

Is the Chikura Group in the southern Boso Peninsula, Japan, an accretionary prism or submarine landslide bodies?

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Toes of an accretionary prism & submarine landslide bodies are structurally similar to each other, and therefore it is sometimes difficult to distinguish them in ancient examples. We examined the Pliocene Chikura Group in the Boso Peninsula south of Tokyo, Japan, that is in controversy whether an accretionary prism or not. The Chikura Group is situated in a unique tectonic setting to the north of the TTT Boso Triple Junction and consists mainly of volcanoclastic sandstone & siltstone with common intercalations of tuff & tuff breccia beds, and chaotic beds at various horizons. The reddish brown tuff breccia occurring in its lowermost strata is derived from the Izu volcanic arc & interfingers with the main trough-fill sedimentary rocks. Higher up in the strata numerous gravity-driven debris flow deposits occur, in addition to liquefaction injections with or without *Calyptogena* fossils (methane-supported bivalve) and related calcareous buildups and chaotic & coherent sedimentary units. The Chikura Group forms a large synclinorium, the northern limb of which rests unconformably on the M. Miocene-L. Pliocene Miura Group, representing an accretionary prism unit.

Although the geological structures of the Chikura Group are dominated by numerous reverse faults & folds, thrust-anticlines & duplexes with layer-parallel faults that are collectively characteristic of an accretionary prism, other people than us all interpret this tectonostratigraphic unit as a trench-slope basin deposit with large-scale submarine landslides, instead of an accretionary prism. Our detail mapping showed that in the lower formations of the Chikura Group, some bedding-subparallel thrusts tend to climb up from the lower to higher beds via backthrusting or forethrusting, although in most cases thrust-anticlines & duplexes are associated with forethrusts. This bidivergent nature of thrusting is common in collisional-type accretionary prisms. We propose that at least the lower & southern parts of the Chikura Group should be a kind of an accretionary prism composed of the Izu arc volcanoclastic deposits, which are dammed up in the subduction boundary, a trench between the Izu and Honshu arcs. Such deep-sea sediments have been accreted to the Boso Peninsula by strong horizontal stress caused by the Izu arc collision.