

Contribution to the Geology of SE Zanskar, Lahul, Chamba – the Sangtha – Dharamsala Section

TALK

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It is significant that there exists no sharp boundary between the Lamayuru Unit and the Zanskar shelf series (FUCHS, 1986). In the Khurnak syncline the complete Precambrian-Eocene succession is exposed. The Triassic series exhibit distinct Lamayuru facies. Though blue limestones gain importance towards the S the euxinic facies persists in the Norian series till Marang La. The thrust of this pass demarkates a change in facies, and therefore indicates at least several kilometers of transport. In the N we find the euxinic Norian and a lenticular red riff body at the base of the Kioto Limestone, whereas in the S the greenish-grey Monotis Shales are succeeded by the Quartzite Beds and then the Kioto Limestone follows. In the Tsarap Valley a complex, partly sheared syncline contains Jurassic-Cretaceous series up to the Kangi La Formation (Campanian).

The Sarchu Shear Zone, comparable to the Zanskar Shear Zone (HERREN, 1987), influenced the pre-existing structures on both sides. In the N the vergence is generally SW, but in the vicinity of the shear zone folds are directed NE. In the S the huge recumbent folds in the Palaeozoics are the product of dragging near the shear zone. There is also a hiatus in the grade of metamorphism - it is much higher in the footwall. During the activity of the shear zone the conditions changed from ductile shear to steep planes with cataclasis.

In the fold belt of Lahul we find Haimantas (Phe) and Parahio (Karsha) Formation with a few Palaeozoic synclines. The Tandi Syncline still is an enigma. It consists of carbonates of Jurassic age (PICKET et. al., 1975) bordering Precambrian Haimantas without a trace of any Palaeozoic or Triassic formations. The fold, however, is directed NE and not plunging SW.

In Chamba the age of the Manjeer Conglomerate is a major problem. From the Sach Pass section FUCHS (1975) did not hesitate to correlate with the Agglomeratic Slate (Up.Carb.). FRANK found the boulder slates underlying Haimantas and therefore suggests a Late Precambrian age (pers.comm.). In fact we substantiated the observation: At Tindi (Chandra Valley), the Chobia Pass, and ENE Barmaur the Manjeer Conglomerates are overlain by Haimantas. From the lithology of the conglomerates and their association with carbonates and black slates there is no doubt that there is only one such series in Chamba, and that the "intra-Haimanta" conglomerates are connected with the Manjeer Conglomerates of the Kalhel Syncline. There they are associated with fossiliferous Late Palaeozoic and Triassic sediments and the Panjal Trap. Thus we favour a Late Palaeozoic age of the Manjeer Conglomerates, which implies overthrusting of Haimantas in the area SE of the Sach Pass.

The Early Palaeozoic Granite intrudes Haimantas in the Dhauladhar Range. Between the Crystalline Nappe and the Murrees of the Tertiary Zone in Dharamsala basic volcanics, Eocene Subathus, and a scale of Shali Limestone and black slates are squeezed and inverted.

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