

Tectonic Evolution of Myanmar: Progress and Problems

Khin Zaw¹

¹CODES ARC Centre of Excellence in Ore Deposits, University of Tasmania, Hobart, Tasmania, Australia

Abstract

Myanmar region encompasses several tectonostratigraphic terranes or micro-plates (e.g., Indochina, Sibumasu, west Myanmar) of mainland SE Asia and can be sub-divided into six N-S trending major tectonic domains from west to east: (1) the Arakan (Rakhine) Coastal Strip is an ensimatic fore-deep, (2) the Indo-Burman Ranges represent an outer-arc or fore-arc, (3) the Western Inner-Burman Tertiary Basin is considered to be an inter-arc basin, (4) the Central Volcanic Belt (Central Volcanic Line) represents an inner magmatic-volcanic arc, (5) the Eastern Inner-Burman Tertiary Basin formed as a back-arc basin and (6) the Shan-Tenasserim Massif occurs as ensialic, Sino-Burman Ranges. The Sagaing Fault forms a tectonically significant boundary between the Eastern Inner-Burman Tertiary Basin (back-arc basin) and the continental, ensialic Sino-Burman Ranges. A number of reconstructions have been published in recent years for tectonic evolution of these terranes. However, there are significant differences in the details of how and when the terranes assembled to form Myanmar region and mainland SE Asia. All the reconstructions show that SE Asia is a mosaic of Gondwanan-derived Palaeozoic and Mesozoic micro-plates separated by major continental-scale faults (e.g., Sagaing Fault) or suture zones containing oceanic cherts, ophiolitic basalts and peridotites. This indicates that after rifting from Gondwana, these micro-plates drifted across the warm Tethyan Ocean accumulating shallow water limestone and other sediments before colliding with each other as well as with larger South China terrane.