 22 countries. I am honored to be part of its editorial team.

Ted Hume
San Angelo, Texas

Can I imagine the Journal of the Oughtred Society without you as the editor? Yes, I think I can. Maybe that's just because you've done such a good job that your work isn't obvious. I have only the foggiest notion of the hours you must have spent rounding up papers and getting them just right. So I can imagine the Journal's going on and I can hope it follows the great example you've set.

Can I imagine the Oughtred Society without you? That's much harder! I may not have seen you labor on the journal, but I've seen you tell about slide rules and calculators. When you helped organize a collection of slide rules at the Museum of American History you gave a wonderful talk on the history of calculation. You were good enough to accept my request to repeat it for the APL Bay Area Users' Group. I was almost, but maybe not quite, surprised to see you and other Oughtred stalwarts at the Maker Faire showing people how to make simple slide rules from folded paper. Your hand was surely evident in an exhibit at the Stanford library. My favorite memories of you and the Society are the annual endings of the Oughtred Society West Coast Meetings with dessert at your house where you've explained the history and operations of calculators and planimeters. I hope you continue teaching us.

Curtis Jones,
San Jose, California

Bob Otnes, Renaissance Man

Bob Otnes is the consummate Renaissance Man. He is a man well educated in numerous fields, always eager to learn, and yet, careful always to verify the accuracy of new information. We are all well aware of and grateful for his stellar performance as Editor of the Oughtred Journal over the past eighteen years, but some members of the Society may not have taken the opportunity, as I have, to converse with Bob at length by telephone.

In my case, this is more of a necessity since I live on the third coast, far from the cool Pacific shores. Sometimes our conversations may touch on slide rule collecting, but they are certainly not limited only to slide rule discussions. Once we discussed Gypsies of whom Bob, of course, has formally studied. Of course I must rely upon personal experience and vignettes related to me by others. Other times we have discussed early members of the famous Ink Spots musical group, some of whom I have personally met, such as Huey Long, who until the age of 105 years resided in Houston, and who in the 1940's joined the group just as the Ink Spots were beginning to enjoy their initial success in show business.

The point is, Bob's interests are not limited solely to slide rules, and he is always eager to discuss many varied topics. I consider Bob a friend — not just a fellow member of the Oughtred Society, especially since I certainly have no expertise as to slide rules and calculators or math of any kind. My wife will tell you, I'm just a guy who will collect almost anything that was never made to be collected.

I have repeatedly commended Bob for editing a superior magazine for the Oughtred Society while so many commercial magazines have huge editorial staffs, yet produce issues of marginal quality at best. Some may recall that I voiced a commendation of Bob at the annual Oughtred Society meeting luncheon a few years back, and fellow Texan, Rick Blankenhorn (now transplanted to California) wholeheartedly agreed, saying that he had read the publications of several collector groups and consistently found the Oughtred Journal to be of much higher quality than the other publications. Of course, Bob is very modest about his many accomplishments.

My best wishes are extended to Bob as he takes a well-deserved rest from some of his editorial duties. He is most deserving of all the accolades he received from Oughtred Society members. Many thanks, Bob for the hours of enlightenment and enjoyment you have afforded to the other members and me!

Billy Kerr
Baytown, Texas

Thank you for your many years of dedication, hard work, and service to the Oughtred Society. It's amazing how you were able to accomplish so much and produce such a wonderful piece of work that is appreciated and enjoyed by so many people throughout the world. I can barely imagine the number of hours you have devoted, as well as the energy spent in creating the Journal and I am indebted to you for that service. I will continue to look forward to reading your articles and visiting with you during the yearly West Coast meetings. Thank you again for all that you have done. Best wishes!

Ron Knapp
Rancho Murieta, California

I feel the best way to say thank you for everything you've done is to let you know that I will not let you down as the new editor for what I will always consider to be your journal. I think of myself as a poor substitute for the journal, and not a replacement. To repeat it with all the focus that engineers have, I will do the best I can and will not let you down! I will do the best I can to make you proud of me. I think that is how you'd want me to say "thank you" for everything you've done for me and for the Oughtred Society; to care for your journal.

From one engineer to another, in appreciation.

Bob Koppany
Hawthorne, California

I'm probably not the sort of member Robert Otnes had in mind when he co- founded the Oughtred Society and began publication of its Journal. I'm not an active collector, although I have a small collection, more in the way of memorabilia. But I grew up with slide rules and read the Journal avidly, appreciating the reminder that technology wasn't invented in the Silicon Valley in the 1970's. Future historians of science and technology will owe a tremendous debt to Dr. Otnes for his efforts to acquire and preserve the knowledge of the final generations for whom the slide rule was an integral part of their education and career.

William Lisowski
Easton, Pennsylvania

Bob Otnes has been the main face of the Oughtred Society for me, representing both their excellent journal and their friendly supportive environment. He helped me write the one article I did for the journal, even helping me debug it on his computer at his home. He's always open with advice,

new treasures, interesting insights and theories, fresh brewed coffee, and time to talk it all over. And I love that he has never been too strict about slide rules; he has helped expand my horizons by sharing his knowledge of counters, planimeters, abaci, jetons, and what-not. As signal processing engineers, Bob and I have both done lots of analog and digital computing, and we always have a lot to talk about. I look forward to watching the new editors of the journal live up to the great reputation that Bob has established for it.

Dick Lyon
Los Altos, California

I got to know Bob in the 80s, when I mailed him some data about my Thomas de Colmar calculator and he mailed me in response a neat little gift - a Stephenson calculator. This was the beginning of an active exchange of collectors information and also the starting point of many personal meetings in Germany but also in England and Holland.

In the following 20 years Bob came to Germany quite a few times and we met at the typical collectors meetings, Museum visits, flea markets and also privately.

I enjoyed talking to Bob about our collectors stuff, because he knew more about calculators and the background than any other person I ever met. And he certainly inspired me to look at new aspects and new contents of our collectors activities.

Therefore if Bob retires from his official duties of the Oughtred society, he'll be glad because now he can spend more time collecting stuff and he'll have more time to travel.

I would be very pleased to meet Bob again in Munich for a very nice dinner and lots of good Bavarian beer.

Peter Maslowski
Munchen, Duetschland

The fella I'd cornered by phone lost patience with me. "Look!" He snapped, "I can't help you. You need to talk to this guy, Bob Otnes. He knows everything about K+E".

I was on a quest to locate repair parts for some old slide rules I'd been given. But as many a seeker has learned, my pursuit had already become more about the chase than the quarry. If this were a story about looking for the Grail, I'd cast myself as the kitchen hand who learned to hope to become a knight, and I'd cast Bob Otnes as Merlin: kindly and wise and slightly mysterious.

Memory says that I called Bob sometime early in the Millennium year. I know that we talked and that with his encouragement I became a member of the Oughtred Society. When my first Journal arrived, electrons began pinging around, opening pathways and launching little endorphan rockets inside my head. Though I didn't yet realize it, I'd

already become a slide rule junkie. My visit to the West Coast meeting that June only reinforced my interest.

By then, Bob and the other members of the Society had already amassed an extraordinary wealth of material about the history and use of the slide rule in the form of the Journal. As a Jersey girl and the daughter of a NJ-trained engineer, my own peculiar passion was proving to be K+E. Bob Otnes and I hit it off pretty well.

After the meeting, I came home and started scraping pennies out of piggy banks. I managed to buy a complete set of back issues of the Journal. Within its pages, I discovered the equivalent of a medieval tapestry: a richly detailed pageant of lives, ideas and connections. Though many others contributed and helped to visualize its construct, Bob's Journal was clearly an extension of his soul. Through the words and the images, if you look, you can see the glimmer of the man.

In the years I've known him, Bob's light has continued to glow steadily. His Journals, amazing though they be, represent only a small whit of what he knows. When you are with him, he radiates knowledge; his most casual comments enlighten and reveal. He is a scholar through and through, and although his work sets for us a standard of intellectual curiosity and academic rigor, he remains at heart a fellow human being of the nicest possible sort.

For years, Bob and his talented cohort Don Black have consistently delighted and inspired us with issue after issue of the Journal. Their efforts were always heroic and were often unsung. Now I wait with eager joy to see Bob's next endeavor.

Kate Matthews
Sonora, California

A 1992 review in "The Annals of the History of Computing" introduced me to the "Journal of the Oughtred Society". I subscribed to the Journal out of curiosity. That was a fortunate decision for me.

We can all be grateful to Bob for helping to establish a publication for slide rule enthusiasts and scholars that is held in high regard throughout the world. Bob's commitment to the Journal has ensured the slide rule a secure record for future scholars. For this he certainly deserves recognition.

On a more personal level, Bob has contributed greatly to my knowledge and understanding of the slide rule. When describing a slide rule for an Oughtred Society auction, Bob's meticulous and loving orations are truly without equal. Even more important to me, though, was the significant influence Bob had on my progress as a novice within slide rule society.

During a visit to California a few years after joining the Oughtred Society, I had the pleasure of a day with Roger Shepherd. Roger and I became acquainted through mem-

bership in the Oughtred Society, and he was my first real contact with the slide rule world.

Bob joined us for dinner that day, then invited us to his home. There I was delighted to see Bob's wonderful collection of calculating instruments. It was at Bob's that evening that I saw a Curta Calculator for the first time.

It was also through the Oughtred Society, and the Journal, that I met one of my best friends: Bruce Babcock. As time passed, I had the opportunity to attend a few of the East Coast meetings. There I added more friends to the growing list.

Sharing our common interest with other collectors and scholars at the Oughtred Society meetings enabled me to gain a better perspective on what makes a good collection and what makes a good collector.

Ultimately, I was privileged to have an article accepted for publication in the Journal. Time will tell if the article has any value, but one thing is certain: it is

a sign of growth that I trace directly to Bob, his generous hospitality, his enlightening conversations, and his diligent work as editor of the respected Journal of the Oughtred Society.

Thank you, Bob!

Paul McConnell
Millville, New Jersey

From the first time I met Bob I realized that I had just met a collector's collector. His passion for calculating machines and mathematics literature is amazing. This passion has made the Journal and the Society what it is. He leaves very big shoes to fill.

Clark McCoy
Roseville, California

Tribute to Robert K. Otnes

Bob Otnes has much of which to be proud, and the rest of us have much for which to be thankful – for his founding and editing the Journal of the Oughtred Society and for his other contributions over some two decades. Thank you, Bob.

I recall having trepidation over my first submission to the Journal, which addressed what I considered a shortcoming in an article of his on Lightning Adders.¹ Not all editors take kindly to any sort of criticism of their own works, but Bob reacted graciously. Thank you, Bob.

On several other occasions he set me straight about errors or omissions in my submissions. But he did it gently and constructively, to the improvement of those articles. Thank you, Bob.

He has a fine sense of humor. One thing I collect is

Lawrence slide rules, in particular the specialty rules from 10-C Engraver's and Photographer's and 10-D Lumber Calculator, on up the alphabet through the letters N and O, Printer's Proportion Rule, and Flashrule. In the prototype issue of *JOS* (volume 0, number 0) Bob had placed an advertisement: "WANTED: Nystrom slide rule in fine condition. Have 500 Lawrence Engineering rules to trade for it".² I have recalled that ad many times and laughed heartily. Thank you, Bob.

In addition to being an editor he is also an author, and his works over the years include numerous articles in *JOS*. Many of these deal with slide rules, of course, while others deal with such related topics as catalogs, mathematical tables, and mechanical calculators. From one of them I learned that in addition to the circular duodecimal slide rules from Gilson, like one in my collection, there are also linear duodecimal slide rules by Stanley of London.³ One of his articles succinctly indicates how the 24 inch non-sliding Gunter rule relates to later sliding rules also called Gunter rules, and to Gunter's earlier cross-staff.⁴ I recall my surprise on learning from an Otnes article that Briggs calculated logarithms using square roots.⁵ Two articles I found particularly informative deal with planimeters and harmonic analyzers.^{6,7} Thank you, Bob, and keep up the good work.

Knowing Bob has been a privilege and a pleasure which I look forward to continuing for many more years. Thank you, Bob.

References:

1. Otnes, Bob 2002. "The Lightning Calculator: Bonham, Hook and Pangborn." *JOS* 11, no 1, pp 53-58.
2. Otnes, Bob 1991. "Wanted." *JOS* 0, no 0, p 16.
3. Otnes, Bob 2001. "The Sheppard Duodecimal Slide Rule." *JOS* 10, no 2, p 57.
4. Otnes, Bob 1999. "The Gunter Rule." *JOS* 8, no 2, p 6.
5. Otnes, Bob 1995. "How Briggs Computed Logarithms." *JOS* 4, no 2, p 26.
6. Otnes, Bob 2002. "American Planimeters." *JOS* 11, no 2, pp 59-64 and rear cover.
7. Otnes, Robert K. 2008. "Notes on Mechanical Fourier Analyzers." *JOS* 17, no 1, pp 34-41.

David D. McFarland
Rancho Palo Verdes, California

I have been reading the Oughtred Society Journal forever I think and while many people obviously contributed to its success over the years, Bob Otnes is also as obviously a prime mover, and for this I deeply thank him.

I don't collect fancy slide rules, don't go to auctions, and generally perform the important "lurker" function in the community — but the Journal's content provides me a rare kind of pleasure I couldn't conceivably get anywhere else,

about perhaps the last mysterious thing without electronics. ... I *still* get a thrill when I touch the 6" K&E given me so many years ago, when the things were still important tools — and I'm afraid I never learned much about it — or math! ... But the meticulous plastic scales! ... The hermetic meaning wound-up in them!

... So, thank you....

J.G. Owen
Huntington Station, New York

Bob - I have read a number of things said of you and I personally have read both within and external to the Society a number of things - many of which have inspired and helped me in my writings. Thanks more than can be measured.

Bryan Purcell
Dearborn Heights, Michigan

Dear Bob:

The Oughtred Society Journal will not be the same without your personal touch that has your trademark on every page. In my opinion the Journal has been the premier publication for those of us that are interested in information and history about math devices, their history and the interesting lives of their inventors. You had a very entertaining way of putting all that together. Our museum is very proud to have a copy of most of the Journals published.

I still recall our first meeting when you and I took the Groesbeck Adding Machine apart so that you could photograph it. You reminded me of the story of the inquisitive little boy with his fathers pocket watch. You just had to see what made that little guy tick. And I think that is one of the reasons for the success of the Journal.

And speaking of premier publications, I hope you will now find the time to complete your book on the subject of adding and calculating machines. I can't think of any book that I have so looked forward to reading and having several copies of for our museum library.

And so, Bob, I will close by simply saying that although we are oceans apart, I have always considered myself fortunate in having you as a friend and look forward to your next trip to Delaware.

With my sincerest best wishes,

Thomas A. Russo
Wilmington, Delaware

I don't have a lot to say, but I think Bob's major contributions to the society are the enormous amount of time he

gave to the Journal and the extremely high quality of a publication that his dedication produced. I am sure that there are very few other special interest publications that can demonstrate similar quality and breadth of subject that the Journal of the Oughtred Society published under his leadership.

Robert Sauer
Hickory, North Carolina

Dear Bob,

Both our articles in "Historische Bürowelt" in 1990 have had far reaching consequences for the international family of slide rule collectors. Many thanks for all the nice personal contacts with you and for all your energy invested in the O.S., which success is to a great extent the result of your activities.

IJzebrand Schuitema
The Netherlands

TO MY FRIEND BOB OTNES

When, in the latter part of 1991, I first encountered Bob Otnes and learned about the interest in forming a Slide Rule collectors' organization, I was like a wandering Nomad who had finally found a small "tribe" to connect with. Up to that point in time, I had been collecting Slide Rules in a rather casual fashion for almost fifteen years, and was convinced that I must be the only collector of this quite esoteric device. That was the start of a mutual professional relationship which I am honored to say has also grown to be a very special friendship. During these last eighteen years, Bob's unique in-depth and encyclopedic knowledge of the origins, evolution, and development of not only the Slide Rule, but also Calculators, Planimeters, and other related instruments, has been an ongoing inspiration, not only to me, but to his many other friends and to the many admiring readers of his "Baby" (The Journal of the Oughtred Society).

As Bob moves on from his eighteen year tenure as Senior Editor (and the only editor, except for the invaluable help from Don Black) to Editor Emeritus of the JOS, we all are anxiously anticipating that his replacements (the new Editing Team) will carry forth the professional integrity which has established the JOS as the premium journal in its field, ranking it up there with other highly respected publications in the scientific community.

Bob, my good friend, the entire Oughtred Society owes you a significant debt of gratitude for what you have managed to accomplish. We will miss your steady hand at the helm of the Journal, however you have certainly earned this respite, and the time to work on your many other projects,

and hopefully, continued contributions to the JOS, as well.

Conrad Schure
Freehold, New Jersey

In Tribute to Bob Otnes

Bob and I co-founded the Oughtred Society 18 years ago. The initial division of responsibility was very natural: I managed the West Coast meetings, and Bob nurtured the Journal. After 10 years I turned the meetings over to the "next generation". Bob chose to continue as Editor and develop the Journal into what it is today. My initial 10 year collaboration with Bob and my subsequent involvement in the Society have provided me with a unique opportunity to observe and assess Bob's huge impact on the Society and the Journal.

First, I must acknowledge the hundreds of hours that Bob devoted to the Journal and the Society. I doubt that any other member has donated so much time to the Society.

Second, I feel that Bob must be recognized for the very high standards that he established for the visual impact of the Journal and for the high academic standards that he urged on contributors. Society members around the world eagerly read each issue of the Journal.

Third, Bob was a wonderful ambassador for the Society. His non-confrontational interpersonal style and his immense knowledge of slide rules and their history made him hundreds of friends world wide and he used these friendships to strengthen the Society.

Finally, I should make people aware that Bob accomplished all this in spite of times when his health and the health of close family members were weighing heavily on him.

The Society has indeed been fortunate to have a member like Bob who has been so selfless and effective. May his name as Editor Emeritus grace the masthead of the Journal for many years.

Rodger Shepherd
Oakland, California

I have loved the Oughtred Society Journal, and I always look forward to it. Thanks for all your hard work.

Winton Teter
San Antonio, Texas

I often look at a private knowledge center in my office for slide rules and calculating instruments, a bookshelf con-

taining reference books, monographs, conference proceedings and periodicals. But the prominent centerpiece is formed by four dark-green cloth-bound volumes of all Journals of the Oughtred Society since 1992.

Whenever I find or choose a new area of interest, from articles read, slide rules acquired or for papers to be written, I browse through the “collective wisdom” of my fellow slide rule collectors.

Thus I have leafed through all of the Journals many a time, and each time discovering different, surprising and exciting items of knowledge. Only then, “standing on the shoulders” of all fellow authors, one can enjoy and advance this our collective wisdom.

Dear Bob, you have started the Journal of the Oughtred Society – together with Rodger Shepherd - and you have built the Journal during almost 20 years of hard and sometimes thankless work into the leading and professional publication that you are now handing over to the new editorial team. I am proud to be part of that team and I am deeply grateful to you for leaving us this invaluable legacy. The Journal is our Society’s renowned flagship which you have navigated so successfully – with the long-lasting assistance by Don Black - through oceans of knowledge and wit, from Spring to Fall issues, on and on.

May the Journal continue to prosper, and long may you remain witness thereof, hopefully assisting us by your erudition and expertise, as adviser as well as contributing author!

Otto van Poelje
The Netherlands

The long term quality and the high standard of content of the Oughtred Society Journal is in itself the greatest tribute to its Editor – I have read and re-read every copy and it is a brilliant achievement.

Michael J. Williams
Bournemouth, United Kingdom

Dear Bob,

I sincerely hope that you won’t be missed during your retirement for the reason you’ll have more time to write those articles that you should have written years ago!

Your fertile science fiction-fed imagination was clearly reflected in Volume 0 Number 0 of this publication that ap-

peared in October 1991. Even then you were looking for space fillers, and when you couldn’t find them, evidence suggests that you wrote them yourself. For example, on page 16 there was a “Letters” column one of which read: “Dear Editor: I had a chance to look at an advanced copy of your rag, and it has some problems. For instance, who the heck is this egomaniac by the name of Otnes who seems to have written too much of the darn thing? A. Pismo Clam.”

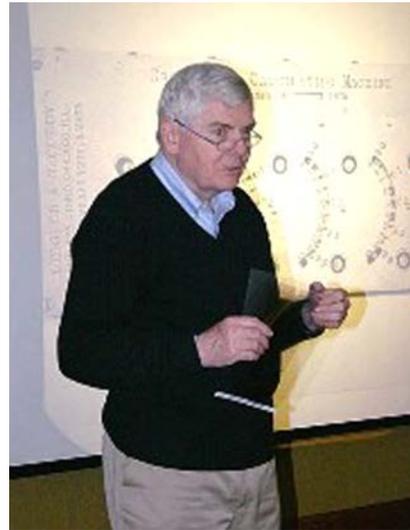
The editorial response read: “Dear Gentle Reader: The “rag” you are holding in your hand is a prototype of what is hoped to be a work participated in by all and any who are interested in the art. Please to take your pen or pencil out of the shirt pocket plastic nerd holder, and rip off an article on your choice of fascinating topic. We are waiting.”

Is there a message here for the new editorial staff?

Also on the same page was the “Advertisements” section one item of which read, “WANTED: Nystrom slide rule in fine condition. Have 500 Lawrence Engineering rules to trade for it. Bob Otnes”. Since Conrad Schure got the Nystrom what are you going to do with your Lawrence Engineering rules?

Sincere thanks, Bob, for your years of devotion in making the JOS the flagship publication of the Society. We owe you our gratitude.

Tom Wyman
Palo Alto, California



Bob Otnes presenting a lecture at a meeting



Bob Otnes photographing slide rules for the Journal