

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
New Worlds - Non-Traditional Space Education and Outreach (7)

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SPACEWARD BOUND INDIA 2016: EDUCATION AND OUTREACH EFFORTS AS A PART OF AN
ASTROBIOLOGY EXPEDITION IN THE HIMALAYAS

Abstract

Mars Society Australia (MSA) has successfully conducted Spaceward Bound programs in Australia under an agreement with NASA Spaceward Bound group at NASA Ames Research Center, USA since 2007. The program involves astrobiology researchers, educators and students visiting off Earth analogue environments for science and education activities. We recently conducted the first formal astrobiology expedition in research and education in India. Our diverse, international team of scientists and educators explored the high altitude region of Ladakh, in the Indian Himalayas, with the broad goals of (A)

recommending Ladakh as a site of astrobiological significance to the global community, (B) developing a framework for hands-on science learning programs in village-based and nomadic small primary schools in India, and (C) establishing similar expeditions as a reoccurring program for Indian scientists and students. MSA collaborated with an Indian institution, Birbal Sahni Institute of Palaeosciences to jointly conduct such an expedition in Ladakh, India from August 09-19 2016. Ladakh, a cold high altitude desert offers several astrobiologically relevant sites such as high passes, saline lakes, permafrost mounds and hot springs within a 150 km radius that can be traversed and covered over a few days. These geographically diverse terrains are all technically accessible via 1-3 day excursions from the city of Leh. Interspersed between these extreme environments are primary schools that serve local villages, nomadic families from all regions of Ladakh. Accordingly, the expedition purposefully included both excursions to the described extreme sites and focused visits to four schools. The team comprised of scientists, engineers, educators and students from Australia, India, US, Spain, Italy, Sweden and Switzerland. This expedition served as a reconnaissance for future visits to the region. We present a summary of conducted education activities, teacher and student responses and planned future work at the different schools visited on the expedition transects.