

# THE KECK GEOLOGY CONSORTIUM: TWENTIETH ANNUAL SYPOSIUM VOLUME

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**LORI BETTISON-VARGA**  
Director, Keck Geology Consortium  
The College of Wooster

## INTRODUCTION

It is my pleasure to present the 20th Annual Keck Undergraduate Research Symposium Volume. The Keck Geology Consortium is a multi-college collaboration focused on enriching undergraduate education through development of high-quality research experiences. The Consortium has been a fundamental component of the undergraduate-research landscape over the last twenty years, supporting 1017 undergraduate students from eighty-three schools across the nation. The 122 projects sponsored by the Consortium have involved 121 faculty representing forty-six different colleges, universities, governmental agencies, and businesses (362 faculty positions overall, many faculty are repeat participants). The Keck experience displays the characteristics of high quality undergraduate research: students are involved in original research, are stakeholders and retain intellectual ownership of their research, experience the intellectual excitement of working in group and independent contexts, and engage in the scientific process from conception to completion. The twelve member institutions have benefited in many ways from the collaboration, both in terms of student and faculty development. With the new program cycle beginning next year, the Consortium is pleased to welcome its six new members: Colgate University, Macalester College, Mt. Holyoke College, Oberlin College, Union College, and Wesleyan University.

Presented in this volume as short contributions is the work of 44 students, all of whom presented at the 20th Annual Symposium at The College of Wooster, April 14, 2007.

## History

Traditionally, each symposium volume presents a brief overview of the Consortium's history. However, this year we include an introduction to the Consortium's background provided by William T. Fox, first Consortium director and Emeritus Professor of Geology at Williams College. Bill presented his comments at the 20th Anniversary celebration held the evening of April 14, 2007 at The College of Wooster. Following his comments, Hank Woodard (Professor Emeritus at Beloit College) provided additional information about the Consortium's founding. In all, four institutions have hosted the Consortium during its 20 year history and 5 individuals have served as Consortium director: Williams College (Bill Fox), Beloit College (Hank Woodard), Carleton College (Cathy Manduca and Beth Palmer), and The College of Wooster (Lori Bettison-Varga). Funding for the 2006-07 program year was provided by the National Science Foundation Research Experiences for Undergraduates award (EAR 0503675) and the 12 member institutions.

## **Student-Faculty Research Projects and Annual Research Symposium**

The Consortium facilitates high-quality undergraduate research experiences by providing yearlong projects for rising seniors. While students in large part apply to work on predetermined scientific questions outlined in descriptions provided by project directors, while in the field they help design their independent projects and recognize how their problems relate to the questions other students on that project are addressing. Students gather appropriate data and samples in the field, work in various laboratories to collect additional data, and continue their work during the academic year. Their results are communicated at the annual Keck Geology Consortium Undergraduate Research Symposium and in the annual Symposium volume.

Perhaps the greatest strength of Keck Consortium projects is that students are working in collaborative research directly with faculty who have dedicated their lives to the synergy of research and education that exists in an undergraduate setting. The Keck faculty recognize, from vast experience, what undergraduates are capable of accomplishing when properly supported and mentored, in the field and laboratory, and during the academic year. The Consortium proudly presents this 20th Symposium Volume and celebrates the student/faculty research collaborations of the Keck Geology Consortium's 2006-07 program.

## **Acknowledgements**

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