

CARBONATE BUILD UPS IN THE HIMALAYA THEIR AGE, MICROFACIES AND ENVIRONMENT.

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Carbonate build ups, especially reefs, have been often described as "Metropolis of fossil fauna". Their significance in Petroleum Geology led to widespread studies. In the Himalaya, the evidences of Carbonate build ups are known from Proterozoic, early and middle Cambrian, early Silurian, early Carboniferous and late triassic.

During the Proterozoic, the stromatolites formed possible reefal builders in Shali and equivalent Formations, Basantpur and Krol 'E' formations. The microfacies found in these buildups are boundstone, rudstone and packstone/ grainstone. These build ups possibly formed barrier and knoll reefs.

Early Cambrian and middle Cambrian stromatolites mounds, mainly made up of Epiphyton boundstone have been recorded from Tal and Kunzam La Formations respectively. The microfacies in the Silurian build ups are represented by whole fossil wacke, pack/grainstone, float/rudstone and boundstone. The main builders during Silurian were, corals, bryozoa, algae and stromatoporoids. The early Silurian build ups vary from tabulate bodies to ? coalescing type of fringing reef. These build ups are recorded from Spiti, Kinnaur and Kumaon. These are also observed in the Lidder Valley in Kashmir, though not studied in detail. Early Carboniferous build ups are small and were found only in Spiti Valley. The microfacies recorded in these build ups are mudstone, packstone, grainstone and boundstone. The main builders are colonial corals and algae. These are low relief bun shaped.

The late Triassic reefs are at mid Norian and Rhaetian - Lias levels. The mid Norian build ups occur in the Hangrang Formation represented by boundstone, packstone/wackestone, grainstone and floatstone. The main builders in these build ups were corals, hydrozoans, sponges and rare algae. Norian build ups are in the form of Knolls reefs. The Rhaetic Lias buildup are known in the upper part of the Kioto Formation. Wackestone/packstone, grainstone and boundstone microfacies are recorded from the Kioto build ups which are in the shape of small nobs with corals as the main builders.