

Rocks exposed across the hundreds of islands that belong to the 800 km long Andaman–Nicobar archipelago provide a condensed window into the active subduction zone that separates the India–Australia plate from the over-riding Burma–Sunda plate. Despite a strategic and seismically active location the Andaman–Nicobar ridge has seen comparatively little research. This Memoir provides the first detailed and comprehensive account of geological mapping and research across the island chain and adjacent ocean basins. Chapters examine models of Cenozoic rifting of the Andaman Sea and the regional tectonic and seismogenic framework. A detailed critical review of the Andaman–Nicobar stratigraphy, supported by new data, includes arc volcanism and a description of Barren Island, India’s only active volcano. Seismic history and hazards and the impacts of the 2004 earthquake and tsunami are also described. The volume ends with an examination of the region’s natural resources and hydrocarbon prospects.