The Vermont Geological Society Fall Field Trip & Annual Meeting
A CENTRAL VERMONT QUARRY TOUR
Rock of Ages Quarry, Antique Verde Quarry
Dinner & Meeting at the Inn at Long Trail
SATURDAY OCTOBER 28, 1995, 10:00 AM
See Inside For Details.
IMPORTANT ABSENTEE BALLOT INFORMATION INSIDE!

Inside This Issue
President’s Letter
Vice President’s Farewell Address
State Geologist’s report
Research Grants/Scholarships Available
Government
Water Update
Vermont Geological Society Business and News
Seminars, Meetings, and Field Trips/ Call for Papers - VGS Winter Symposium
Question of the Quarter
Fall Field Trip & Annual Meeting Information/Legislator Addresses and Numbers
Absentee Ballot
October 14, 1995

DEAR MEMBERS,

This is my last President's Letter to you (I heard that collective sigh of relief). It has truly been a privilege to serve as the VGS President this past geologic blink in time. When I was first approached and asked to be more actively involved with the VGS, I thought I had too many things going on in my life, I really didn't think that I could spare the time or energy required to do a good job for the Society. Looking back now, I realize how much I would have missed by succumbing to that fallacy.

Yes, there definitely is a drain on one's free time occasionally, but not all too frequently. In fact, this is an organization that is fueled by member enthusiasm. My most difficult challenge has been to provide just enough of a nudge to the directional guidance system from time to time to keep things on track and running smoothly (I hope).

As you already know, Stephen Howe has moved on to opportunities in Illinois. The void created has been ably filled by Allen Carpenter. Allen is a CPA with an interest in rocks, how much luckier could we get in finding someone to fill the role as Treasurer?

As you will read on the following page, Ronald Parker, after contributing many years in a number of capacities for the VGS, is now working on his Ph.D in Texas. We will miss Ron and his seemingly endless flow of innovative ideas and thought provoking questions! Traditionally, in this organization, the Vice President has stepped into the President's role to provide a sense of continuity from one year to the next. Although this is not possible this year, thanks to Eric Lapp's efforts, Laurence Becker, our new State Geologist, has agreed to pull double duty by stepping forward and serving as our 1995-1996 President.

Nancy Keller is also stepping down after giving us two excellent years as Secretary. Thank you Nancy for so ably keeping track of the little details that might otherwise have become nothing more than fault gouge.

As my own term grinds to a halt, I will be stepping aside to provide background support as a Director on the Board. Also, I will continue to work with Stephen Wright in putting forth the GMG and other VGS publications (look for Vermont Geology #8 this coming year).

Now I am calling on you members to step forward and take a turn at the helm. We are in need of two nominees to fill the roles of Vice President and Secretary for the upcoming year. The pay is lousy, but the rewards and the feelings of self-satisfaction are high. The efforts required are not that great, and you'll have the satisfaction of knowing that you've helped pilot our organization towards the quarter century mark!

I hope to see you at our annual Fall meeting and field trip on Saturday the 28th. The quarry tour should be informative, and the hike up Deer's Leap should be magnificent. Of course the Extra Stout being served up with dinner at the Inn at Long Trail should put everyone in a great frame of mind for Society business! If you can't make the meeting, our Absentee Ballot for the 1995 election is enclosed as the inside back cover of this issue. Please take a few minutes now to complete it. Write-in candidates are most welcome, as we will need to fill all vacancies. Please put it in the mail today, so that your vote will count!

Thanks for a great year.
Sincerely,
Kent S. Kocithch
Dear Fellow VGS Members,

It was with a touch of sadness and glee that I moved myself and my family to College Station, Texas in the early part of August. My move, to pursue a Ph.D. in environmental geochemistry at Texas A & M University, was a long time in the dream stage. After living in Vermont for thirteen wonderful years, I had (almost?) outgrown my flatlander origins. Now that I (along with Kris, Andy and Willie - and, yes, Garp, too) are settling into our new house and yard, Texas isn’t looking at all bad (except for the fire ants). Since I have come to terms with sacrificing hockey and outcropping bedrock to the world of heat and flat land (ers), I have decided to say hello, and good-bye.

It has been customary that the Vice-President of the Vermont Geological Society assume the role of President after the passage of a year’s time. I regret that I was not able to fulfill the duty of President. I am, however, relieved that it is no longer possible for me to be measured against the performance of current President Kent Koptuich, who in my estimation has been among the more active and effective Presidents.

I am leaving Vermont at a time that, I think, foresees much growth in the geosciences - albeit growth that is less focussed in the traditional areas. As with almost every sector of society, downsizing and reduction in opportunities have required that every geologist expand into other areas of expertise - computers, industrial hygiene, air quality, materials science, statistics, to name a few. Despite this entrenchment, growth is still apparent in Vermont’s geologic scene. This sense of growth is a consequence of revitalization of geology education, both by the addition of new faculty to academic departments and the expansion of programs to increase support for K-12 earth science teachers. The progress on the new state bedrock map, in spite of setbacks at the U.S.G.S., continues to set the standard by which future Geographic Information System based mapping projects will be judged. The recently enhanced regulations for drinking water source protection, and the continued need for point and non-point source pollution management are also positive, long-term factors. All of these developments ensure that geologists, and geology related disciplines will be employed and employable well into the twenty-first century.

My association with the Vermont Geological Society has been long and cherished. I was always happy that a good geology field trip was never more than a few months away. I expect that the VGS will see a renewed growth as well. Although I am now immersed in geology, I miss (and will continue to miss), those most Vermont of things: the rocks. So, take care of them for me and make sure that there is a faculty position open around there somewhere in a few years so that I can play hockey again.

Sincerely,
Ron Parker
rlp4045@geopsun.tamu.edu
“Eschew surplusage.”

I am leaving Vermont at a time that... foresees much growth in the geosciences - albeit growth that is less focussed in the traditional areas.”
Research Grants/Scholarships Available

- **Geochron Laboratories** annually awards a series of research grants to graduate students requiring interest or new applications of isotopic analyses. The awards consist of analytical services performed free of charge to the winner of each category. Recent awards have been offered in K-Ar dating, C-14 dating, stable isotope ratio analyses (SIRA), SIRA in dietary studies, and SIRA of fluid inclusions in minerals. Awards are offered to promote the application of isotopic analytical techniques in solving original and significant problems. Application deadline is May 1, 1996. Early application is suggested. For Research Award Program Guidelines and official rules, call 617-876-3691, fax 617-661-0148, or write 711 Concord Ave., Cambridge, MA 02138.

- **Jonathan O. Davis Scholarship: Quaternary Sciences Center of the Desert Research Institute** - This scholarship was established by the family and friends of Jonathan O. Davis to be given annually to support the field research of a graduate student working on the Quaternary geology of the Great Basin or surrounding areas. Administered by the Quaternary Sciences Center of the Desert Research Institute, the scholarship is a grant of $1,000 or more and is open to graduate students enrolled in a M.S. or Ph.D program at any US university. Research must have a substantial geographic component, or demonstrate a strong reliance on geologic techniques. Applications must be received by Feb 1, 1996. Include a current resume or vita, a two (2) page (single spaced) description of the thesis/dissertation research which also clearly documents the geologic orientation and research significance, and a letter of recommendation from the thesis/dissertation supervisor that emphasizes the student’s research ability and potential as a Quaternary scientist. Address applications to: Executive Director, Quaternary Sciences Center, Desert Research Institute, PO Box 60220, Reno, NV 89506.

- **Cole Memorial Research Award and Fahnstock Memorial Research Award** applications are available from: Research Grants Administrator, Geological Society of America, PO Box 9140, Boulder CO, 80303. Applications must be postmarked by Feb 15, 1996. The Gladys W. Cole Memorial Research Award provides support for investigations of the geomorphology of semi-arid and arid terrains in the US and Mexico. Application is open to GSA Members and Fellows. Last year’s award of $9,000 went to Robert S. Anderson, University of California, for his project entitled “Validation of New Cosmogenic Radiocarbon Dating Strategy on the Wind River Terraces, Wyoming.” The Robert K. Fahnstock Memorial Research Award is given annually to the student who submits the most outstanding research proposal in the field of sediment transport or related aspects of fluvial geomorphology. The recipient is Stephen Drew Thorne, Florida State University, for “Transverse Bars: their origin and influence on flow structure, sediment transport and channel evolution in a boulder-bed stream.”

- **Vermont Geological Society Student Research Grants** are designed to aid our future geologists investigate Vermont’s geo-history. Awards are presented semi-annually to the student(s) with the best research topic(s) and associated method(s) in Vermont Geology. Students receiving assistance through the program will present their research results at the VGS Spring Meetings. Fall application deadline is November 20, 1995. For applications contact VGS Student Research Grants, Dept of Geology, UVM, Burlington, VT 05405-0122.
**Government**

The USGS is now offering a digital database of agricultural practices and herbicide, fertilizer, and land use by county over the internet. The database includes the report and 18 GIS graphics layers. To access on the internet: <URL:http://fh20.usgs.gov/pubs/bat/bat000.htm>. Paper ($36) and microfiche ($4) copies of "Spatial data in geographic information system format on agricultural chemical use, land use, and cropping practices in the United State," USGS Water-Resources Investigations Report 94-4176 can be obtained by writing the USGS Earth Science Information Center, Open File Reports Section, Box 25286, MS 517, Denver Federal Center, Denver, Colorado 80225. Specify report number and full title.

**Water Update**

By Kent S. Koptisch

Many of Vermont’s small, privately-owned water companies are struggling financially to meet stricter water quality analytical requirements. Currently there are 49 private water supply companies in the State serving approximately 6,000 residents. Heretofore, customers of private companies paid rates generally equivalent to those of customers on public systems in the state, however, some are now facing potential rate increases ranging from 37 to 463% if pending rate increase requests are approved by the Public Service Board. A number of the state’s private water suppliers currently are not meeting water quality standards; their customers have been advised to boil their water. Several system owners have suggested turning their private systems into collectively-owned fire districts to qualify for upgrade grants and public loans.

The USGS has released the results of a national survey encompassing water quality of more than 12,000 groundwater and 22,000 surface-water samples. The results indicate that the drinking water standard for nitrate was exceeded in 21% of shallow wells in agricultural areas. Concentrations were highest in areas of the Northeast, Midwest, and the West coast where row crops are prevalent and soils are well-drained. Nitrate concentrations were generally lower in the Southeastern region of the country. Surface-water impacts were noted as generally elevated downstream of agricultural areas, but rarely in excess of drinking water standards. Copies of "Nutrients in Ground Water and Surface Water of the United States-An Analysis of Data Through 1992" are available from the USGS for $12.25. Call 303-202-4210.

Seven out of eleven leading US water faucet manufacturers have agreed to a national lead reduction plan aimed at meeting California’s standard of 0.5 mg/l/day. The seven manufacturers will voluntarily step-down lead-containing components in their faucets nationwide. A goal of 65% lead-free composition has been set for 1996; it is anticipated that a 95% lead-free goal can be achieved by 1999.

In a recent two-month study of tap water quality in 29 Midwestern cities, herbicide concentrations at levels in excess of federal health standards in 6 cities. 21 out of 29 cities had 4 or more herbicides present, while 28 out of 29 cities had some type of agricultural herbicide present in drinking water tested. The study, conducted by the Environmental Working Group listed atrazine and cyanazine as the most frequently encountered compounds. The cities with the most contaminated water were: Danville, Decatur, Granite City, and Springfield, IL; Columbus and Bowling Green, OH; Indianapolis and Fort Wayne, IN; Kansas City, KS; Jefferson City, MO; Omaha, NE; and New Orleans, LA.

The Safe Drinking Water Act (SDWA) and the Clean Water Act (CWA) are still struggling through committees in the Congress and the Senate on their long and windy aequedus to reauthorization. At stake is the quality of public water supplies throughout the country. The hands being played on Capitol Hill are drawing on our taxpayer dollars; ultimately we pay either through poorer water quality and its associated health risks, or through a continued federal deficit that will bankrupt our children’s future. No winners in either hand!

(Continued on Page 10)
THE GREEN MOUNTAIN GEOLOGIST Volume 22, Number 3, Fall 1995

SEMINARS, MEETINGS, and FIELD TRIPS

- Oct 27, 1995: Soil & Water Conservation Society Fall Chapter Meeting - New Hampshire/Vermont Chapter. A 1-day short course on wetlands delineation at the US Army Corps of Engineers Cold Regions Research & Engineering Laboratory (CRREL) in Hanover, New Hampshire. 9:00 am - 3:30 pm. Contact: Nick Comerci @ (802) 748-3885.

- Oct 28, 1995: Vermont Geological Society - Annual Fall Meeting and Field Trip - A Central Vermont Quarry Tour and dinner at the Inn at Long Trail with "Extra Stout." Meet at Rock of Ages Quarry, Barre, Vermont, 10:00 a.m.

At only $15.00 per year the VGS offers one of the best bargains in Professional Association dues around. Do you know a "rock head" who'd like to enrich his/her depositional environment? Let's get their mudcast today!


CALL FOR PAPERS

APPLIED ENVIRONMENTAL GEOLOGY IN NORTHERN NEW ENGLAND:
A Synopsis of Currently Accepted, or Evolving Investigative & Remedial Practices at Hazardous Waste Sites in Vermont, New Hampshire, Maine, and Upstate New York

To be held as the VGS Winter Symposium. Date and Location to be determined at the annual Fall VGS Executive Committee Meeting.

The VGS is seeking papers that address all aspects of currently accepted practices or evolving innovative practices in hazardous waste site investigation and/or remediation of soils and groundwater impacted by petroleum and chlorinated hydrocarbons. Instructions:

- Submit four (4) copies of a one (1) -page abstract of 250 words or less in standard Geological Society of America abstract format (floppy disk in any Microsoft Word Processing format or ASCII text-only welcomed also) by November 30, 1995 to:
  Kent Koptiuch
  Vermont Geological Society
  c/o KSKGeoS
  164 Osgood Hill, Essex, VT 05452
  Fax 802-878-1620, e-mail: KSKGeoS@aol.com

The VGS anticipates a 1/2 -day program consisting of up to eight (8) presenters. Twenty (20) minutes will be allowed for each presentation followed by ten (10) -minutes of questions and answers. Please indicate your requirements for audio-visual equipment on the abstract.

Question of the Quarter

"Should Vermont establish a Professional Geologist licensing program similar to that of the existing Professional Engineer licensing program?"

Background

We’ve asked this question before with only limited response. Many other states have professional certification programs to establish a baseline of quality, professionalism, and ethics in the industry.

Got an idea for a VGS field trip or seminar? Let us know how you want your Society to work.

- The responses to last issue’s question: “Should the taxpayer-funded, Vermont Department of Environmental Conservation, R.A. LaRosa State Environmental Laboratory continue to operate in direct competition with private industry laboratories?”
- Six (6) respondents were opposed to the State Lab’s competition with the private sector labs.
- One (1) respondent was in favor of the practice.

How about it folks; we’ve got more than 125 members out there - let me know what you think?
Come to the
Vermont Geological Society's
Fall Field Trip and Annual Meeting!

The Trip:
Rock of Ages Quarry, Barre
Rochester Verde Antique Quarry
Hike up Deer's Leap
Saturday, October 28, 1995, 10:00 AM
Meet at the Rock of Ages Information Center

The Annual Meeting and Banquet:
the Inn at Long Trail, Sherburne, 5:00 PM
Irish Music at 5:00 PM by Extra Stout. If you plan on attending, please contact one of the following people as soon as possible:
Helen Mango - 802-468-5611, ext 478; mangoh@sparrow.csc.vsc.edu
Kent Koptiuch - 802-878-1620; kskgeos@aol.com
Stephen Wright - 802-656-4479; swright@moose.uvm.edu
Elections and other VGS business will be conducted regardless of noise level!

When it's Important to you, make your opinion count! Contact Your Representatives today:

Federal:
The Honorable James M. Jeffords
513 Hart Senate Office Building
Washington, D.C. 20510-4503
(202) 224-5141
(800) 835-5500

State:
The Honorable Patrick J. Leahy
433 Russell Senate Office Building
Washington, D.C. 20510-4502
(202) 224-4242
(800) 642-3193

Congress:
The Honorable Bernard Sanders
213 Cannon House Office Building
Washington, D.C. 20515-4501
(202) 225-4115
(800) 339-9834

Governor Howard Dean, M.D.
Office of the Governor
Montpelier, VT. 05609
(802) 828-3333
(800) 649-6825

Vermont Geological Society
Student Research Grants
are designed to aid our future geologists investigate Vermont's geo-history.
Help the VGS to promote a deeper insight into Vermont Geology.
Students receiving assistance through the program will present their research results at the VGS Spring Meetings. Your generosity will help cover a lot of terrain!

To receive your copy of Vermont Geology, Volume 7, or to contribute to the VGS Student Research Grant Program, clip this form and send it, along with your check or money order made payable to VGS, to:
Allen Carpenter, Treasurer, Vermont Geological Society
Department of Geology, University of Vermont
Burlington, Vermont 05405-0122

- YES, PLEASE SEND ME COPIES OF VERMONT GEOLOGY VOLUME 7 - I'VE ENCLODED MY CHECK OR MONEY ORDER OF $8.00 PER COPY ($10.00 PER COPY FOR NON-MEMBERS)
TOTAL PRICE: $__________

I'VE ENCLODED MY TAX-DEDUCTIBLE CONTRIBUTION TO BE DEDICATED TO THE VGS STUDENT RESEARCH GRANT PROGRAM
TOTAL GIFT: $__________

TOTAL ENCLODED: $__________
ABSENTEE BALLOT: 1995
Vermont Geological Society
Vote for one in each category

Officers:
President           Laurence Becker
                     ________________
Vice President
                     ________________
Secretary
                     ________________
Treasurer           Allen Carpenter
                     ________________
Board of Directors  Eric Lapp
(2 years)
                     ________________

Bylaws:
Shall Article VII, Section B. Vice-president be amended to include the following:

- The Vice-president shall also coordinate with, and serve with the Chairperson of the Advancement of Science Committee in reviewing all applications for Student Research Grants. If need be, the Vice-president shall have the authority to appoint appropriate additional persons with relevant knowledge of a particular proposed research topic to assist in completing the review of grant applications. Should the Vice-president and the Chairperson of the Advancement of Science Committee not agree on a Student Research Grant recipient, the President shall have the authority to make the final decision.

If you will not be attending the VGS Annual Meeting in Sherburne, please complete this ballot and return it in an envelope marked with the word "BALLOT" in the lower left hand corner, and your name and address in the upper left hand corner to:

Vermont Geological Society
Department of Geology
University of Vermont
Burlington, Vermont 05405-0122

To be counted, this ballot must be received by October 27, 1995.