

## Preface

Shrinkage of glaciers has contributed to rising sea level over the last century. It is of global concern whether the rate of shrinkage could accelerate. Glaciers are also of local interest for human water use and potential hydrologic hazards. To address these issues requires accurate measurements of glacier mass balances worldwide and better understanding of their mass and energy exchange. Much of our understanding to date has been gained from relatively clean glaciers, largely free of debris cover. However, debris-covered glaciers comprise a significant fraction of the global population of glaciers and are particularly common in the Himalayas, Andes, Alaska and on stratovolcanoes worldwide.

Despite their relatively common occurrence, debris-covered glaciers have not been well studied, in part because we do not have practical methods to measure or predict the melting rate of the ice under the debris. This fundamental variable is crucial for mass balance calculations, response to climatic variations, and for water runoff. Moreover, the perimeter of debris-covered glaciers can be difficult to determine from ground-based and satellite observations. From a hydrological perspective, debris-covered glaciers commonly develop supraglacial lakes that can release disastrous floods.

In addition to issues directly concerning debris-covered glaciers, rock glaciers may be an end-member in the spectrum of glaciers, possibly originating from debris-covered glaciers. Current debate on the origin of rock glaciers and their possible genetic connection to debris-covered glaciers highlights fundamental issues regarding debris transport and energy balances.

With these issues in mind, the workshop was organized, aiming to synthesize our current understanding about debris-covered glaciers and rock glaciers. By drawing on experiences from different regions of the world we hope to highlight the underlying physical processes controlling the nature of debris-covered and rock glaciers. During the initial organizational phase of the workshop, we were anticipating about 30 participants. Much to our surprise, over 50 people responded to our call for papers with submitted abstracts. This response indicates the timeliness of the topic.

The workshop was held on the campus of the University of Washington in Seattle with sponsorship of the Geophysics Program. The 54 oral and poster presentations were delivered over three days. A fine banquet overlooking the ship canal was convened on the second night and a field trip to the debris-covered Emmons Glacier on Mt Rainer occurred on the Saturday following the meeting.

This volume of proceedings contains 28 papers. Each paper was reviewed by at least two referees with expertise in the topic of the paper. The organization of the papers in the volume follows the organization of the workshop. Because the proceedings volume was published prior to the workshop, we are not able to include the results of the stimulating discussion in this volume, which we hope to publish in another publication.

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