

Preface

The Himalaya-Karakoram-Tibet (HKT) region, well known as “the roof of the world,” embraces the highest elevations and the greatest relief on earth. The formation and uplift of the HKT region during the Cenozoic was a crucial event in the geological evolution of our planet and its major rivers support more than two-thirds of the world’s human population.

In geoscientific terms, the HKT region is important in two ways. First, it serves as a natural laboratory for study of the composition, structure and formational process of the continental crust. The area today occupied by the Tibetan Plateau was the focus of subduction-related magmatism before the collision of India with Eurasia. After the collision, continental deformation led to the formation of the earth’s thickest crust beneath Tibet. Early in this process the Karakoram-Kohistan area was at the island-arc stage of formation and now is the site of ultra-high-pressure rocks. The Himalaya, a foreland fold-thrust belt with metamorphic core, formed along the northern margin of the Indian continent after the collision. It exhibits the effects of thrust tectonics resulting in rapid uplift – most dramatically, an unrivalled array of the eight-thousand-meter giants. The highest section extends more than halfway into the troposphere and exerts a major influence on the global atmospheric circulation. In order to develop future global climatic scenarios it is necessary to understand: (i) the timing, underlying causes, and mechanism of the uplift; (ii) the monsoon climate, its time of initiation and manner of evolution; and (iii) the relationship between the two.

The HKT region is a natural laboratory where one can observe the diversity of both geological and biological phenomena, a thorough understanding of which is vital for the development of rational resource-use policies.

The HKT Workshops, since their inception in 1985, have become an important forum for sharing scientific knowledge and experience. The present workshop, held in Japan, will include a special session on “Uplift of the Himalaya-Tibet region and the Asian Monsoon: Interactions among Tectonic Events, Climatic Change and Biotic Responses during Late Tertiary to Recent Times”.

Despite its distance from the HKT region, Japan is an appropriate venue for the workshops. The northern side of Japan, facing the Japan Sea, experiences some of the world’s highest annual snowfall. The Japanese monsoon (*tsuyu*) occurs in June. Thanks to the water derived from snowmelt, together with the accompanying rainfall during the *tsuyu*, Japan has evolved a remarkable form of rice cultivation. It was the uplift of the HKT region that was essential to this development, which in the old days was called a *toyo-ashihara-no-mizuho-no-kuni* (literally, “beautiful country of rice”). If the HKT region in its present form did not exist, Japan probably would have no monsoon and conditions would be very different from those of today.

This special issue of the *Himalayan Journal of Sciences* contains one hundred and thirty-six abstracts. One hundred and fifty scholars from fourteen countries have pre-registered for the Workshop. It is our hope that all the participants will take advantage of this meeting to express their views, listen to the opinions of others, and exchange scientific knowledge.

The Organizing Committee would like to express its sincere thanks to the many organizations and enterprises that provided financial support and facilitated the participation of many scholars from the HKT region (China, India, Nepal, Pakistan) and Japan (especially graduate students from abroad). Twenty-one participants received registration grants and sixteen received grants covering registration and full or partial travel expenses. Furthermore, special gratitude is expressed to Prof. Arvind K. Jain for his assistance in evaluating the abstracts, to Prof. Mitsuhiro Nakagawa for his generous offer to lead an excursion to the active volcanic area of Mt. Usu, and to Mr. Takahiro Tajima for managing the HKT19 homepage.

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