Field Transect: *ER 010 Andaman Islands: An anatomy of the Accretionary prism in an active Burma-Andaman –Java subduction zone*

Geological Significance:

- ✓ *The Andaman & Nicobar Islands (central part of the 5000 km long Burma-Andaman-Java subduction complex) are geologically very unique and represents a modern day subduction process with a scope for on-land studies to elucidate the complex tectonic processes involved in the development of this exceptional island chain. The oceanic part of the Indian plate is subducting towards the east, below the oceanic part of the South-east Asian/Burma plate. The Andaman and Nicobar Islands represents the positive landform expression of the accretionary prism in outer arc and turbidites of fore arc setting developed due to continued subduction and multiple thrusting.*
- ✓ *A complete dismembered ophiolite sequence occurs as thrust slices along with Eocene sediments in an accretionary set-up in the outer-arc of the active Andaman-Java subduction zone.*
- ✓ *The Phanerozoic Andaman ophiolite being part of the active subduction complex provides an opportunity to investigate early crust-mantle processes of this active geodynamic belt.*

International Attraction:

- ✓ *The Andaman ophiolite would be helpful to understand mantle-crustal processes as well as the influence of the ocean-ocean subduction in active dynamic belt.*
- ✓ *Andaman ophiolite has unique polygenetic setting preserving characters of both MORB mantle and suprasubduction zone mantle. This area reveals the intricacies of physicochemical processes involving both subducting Indian Plate, overriding Burma plate and features of melt- rock interaction in the suprasubduction zone. Petrological MOHO is exposed in the road section.*
- ✓ *The Andaman ophiolite preserves the different varieties of melts derived from mantle in the form of extrusives which will give valuable information on the nature of melt, enrichment processes, melt-rock interaction, and crust-mantle evolution of the mantle wedge above the subducting slab. The geoscientist would get a chance to experience a live volcano spewing large proportions of pyroclasts and lava. which dates from 200 B.C.*

Duration: 6 Days
Date of Excursion: Pre Congress
Max. Participants: 20

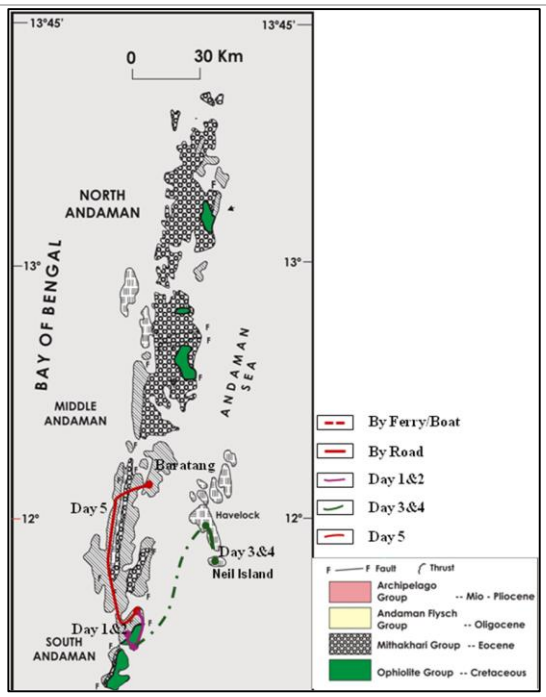
GEOTOURIST SITES:

Spectacular beach of Radhangar area, Havelock has developed over the carbonate turbidites of Archipelago Group

Eruption Of Barren Volcano, 2005

Baratang (Mud Volcano)

Geological map



Geological Field Photographs

Fine grained bioturbated sandstone exposed in Kalapattahr beach, Havelock

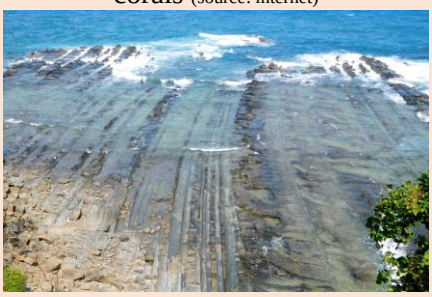
layered dunite, lherzolite, gabbro, pyroxenite

Pyroclastic andesite in ophiolite, near Chidiyatapu

Pillowed basalt expose in Corbyn's Cove

GEOTOURIST SITES:

Chidiyatapu-Mundapahar store house of The different varieties of corals (source: internet)



Thick sequence of deep sea ocean sediments in the form of sandstone-siltstone –shale sequence (turbidite) of Oligocene age (Andaman Flysch) are exposed.

OTHER ATTRACTIONS:

- ✓ Cellular Jail
- ✓ Radhanagar baeach
- ✓ Ross and smith island
- ✓ Elephant beach
- ✓ Mahatma gandhi marine national park
- ✓ Mangrove forest
- ✓ Anthropological Museum etc