

COMMENT

Tectono-stratigraphy and emplacement history of the ophiolite assemblage from the Naga Hills and Andaman island-arc, India.

(A comment on the paper by S. K. Acharyya, K. K. Ray and D. K. Roy, in the Journal of the Geological Society of India, v. 33, no. 1, pp. 4-18).

Authors' surmise and interpretation that ophiolite emplacement (NHO, ANO and Chin hills) during Paleocene-Eocene by continent-continent and Oceanic Island chain-continent collision, associated with easterly subduction zone is quite logical with current concepts and data. That there is no 'straightforward relation between the Late Oligocene collision suture and the present day subduction zone' is in line with the idea that both subduction zone and such suture lines may shift relatively with time and modifying tectonics. But I don't understand the authors' contention in separating post-Oligocene schuppen thrust (concluding line) accretion from the overall process, which may be active still. Are all these processes not related to the same causative ultimately? If not, why then there is continued north westerly compression?

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REPLY

In his letter, Sri Rangaraju has accepted collisional emplacement of Naga Hills and Andaman Ophiolites as deduced in our paper (Acharyya *et al.* 1989). But he has questioned why the 'Post-Oligocene Schuppen' thrusting in the Naga Hills and accretion related to on going subduction in the Andaman area have been separated and these have been delinked from Late Oligocene collision process.

Post-collisional developments were treated briefly in our paper and some elaboration appears necessary. The Late Oligocene collision suture and the present subduction zone in the Andaman area do not represent a simple case of shifting subduction zone with time in an accretionary prism. The Late Oligocene suturing is the culmination of a two-stage collision process which had similar development from Naga Hills to Andaman area. The post-collisional development started after a break in tectonism and sedimentation, and the Naga Hills to the north and Andaman sector to the south, had different evolutionary history. In the Naga Hills, foreland Neogene continental molasse sediments were imbricated. Pliocene and older sediments in the belt of schuppen are westwardly thrust over Oligocene and younger sediments. The schuppen thrusting is thus post-Pliocene in age. The Andaman sector, on the other hand, was subjected to subsidence, faulting, volcanism and opening of the Andaman Sea rift zone since late-early Miocene. A new subduction zone also developed contemporaneously beneath the Andaman-Java trench located to the west and south of the outer non-volcanic island-arc (Curry *et al.* 1979). The map location of this new subduction zone and the westwardly located frontal part of the ophiolite nappe are closely juxtaposed. But this subduction zone, contrary to general belief, does not continue northward to Naga Hills representing continental domain. Thus, the Post-Oligocene structures in Naga Hills and Andaman sector differ in nature.

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