



Field Transect: NER001, Geodynamic evolution of Northeastern Himalayas: Traverse along Bhalukpong-Bomdila-Tawang Section, Arunachal Pradesh

Geological Significance:

- Himalayas are the perfect example of continental collision tectonics with heterogeneity in lithology, stratigraphy, tectonic and metamorphic history. This mighty mountain chain spread along 2400 km in length and 240-325 km in width. Arunachal Himalayas bears a distinct geological setting representing the signatures of India-Eurasia collision. The geological history of Arunachal Himalayas represents a wide spectrum of litho-sequences ranging in ages from the Paleoproterozoic to the Recent. In the traverse along the Bhalukpong-Bomdila-Tawang section, the Himalayan thrust dynamics as well as the inverted metamorphic sequence deviating from classical Barrovian-type metamorphism will be the main theme.
- Three major structural and tectonic elements of Arunachal Himalayas viz the HFT (Himalayan Frontal Thrust) separating the Siwalik from the alluvial plain of Brahmaputra, MBT (Main Boundary Thrust), separating the Siwalik rocks from the Lesser Himalayan rocks and MCT (Main Central Thrust) separating the Lesser Himalayan rocks from the Higher Himalayan crystalline rocks occurs sequentially from south to north in this section.

International Attraction:

- ✓ The Bhalukpong-Tawang section of western Arunachal is the best place for the study of the eastern Himalayas as the section possesses the entire Himalayan geological succession depicting various phases or events of its geodynamic evolution.
- ✓ The field trip would give an opportunity to look into whether the Himalayan orogen was constructed in the same manner along its whole length with a constant magnitude of crustal shortening or is there any strike variation in response to a westward decrease in convergence rate between India and Asia. In other words, it also addresses the burning issue whether the Himalayan orogen was constructed synchronously or diachronously along strike.

Duration: 6 Days

Date of Excursion: Post Congress

Max. Participants: 30

GEOHERITAGE SITES:



Sela Pass



Kink Folds, Dedza



Nuranang waterfall, Jang

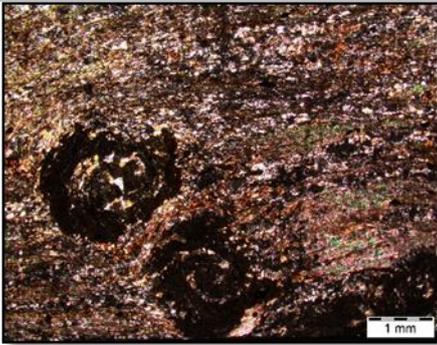


Tawang Monastery

Geological Field Photographs:



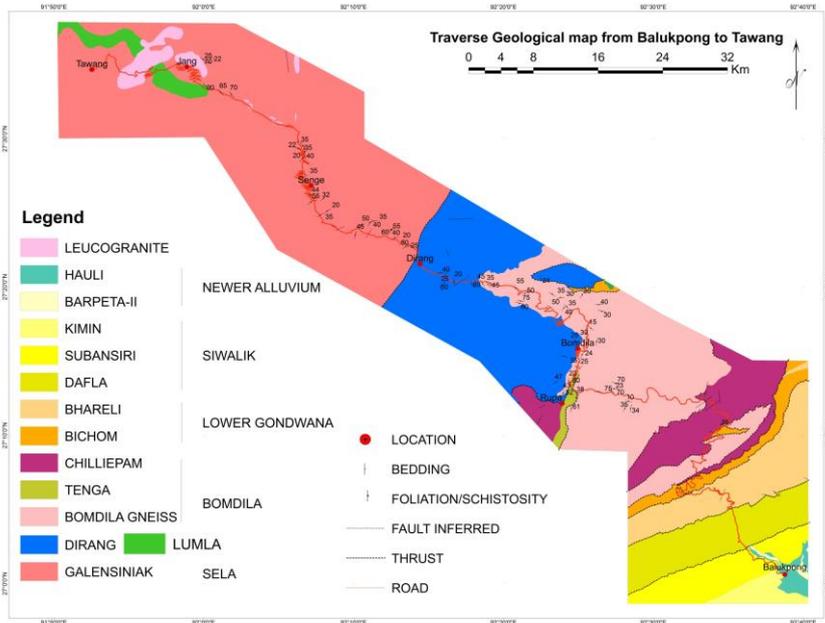
Deformation in Bomdila metasediments



Snowball garnet, in the schist of MCT zone.



Ripple marks in sandstone, Lower Gondwana, Pinjoli – Sessa section



NOTE ON GEOTOURIST SITES

This field traverse showcases high altitude lakes, hot springs, mineable deposits of dolomite, fossil occurrences in the Gondwana sequence and thrust tectonics.

Sela Pass, the breathtaking place in Arunachal Pradesh is a high altitude mountain pass, with La denoting Pass. It is a must visit geotourist site. Located in Tawang District of Arunachal Pradesh, Sela Pass sits at an elevation of 4,170 meters where one can experience a slice of heaven on earth itself.

Tawang Monastery, which is the largest monastery in India and second largest in the world after Potala Palace in Lhasa, Tibet attracts tourist worldover.



High altitude lake