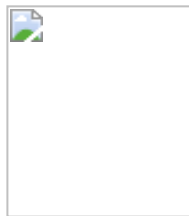


The Granite State Geologist



Newsletter of the New Hampshire Geological Society

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Marland P. Billings and Katharine Fowler-Billings Honored by the New Hampshire Geological Society

At the Society's annual meeting on October 8, 1992, President Dick Lane conferred the title of Honorary Fellow on both Marland P. Billings and Katharine Fowler-Billings in recognition of their contributions to the advancement of geology in New Hampshire. The Billings were unfortunately unable to attend the meeting themselves, and requested that Mark Van Baalen of Harvard University accept the award on their behalf. Following the presentation and acceptance of the awards, Tim Allen gave a talk entitled "Migmatites in the White Mountains: Implications for Mountain-Building Processes," presenting results of recent research in the Mount Washington-Gorham area first studied by the Billings.

Marland Billings joined the faculty at Harvard University in 1930 and became Professor Emeritus in 1972. In 1987 he was awarded the Penrose Medal by the Geological Society of America in recognition of his eminent research in pure geology and life-time contribution in the field of geology.

Selected works of Marland P. Billings:

- 1937. Regional Metamorphism of the Littleton-Moosilauke area, New Hampshire. Geological Society of America Bulletin, v. 48, pp. 463-566.
- 1941. Structure and metamorphism in the Mount Washington area, New Hampshire. Geological Society of America Bulletin, v. 52, pp. 863-936.
- 1955. Geologic Map of New Hampshire (1:250000), Washington, D.C.: United States Geologic Survey.
- 1956. The Geology of New Hampshire, Part II - Bedrock Geology, Concord, New Hampshire: State of New Hampshire Planning and Development Commission, 200 pages.
- 1972. Structural Geology (third edition), New York: Prentice Hall, 606 pages.
- 1975. Geology of the Gorham Quadrangle, New Hampshire and Maine, Bulletin 6. Concord, New Hampshire: State of New Hampshire Department of Resources and Economic Development, 120 pages (with Katharine Fowler-Billings).

Katharine Fowler-Billings is a well known geologist and author in her own right. She has published a number of geological reports, including: Geology of the Cardigan Quadrangle, Geology of the Isles of Shoals, Geology of the Monadnock Quadrangle, Igneous and Metasedimentary Dikes of the Mount Washington Area, and Sillimanite Deposits of the Monadnock Quadrangle. She also co-authored several additional reports, including Geology of the Gorham Quadrangle, New Hampshire and Maine.

In a letter to the Billings informing them of the Society's award, Dick Lane wrote:

Your work has inspired many to pursue a career in the geological sciences, has made geology come alive for the lay person, and has challenged fellow geologists to continue the formidable task of mapping and interpreting New Hampshire's complex geology. I could not begin to list all of yours

and Katharine's accomplishments. Instead, I would like to share with you how your work has influenced my own career. My first exposure to New Hampshire geology was the quadrangle reports. These sparked a thirst for more information. Katharine's *Geology of the Isles of Shoals* inspired me as a geology major at the University of New Hampshire to study the structural geology of Odiornes Point as my senior thesis. As an engineering geologist for the NH Department of Transportation, a major portion of my work involves structural geology and how it effects the stability of the rock in roadway cuts. Throughout my career, your textbook on Structural Geology, publication on the Bedrock Geology of NH, and the Geologic Map of New Hampshire have been my most utilized references.

In conferring the award, Dick Lane said "There is no couple that has contributed more toward the advancement of geology in New Hampshire and toward the realization of the goals aspired to by this Society."

The Billings Accept Awards of Honorary Fellows of the NHGS

Mark Van Baalen gave the following remarks to the Society on October 8, 1992, in accepting on behalf of Marland Billings and Katharine Fowler-Billings the award of Honorary Fellows of the Society:

A few days ago I had a long and enjoyable phone conversation with Marland and Kay Billings in preparation for this event, and both of them expressed the wish that I convey their sincere appreciation to the Society for this award. Had they been here tonight, they would have wanted to recognize the contributions of several key individuals who advanced the cause of geology and publication of geologic maps in the state of New Hampshire. My remarks are an attempt to relay the important points of that conversation to the group here. These remarks nicely complement the notes by Linc Page in the most recent issue of the Granite State Geologist.

First Kay: Kay was born on the NH seacoast, and became an authority on the geology of West Africa, especially Sierra Leone. She got into NH geology as a result of being asked to lead an AMC field trip to the Isles of Shoals. She responded that she could lead the trip, but a lot more needed to be learned about the Isles of Shoals! Also at that time, Annette Cottrell told her that that the area around Odiornes Point, at the mouth of the Piscataqua River, was about to be sold to developers, and a movement was put in place to preserve the area as a state park and nature center. This effort required further geological work, as well as botanical and historical reports with many collaborators. The success of this effort was underscored on June 13 of this year, when Governor Judd Gregg dedicated a new nature center at that park. But back in the 1930's, when Kay was teaching geology at Wellesley College, she undertook, with Louise Kingsley, the mapping of the Cardigan quadrangle, which was published in 1937. It was on this project that she met Marland, and they were married in 1938. The two have worked jointly on many other projects, including the mapping of the Gorham quadrangle, published in 1975. Other collaborations produced two children, George and Betty Jean.

Next Marland: Marland wanted to be sure to recognize several individuals who played key roles in the progress of geologic mapping in New Hampshire. One was James P. Goldthwait, a professor at Dartmouth. He was doing a survey of sand and gravel resources for the Highway Department, at the time when the Commissioner was Frederick W. Everett. After seeing Marland's colored maps of the Littleton and Moosilauke quadrangles, Goldthwait suggested to Everett that the state consider publishing these maps. Important too was Harold W. Bannerman, who was also at Dartmouth but who went to the USGS in Washington during WW II and continued there after the war. He suggested to Goldthwait that state geologic maps and explanatory booklets be published, which suggestion was of course well received. Bannerman also suggested to Billings in 1952 that a state geologic map be prepared, and Marland replied that "we didn't know enough." Bannerman would not let Billings off the hook, however, and the NH State map was published three years later in 1955. Another key player in the early years was Capt. Charles F. Bowen, Managing Director of the New Hampshire Planning and Development Commission. Finally was Mary Louise Hancock, who

was Planning Director of the NH State Planning and Development Commission, later a state senator, who worked with the community of academic and professional geologists, greatly facilitating the publication of the maps and quadrangle reports by the state.

The following letter from Marland gives us some further insight to his character and attention to detail. I came across this letter pasted to the inside cover of his 1927 doctoral thesis.

Ms. Connie Wick, Librarian
Kummel Library, Harvard University

September 20, 1990

Dear Connie,

I have always felt guilty about the quality of the copy of my thesis (Geology of the North Conway Quadrangle, New Hampshire, 1927). I would like the following to be pasted on the inside cover:

"In 1927 only one copy of Ph.D. theses was required. This copy went to the Archives. This was my personal copy and did not have to be very neat. When I retired I gave it to the library despite its disreputable appearance. A decent-looking copy is in the Archives."

Thank you.

Sincerely,

Marland P. Billings

Postscripts to the Billings Awards

Mark Van Baalen reports:

On October 15, 1992, accompanied by Prof. J. B. Thompson, Jr., I delivered the Honorary Fellow award to Marland and Kay at their home in Wellesley, Mass. They were most appreciative.

Just published in the November 1992 issue of the GSA Bulletin is Marland Billings' most recent contribution to science. The full reference is: Billings, Marland P., 1992. The "Piermont Allocthon" in the Littleton- Moosilauke area of west-central New Hampshire: Alternative interpretation and reply. GSA Bulletin, v. 104, pp. 1539-1543. Accompanying the alternative interpretation is a reply by Robert H. Moench.

The Society received the following letter dated November 5, 1992, from Marland Billings:

Dear Mr. Lane:

Mrs. Billings and I are very grateful to the New Hampshire Geological Society for making us honorary fellows. Mark Van Baalen and Jim Thompson delivered the lovely plaque a few days ago. It is now hanging in our living room here in Wellesley.

I want to congratulate the geologists of New Hampshire for organizing a geological society. I regret the delay in acknowledging this honor. I have had to change the arrangements for the typing of my letters.

I read in the NewsLetter of the New Hampshire Geological Society Lincoln Page's account of the early days of the gravel survey conducted by James W. Goldthwait. Long ago I planned to prepare an account of the early days of the bed-rock program emphasizing the non-geological aspects, but there seemed to be no logical publication for this. The situation has obviously changed. I hope to prepare such a memorandum in the near future for your NewsLetter.

Several weeks ago I gave this information to Mark.

Sincerely yours,

Marland P. Billings

See also [Number 20](#) of [The Granite State Geologist](#) and [Marland P. Billings 1902-1996: A Remembrance](#) by Brian K. Fowler

Certification of Geologists in NH

Eugene L. Boudette, State Geologist

An act concerning the registration of geologists, along with other scientists practicing in the disciplines of agronomy, pedology, and soil science, is in draft process for presentation to the New Hampshire General Court during the 1993 session. Certification is expected to be based upon a combination of application criteria established by resume and formal examination. The act is written to provide reciprocity for applicants certified by other states. Provision is also made to exempt state and federal employees from the requirement of certification.

Association of Massachusetts Licensed Site Professionals

Joel Loitherstein

As most of you know, the legislation has passed which creates a new profession--the Hazardous Waste Site Cleanup Professional a.k.a Licensed Site Professional or "LSP." A group of us would like to start an organization that would be an advocate for LSPs as the profession and regulations continue to evolve.

A kickoff meeting for the organization has been scheduled for 3:00-6:00 PM January 6, 1993 at the Newton Marriott. This date is a few days after the draft regulations come out to allow you a chance to review them and to provide a topic for discussion. The cost for this meeting is \$7.00 per person to cover room and refreshments. Everyone that is interested in becoming an LSP should come. We need your support and look forward to your involvement with forming this organization.

For further information or to make reservations, please contact Mary O'Brien at (508) 651-3481 x353 or Diane Cabrai at (617) 630-6263.

Organizing Committee: Larry Feldman, Deborah Gevalt, Richard Hughto, Joel Loitherstein, John Seferiadis, Joseph Engels

The views expressed above are those of the authors. The New Hampshire Geological Society has no position with regard to the issue of professional registration or certification of geologists.

NHGS News and Events

The Winter Meeting of the New Hampshire Geological Society will be held on Thursday, January 14, 1993 (Cash Bar @ 6, Dinner @ 7), at the High 5 Restaurant, Wall Street Tower Building, 555 Canal Street in Manchester. The speaker will be Dr. John Ebel of the Weston Observatory, who will talk about Regional Seismicity. For more information contact Joanne McLaughlin at (603) 224-7979.

At the Society's annual meeting on October 8, 1992, a new Board of Directors was elected: Bob Luhrs, President; Gene Boudette, Vice President; Joanne McLaughlin, Secretary; Dorothy Richter, Treasurer; Gary Smith, Member at Large; and John Cotton, Member at Large.

Scheduled dates for Upcoming Meetings of the Society for 1993 and 1994 are: April 8, June 10, field trip and picnic August 7, annual meeting October 14, 1993, and January 13, April 14, June 9, field trip and picnic August 6, annual meeting October 13, 1994.

Call for Papers: the Society is soliciting abstracts from undergraduate and graduate students at New Hampshire colleges and universities, for presentation at the April 8 meeting. Students will have a chance to give a fifteen or twenty minute talk presenting research they have undertaken. Poster presentations may also be considered. Abstracts should include a title and the names and addresses of the student author(s) and any other co-authors. The text of the abstract should be about 350 words or less. Please specify oral or poster preference. The deadline for abstracts is March 1, 1993.

Attention Mineral Lovers and Collectors! A new mineral and rock shop has just opened in southern NH: The New Hampshire Crystal Company, Inc. They have a dazzling collection of specimens from all over the world, as well as exciting finds from New Hampshire. Come visit and take a look around. They are located just off Rt. 101, on the Wilton/Milford border, in the Souhegan Marketplace. Open Tue-Sat 10-6, Thurs 10-9, Sun 12-6. Questions? Call 654-9698 and ask for Don Yonika or Darryn Mendham.

The Geological Society of America's Northeastern Section Meeting will be held March 22-24, 1993 at the Sheraton Inn Conference Center, Burlington, Vermont. The GSA's 1993 Annual Meeting will be held October 25-28 in Boston. Contact GSA at 1-800-472-1988 or (303) 447-2020.

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