

# THE GREEN MOUNTAIN GEOLOGIST



QUARTERLY NEWSLETTER OF THE VERMONT GEOLOGICAL SOCIETY

VGS Website: <http://www.uvm.org/vtgeologicalsociety/>

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## **PRESIDENT'S LETTER**

It was a busy Fall between the unplanned Tropical Storm Irene and the long-planned NEIGC meeting hosted by Middlebury College. During the NEIGC it was exciting to see the large turnout for the three days of trips. Please see the State Geologist's Report, below, for more details.

The holidays are behind us and actual winter weather has finally arrived. Now it's time to catch up with your colleagues and friends in the geological community by attending the Winter meeting of the VGS on February 18 here at Norwich University. We'll have talks on a variety of topics, with at least a couple related to Tropical Storm Irene and its aftermath. I hope that many of you will be able to come and listen to the talks and participate in the discussions.

Respectfully submitted,  
George Springston, President

## **TREASURER'S REPORT**

The Society remains in good financial health, with a current balance of \$3,552.68. Since the last Treasurer's Report in September 2011, we have received income of \$60 in dues and \$10 in contributions to the Research Grant Program. We have also spent \$2,075 as follows:

- a Research Award of \$675 to R. Nicholas Daly
- a Research Award of \$700 to Diego Russell
- a Research Award of \$700 to Emily McDonald

As most of you recognize, dues reminders were not sent out in a timely way, for which I apologize. Forms will be sent shortly for 2012 dues and contributions to the Research Grant Program.

Please join me in welcoming a new member, Matthew Stein, Senior Project Geologist at Sanborn, Head and Associates, Inc.

Respectfully submitted,  
David S. Westerman, Treasurer

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## ADVANCEMENT OF SCIENCE COMMITTEE REPORT

The Advancement of Science Committee received three applications to the Vermont Geological Society Research Grant Program by the October 1, 2011 deadline. Because of delays caused by Hurricane Irene, these grants were not reviewed and awarded until mid-December 2011. The names of the recipients, their affiliations, the titles of their proposals, and the awards are shown below:

-Nicholas Daly, Middlebury College undergraduate student, "Relationship of Bedrock Geochemistry and Groundwater Chemistry in the Fractured Bedrock Aquifer System of the Plainfield Quadrangle, Vermont", \$675.00.

-Emily McDonald, Middlebury College undergraduate student, "An Analysis of Radionuclides in the Clarendon Springs Formation: Implications for Water Quality in Highgate, Vermont", \$700.00.

-Diego Russell, Middlebury College undergraduate student, "Understanding the Relationship between Arsenic Content and Metamorphic Grade in Cambro-Ordovician Sedimentary and Metasedimentary Rocks in Northern Vermont and Southern Quebec", \$700.00.

We look forward to presentations by all of these students at the April VGS Student Meeting

The next Vermont Geological Society Research Grant deadline is April 1, 2012. All applications must be postmarked by this deadline. Applications for Vermont Geological Society Grants should be sent to Jon Kim, Vermont Geological Survey, 103 South Main Street, Logue Cottage, Waterbury, VT 05671-2420.

Respectfully Submitted,  
Jon Kim

## VERMONT STATE GEOLOGIST'S REPORT

### NEW BEDROCK GEOLOGIC MAP GOING TO PUBLICATION!

The long awaited publication of the new Vermont bedrock map is in its final stages. We are planning for a public presentation of the map at the Vermont State House in late March or early April, if all goes well. The Vermont Secretary of the Agency of Natural Resources, Deborah Markowitz, has reached out to the Governor's Office and they are very enthusiastic so we are working to involve the Governor in the presentation. We plan to notify the Society through an e-mail distribution when the time and place are set. The map is to have a 2011 publication date which is 150 years (sesquicentennial) since the first 1861 geologic map of Vermont and 50 years since the 1961 centennial geologic map of Vermont.

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There are many accolades to go around when the map is released but let me at least list title information:

**Bedrock Geologic Map of Vermont, 2011**

By

Nicholas Ratcliffe (USGS), Rolfe Stanley (UVM, posthumous), Marjorie H. Gale (VGS),  
Peter Thompson (UNH) and Gregory Walsh (USGS)

With contributions by

Norman Hatch (USGS), Douglas Rankin (USGS), Barry Doolan (UVM), Jonathan Kim  
(VGS), Charlotte Mehrrens (UVM), John Aleinikoff (USGS) and J. Gregory McHone

Cartography by

Linda Masonic (USGS)

Technical Editor

Jim Estabrook (USGS)

Older GMGs on Line

Vermont Geology, Volumes 1-8 and most of the GMGs are now on-line at:

<http://www.anr.state.vt.us/dec/geo/VGSociety.htm>

Energy – Geothermal Grant First Year

We delivered on the first year of our three year geothermal grant through the U.S. Dept of Energy/Arizona Geological Survey. With the help of PJ Telep in ANR IT, a successful Web Map Service is set-up for the water well data. Database work by Siobhan Perricone (ANR-IT) plus the post-Irene push by Marjorie Gale and Wendy Kelly of the VGS accomplished the work.

We delivered the following via upload to the National Geothermal Data System (NGDS):

10/18/2011- 199 georectified images (87 georeferenced Environmental Geology maps, 58 VGS Bulletin maps and 54 original surficial geologic maps)

11/1/2011 – revised deeper well data metadata from older natural gas exploration; 7 records

11/7/2011 – metadata for digital GIS data uploaded to the NGDS site; 58 records

11/14/2011 – delivered metadata records and web links for miscellaneous mineral resource files

11/16/2011 – delivered metadata for 2700 bibliographic references

New England Intercollegiate Geologic Conference (NEIGC)

The Vermont Geological Survey and colleagues from Middlebury College, Norwich University, University of New Hampshire, and University of Vermont were very active in the recent New England Intercollegiate Geological Conference (NEIGC) hosted by Middlebury College from September 30 – October 2, 2011. The trip citations are listed below.

Dunn, R., Springston, G., and Wright, S., 2011, Quaternary Geology of the Central Winooski Watershed with Focus on Glacial Lake History of Tributary Valleys (Thatcher Brook and Mad River): in West, D., editor, New England Intercollegiate Geological Conference: Guidebook for Field Trips in Vermont and adjacent New York, 103rd Annual Meeting, Middlebury, Vermont, Trip C3, p. C3-1 – C3-32.

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Kim, J., Klepeis, K., Ryan, P., Gale, M., McNiff, C., Ruksznis, A., and Webber, J., 2011, A Bedrock Transect Across the Champlain and Hinesburg Thrusts in West-Central Vermont: Integration of Tectonics with Hydrogeology and Groundwater Chemistry: in West, D., editor, New England Intercollegiate Geological Conference: Guidebook for Field Trips in Vermont and adjacent New York, 103rd Annual Meeting, Middlebury, Vermont, Trip B1, p. B1-1 – B1-35.

Springston, G., Dunn, R., Underwood, K., Schiff, R., Sheldon, A., McKinley, D., Donahue, N., and Pytlik, S., 2011, Fluvial Geomorphology of the Middlebury River Watershed: Geologic Controls, Assessment of Stream Channel Stability, and River Corridor Restoration: in West, D., editor, New England Intercollegiate Geological Conference: Guidebook for Field Trips in Vermont and adjacent New York, 103rd Annual Meeting, Middlebury, Vermont, Trip B5, p. B5-1 – B5-23.

Thompson, P., Gale, M., Laird, J., and Honsberger, I., 2011, Transect across the North-Central Green Mountains from the Carbonate Shelf to Ultramafic Slivers in the Taconian Subduction Zone: in West, D., editor, New England Intercollegiate Geological Conference: Guidebook for Field Trips in Vermont and adjacent New York, 103rd Annual Meeting, Middlebury, Vermont, Trip A1, p. A1-1 – A1-27.

West, D., Kim, J., Klepeis, K., and Webber, J., 2011, Classic Bedrock Teaching Localities in the Champlain Valley between Middlebury and Burlington, Vermont: in West, D., editor, New England Intercollegiate Geological Conference: Guidebook for Field Trips in Vermont and adjacent New York, 103rd Annual Meeting, Middlebury, Vermont, Trip C5, p. C5-1 – C5-23.

## ANNOUNCEMENTS

### ELECTION OF OFFICERS

The Society is looking for nominations for Officers. A slate of candidates will be proposed at the next Executive Committee meeting (Winter Meeting) and ballots will be included in the next GMG. If you are interested in serving please contact George Springston.

### WINTER MEETING

The VGS Winter Meeting will be held on February 18<sup>th</sup> at Norwich University, in Northfield. The meeting will be approximately one half day in length, starting at 9:00 am. We will meet in Cabot 85, which is in the Math/Science complex near Kreitzberg Library.

Abstracts should be prepared using the style employed for abstracts submitted to Geological Society of America meetings (maximum of 2,000 characters without spaces). **Abstract deadline for the Winter Meeting is Friday, February 10<sup>th</sup>.** Email your abstract to George Springston at ([gsprings@norwich.edu](mailto:gsprings@norwich.edu)).

Oral presentations will be limited to 15 minutes with 5 additional minutes for questions. A computer projection system is available for PowerPoint presentations.

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## **CALL FOR STUDENT ABSTRACTS**

### **SPRING MEETING OF THE VERMONT GEOLOGICAL SOCIETY**

The Vermont Geological Society will hold its Spring 2012 meeting on Saturday, April 28th, 2012, at Middlebury College. The meeting is dedicated to students conducting research in the geological sciences. Undergraduate and graduate students are encouraged to submit abstracts outlining the results of their research. Abstracts covering all aspects of the geological sciences are welcome and will be published in the Spring issue of the *Green Mountain Geologist*. The Charles Doll Award for the outstanding undergraduate paper will be presented. Cash awards for the top three papers will also be presented based on quality of the research, the abstract, and the presentation of the paper.

Abstracts should be prepared using the style employed for abstracts submitted to Geological Society of America meetings (maximum of 2,000 characters without spaces). We strongly encourage speakers to send their abstracts electronically as a Word file with a .doc extension attached to an e-mail message to Dave West ([dwest@middlebury.edu](mailto:dwest@middlebury.edu)).

Oral presentations will be limited to 12 minutes with 3 additional minutes for questions. A computer projection system is available for PowerPoint presentations.

**Deadline for abstracts: Friday, April 2, 2012 at 5:00 pm**

## **VERMONT GEOLOGICAL SOCIETY CALENDAR**

- Feb 18: VGS Winter Meeting, Norwich University (see details above)
  - April 28: VGS Spring Meeting, Middlebury College
  - March 18-20: Northeast GSA, Hartford, CT
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The **Vermont Geological Society** is a non-profit educational corporation.  
The **Executive Committee** of the Society is comprised of the Officers, the Board of Directors,  
and the Chairs of the Permanent Committees.

#### **Officers**

President	George Springston	(802) 485-2734	gsprings@norwich.edu
Vice President	Keith Klepeis	(802) 656-0247	kklepeis@uvm.edu
Secretary	David West	(802) 443-3476	dwest@middlebury.edu
Treasurer	David Westerman	(802) 485-2337	westy@norwich.edu

#### **Board of Directors**

Richard Dunn	(802) 485-2304	rdunn@norwich.edu
Les Kanat	(802) 635-1327	les.kanat@jsc.edu
Jon Kim	(802) 241-3469	jon.kim@state.vt.us

#### **Chairs of the Permanent Committees**

Advancement of Science	Jon Kim
Geological Education	Christine Massey
Membership	David Westerman
Public Issues	Laurence Becker
Publishing	Richard Dunn

**Vermont Geological Society**  
**Department of Geology and Environmental Science**  
**Norwich University**  
**Northfield, VT 05663**

***ADDRESS CHANGE?***

*Please send it to the Treasurer at the above address*

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