

History of Geology Division Newsletter

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Message from the Chair

Geology is a historical science, a successor in the long intellectual tradition of natural history. Just as important, of course, is the human history of those who would read that natural history from rocks, fossils, and landscapes. And no less important is what we can learn from that history: how geologists can address fundamental questions about nature, and how to formulate even better questions.

The History of Geology Division was founded in 1976. 2011 will be the 35th anniversary, and perhaps worthy of some special event. Even more momentous will be the 125th Anniversary of GSA in 2013. Obviously, our division needs to be involved in the GSA celebration. Thus, it was fortunate that I was named to the Ad Hoc GSA Council Committee to help plan the occasion. I reminded the committee that for its 75th anniversary, GSA published *The Fabric of Geology* edited by our Division's C.C. Albritton, Jr. The committee subsequently recommended to Council and Council approved a celebration focus on updating some of the themes from that classic volume, specifically (1) our science (how it has evolved since 1963), (2) society, and (3) the fabric of the geosciences (the evolution of thought in the geosciences and the uniqueness of our thought processes and the impact of that way of thinking). We clearly need to be involved in this and in other activities that bring us closer to the mainstream of the Society as a whole.

Upcoming GSA Meeting, Denver 2010

Those of us from a generation who read the best-selling book "Zen and the Art of Motorcycle Maintenance" will recall its claim that philosophy is "the high country of the mind." Given that the chosen theme of the 2010 GSA annual meeting is to be "Reaching New Peaks in Geoscience", Gary Rosenberg and I are chairing the Division's GSA Topical Session T95 "High Country of the Geological Mind: Philosophy of Geohistory." The session will explore recent advances in understanding the fundamental presumptions that underlie geology as a science. Philosophy is about ideas so fundamental that they typically go unquestioned as practitioners proceed with their activity. As Thomas Kuhn pointed out, philosophical concerns come to the fore when a science is undergoing rapid change in its outlook and methods. We all have ideas about such changes that characterized geology in the past. For geology today, one such change might be the rapid growth of studies exploring a simulated past via symbolic manipulation through computer codes, perhaps at the expense of traditional exploration of a signified past through the study of mineral grains, fossils and strata in the field.

It was also Thomas Kuhn who showed that philosophy of science is best informed by historical accounts of how scientists actually work, rather than by the normative accounts that presume to prescribe how science should be done. Thanks to Kuhn, among others, the logical empiricism that dominated the latter approach for much of the last century has now been mostly discredited among philosophers (though many scientist still seem to hold to naïve versions of its outdated positivist ideas). Philosophy of science is a far more nuanced subject today than it was but a few decades ago, and one trend is the increased recognition of unique aspects for various different sciences. Thus, it is now recognized that biology cannot simply “reduce” to physics. Nevertheless, with but a few notable exceptions, there has been relatively little philosophical attention to geology, a failing that our session seeks to rectify.

In the call for abstracts below, you will note that there will also be the usual History of Geology Division Session for general contributions to the history of geology, plus another Topical Session: T94 “The Colorado Scientific Society and 150 Years of Geologic Research in Colorado: Early Colorado Geology and Important Scientific Contributions by the Founders and Members of the Rocky Mountain Region's Oldest Scientific Society, Founded in 1882.” Please contribute your abstracts and attend our sessions in Denver!

Division Bylaws

At the GSA Division Chairs Meeting, held in Boulder earlier this year, it was pointed out that the Bylaws for our division (and for many others) need updating for various issues relating to GSA Headquarters, procedural changes, etc. A major concern of the society is the better integration into mainstream GSA activities by the various Divisions, Sections, and Affiliated Societies. GSA is making a particular effort to encourage closer ties between Divisions and Affiliated Societies. The obvious affiliated society for our division in this regard is the History of Earth Sciences Society (HESS). HESS was founded in 1982 (six years after the founding of our Division), and I believe that members of our division were very important in the founding of HESS, which is an international society. There are many overlaps of membership and officers (for example, I am the Book Review Editor and member of the Advisory Board for the HESS journal EARTH SCIENCES HISTORY). Please give some thought (and provide suggestions) as to how we might implement closer coordination, etc. with HESS.

Name Change

Given the need to rework the Bylaws, it is appropriate for the membership to consider the proposal that the Division formally change its name to the History and Philosophy of Geology Division. The name change proposal was made to the Division Management Board by Gary Rosenberg (text follows this message) and subsequently approved by that body, so the issue will next be put to a vote by the membership as a part of the Bylaws changes. In approving this proposal, the Division Management Board considered a number of points. While the name change will not involve any changes to division traditions, such as named

awards, functions, etc., it will generate higher visibility for the Division in GSA affairs, thereby addressing concerns noted above. The attention that can be brought to our division is key to one of the biggest concerns that we have as historians (and philosophers) of geology: how do we get more of our colleagues (and particularly our younger colleagues) interested and engaged with the history (and philosophy) of their science? Enlarging the scope of our division cannot but help in this regard. We would hope to have more sessions at the annual meeting carrying the name of the Division, more publications, etc.

It should be noted that there are other Divisions that have already or are contemplating name changes. The Engineering Geology Division has been discussing a change to the "Environmental and Engineering Geology Division." Also, the American Association for the Advancement of Science (which some of you will know was the outgrowth of the original U.S. geological society that preceded the GSA) has long had as one of its Sections, "History and Philosophy of Science." This Section has achieved a high profile in the AAAS, with named lectures, involvement in many sessions, etc.

I already referred above to the 1963 book *Fabric of Geology*, edited by C.C. Albritton, Jr. The collection of essays in that book provided a philosophical perspective on geology's history, present status, and future directions. Some of the issues included how geology differs from other sciences in its methods, what it means to be a historical science, whether geology has "laws" in the same way as other physical sciences, the nature of geological maps, and how the methods of past geologists like Hutton, Lyell, and Gilbert continue to exemplify unique aspects of geology as a science. There are so many examples of this interface that it is perhaps best to stop here and leave the last words to the classical historians Thucydides and Dionysius of Halicarnassus: "History is philosophy teaching by example."

Feedback

The Division Management Board welcomes your thoughts on any of the above. My email is baker@hwr.arizona.edu I look forward to seeing all of you in Denver!

Cheers,

Vic Baker
The University of Arizona

Proposal for Division Name Change (by Gary D. Rosenberg)

I wish to propose that the History of Geology Division of the Geological Society of America change its name to the History and Philosophy of Geology Division.

In the course of my editing GSA Memoir 203, "The Revolution in Geology from the Renaissance to the Enlightenment," it became apparent that the history and

philosophy of our science and indeed of any science for that matter, are inseparable. When one considers that Memoir 203 contains papers on art history, mining in New Spain, and the accomplishments and ideas of Isaac Newton, Athanasius Kircher, Nicholas Steno, Ben Franklin, Thomas Jefferson, Charles Darwin, and Charles Peirce, the philosophical glue that binds these papers together between two covers becomes as important as the progression of events and ideas about geology which the book develops.

The rediscovery of Greek and Arabic geometry which was the sine qua non of the Renaissance and which made the subsequent Scientific Revolution possible, transformed all of Western culture and led to the establishment of Western democracy. The same geometry that Renaissance artists began to use to scientifically describe the structure of landscape and of the organism, particularly of the human body, is the same geometry used in double and triple entry book keeping which describes the evolution of wealth. It is the same geometry used to study the evolution of the form of organisms, as well as to construct topographic and geologic maps, and to divide land and distribute commerce in a way that facilitated the emergence of a middle class. More generally, the individual acquired the potential to change status and to exercise political influence regardless of his or her status at birth. In short, Western democracy became a culture of evolution and, inversely, without the concept of evolution there would be no democracy. The history of our science clearly has implications well beyond a narrative of events.

A practical purpose for the proposed name change would be to grow the membership of the division, one of GSA's smallest. The division has discussed this concern for many years and many of us are aware that other societies (e.g. History of Science Society) as well as academic humanities departments likely include scholars interested in philosophical issues integral to the history of our science. The name change would make our division more inviting to such scholars and students.

TIME TO THINK DENVER - ABSTRACTS NEEDED

DENVER GSA

31 October – 3 November, 2010

The 2010 GSA Annual meeting will be held October 31-November 3, 2010, in Denver, Colorado. The theme of the meeting is Reaching New Peaks in Geoscience. We hope to a visible presence for our division at this meeting with 2 Topical Sessions (Symposia) and at least one Discipline (General) Session.

ABSTRACT DEADLINE AUGUST 10, 2010

Our Division Symposia are:

T95. High Country of the Geological Mind: Philosophy of Geohistory

Advocates: Victor R. Baker, Gary Rosenberg

This session encourages contributions from philosophers, historians and geologists on the nature of geology as a historical science and on the related implications of geology's historical nature for the betterment of humankind.

T94. The Colorado Scientific Society and 150 Years of Geologic Research in Colorado: Early Colorado Geology and Important Scientific Contributions by the Founders and Members of the Rocky Mountain Region's Oldest Scientific Society, Founded in 1882

Advocates: Lisa Rae Fisher, Libby Prueher, Scott A. Minor, Thomas R. Fisher

Join us for the 1859 Gold Rush, the Great Surveys, Arthur Lakes' dinosaur quarries, the establishment of the CSS, and important contributions and advances by its founders and members, along with fascinating related new research.

And don't forget the General Discipline session if your paper does not seem to fit into T95 or T94. Please use this session to give us updates on your work in progress, a favorite idea you have, or even maybe something new and different.

REMEMBER THE ABSTRACT DEADLINE IS AUGUST 10 !!!! To submit your abstract, to register for the meeting, or to find more information, please go to <http://geosociety.org/meetings/2010/>

RECEPTION FOR STUDENTS AND FRIENDS:

And, also, while your remembering cap is on, begin checking your bookshelves for extra or unwanted copies of suitable book and papers to donate for the door prizes at our reception. This is always a great success, thanks to the generosity of our members. As you come across items you can donate, please let the Secretary-Treasurer know (Jdhexen@aol.com) so she can keep a list of what is coming. Do not send her the item unless you will be unable to attend the Denver meeting. We would rather have you bring the item and attend the reception.

CALL FOR NOMINATIONS

The Nominations Committee is seeking nominations (including self-nominations) of people who are willing to serve as History of Geology Division officers/committee members. Please consider serving. To submit your name or that of a colleague, contact the Nominating Committee Chair Renee Clary (rclary@geosci.msstate.edu).

For Division Officer: Please consider nominating someone else or yourself to be an officer in the Division.

The commitment is for three years based on a sliding system where a person starts as Second Vice-Chair the first year, moves up to First Vice-Chair the second year, and in the third year becomes the Division Chair. The duties are varied, but basically the First and Second Vice-Chairs assist the Chair organizing and running our annual meeting activities. In this way a person gets to see how the system works and who to contact before having to do her/his own session. The Secretary-Treasurer-Editor position is a two-year (renewable) term. This person looks after the Division finances and prepares the Division Newsletter four times a year, with much able assistance from the current and past officers and Division members.

Serving as an officer is a great way to get to know other members of the Division and to work with your colleagues to support and further our Division's mission. Please consider serving as an officer or nominate someone to serve (with his/her knowledge and permission, of course) who you feel will make a good Division leader.

AWARDS:

Announcing the 2010 Mary C. Rabbitt HISTORY OF GEOLOGY AWARD Winner

Gabriel Gohau

Through deeply informed research Dr. Gohau has made extensive and important contributions to the literature of the history of geology. His work has illuminated diverse topics and issues such as theories of the earth, the historical framing of inquiry about the earth, concepts of mountain-formation, stratigraphy, metamorphism and the formation of granite, and the philosophical foundations of geological thinking. Gohau's many papers illuminate the work of historical figures ranging across a long period, from Descartes and Burnet to Élie de Beaumont and Prévost. Among his books are (1) a broad inquiry into the earth sciences' "gestation" during the 17th and 18th centuries, (2) a succinct account of the beginnings of historical geology, and (3) one of the most widely used comprehensive histories of geology of our time. Since 1996 he has presided over the principal French group dedicated to the history of geology, the Comité Français d'Histoire de la Géologie.

Announcing the 2010 Gerald M. and Sue T. Friedman DISTINGUISHED SERVICE AWARD Winner

Daniel F. Merriam

Daniel F. Merriam's services to the history of geology over a period of many decades have been extraordinary. Besides his own extensive service to the Division and its activities, he has made exceptional contributions as an organizer, editor, chronicler, compiler, and author, with a long record of historical

publications including departmental and organizational histories, bibliographies, indexes, and obituaries.

HISTORY OF GEOLOGY STUDENT AWARD

This was still pending when the newsletter went to press. Details will be forthcoming in the September issue.

STUDENT AWARD NOMINATIONS NEEDED!!

We still need nominations for this award, as soon as possible. We can hold the nominations open for only a couple more weeks--so please get the application form from the Division website <http://gsahist.org/> and send it asap to the Secretary-Treasurer know (Jdhexen@aol.com)