



CHRONOSTRATIGRAPHIC MODEL FOR THE SLOPE DEPOSITS IN THE UPPER ABURRÁ VALLEY

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This paper presents new stratigraphic and chronologic data related with a widespread and complex sequence of slope deposits located at “El Poblado” sector, southeast area of the Medellín and Envigado (Antioquia, Colombia). Geomorphologic cartography, stratigraphic work in civil works excavations and fission track ages of interbedded volcanic ash deposits let us to divide the slope deposits in at least four stages: I, II, III, and IV. Such slope materials, mainly mud and debris flows, present a staircase distribution (telescopic). The oldest deposits, stages I and II, crop out on the middle and higher parts of the slope; while the younger ones, stages III and IV, show wide and nicely preserved fan shape over slope foothills. The oldest ages found in volcanic zircons (obtained around 30 m depth) reach 2.63 Ma, Late Miocene, representing the maximum age of stage I, which lower age is approximately 1.8 Ma. Stage II has a wide thickness range, and ages between 2.0 and 0.9 Ma, Late Pliocene-Pleistocene. Finally, for upper deposits belonging to stage III, other authors report peat layers with ages beyond of the time span of radiocarbon method (older than 40 ka). In addition, several basement zircons were found in the deposits, with ages between 45 and 48 Ma. These data confirm the validity of ages previously determined by the same method on alluvial and slope deposits located in other areas of the Aburra Valley, whose opening is probably due to complex tectonic activity which started before Quaternary, as it was traditionally supposed.

Key words: tephrochronology; fission tracks; Aburra Valley; Colombia