Initial stages of upliftment of NW Himalaya during palaeogene : biostratigraphic approach

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India-Asia collision is the most important event in understanding initial stages of upliftment of the Himalaya. This event took place near K/T boundary in Pakistan and in early Late Ypresian in central and eastern Ladakh. In northwest Himalaya, dominantly shallow marine early Palaeogene succession is developed along three belts, namely Indus and Zanskar Tethyan zones in Ladakh and Himalayan foothills belt (from north to south). These sediments are represented by Sumdha Gompa (Palaeocene) and Nummulitic (Early Ypresian-early Late Ypresian) Members of flyschoid Indus Formation in Indus zone; Lingshet/Dibling (Thanetian-earliest Ypresian) and Kong (late Early Ypresian-Late Ypresian) Formations in Zanskar Tethyan zone; and Kakara (Maastrichtian-Thanetian) and Subathu (Ypresian-Early Lutetian) Formations in foothills belt. Withdrawal of Tethys took place after deposition of these lithounits. This event is attributed to collision with attendant phased upliftments, i.e. in Indus zone in earliest Ypresian (51 Ma); in Zanskar Tethyan zone towards end of Ypresian (49 Ma); and in foothills belt in Early Lutetian (47 Ma). These upliftments led to development of brackish to fresh water conditions. As a result of it, Jurutze and Gongmaru La Members (Late Ypresian) of Indus Formation were deposited under fluvio-deltaic conditions, whereas overlying Hemis Conglomerate (middle–late Eocene) under fluvial conditions in Indus zone; fluvio-deltaic Chulung La Formation (latest Ypresian-Lutetian) in Zanskar Tethyan zone; and continental Murree/Dharmsala/Dagshai-Kasauli succession in (Middle Lutetian-earliest Miocene) in foothills belt.