

Detrital zircon chronology of the Upper Cretaceous Atokura Formation in northern Kanto Mtn., Japan

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The Cretaceous sandstones of the Atokura nappe in the northern Kanto Mtns. in central Japan were analyzed for detrital zircon U-Pb chronology by LA-ICP-MS. The results documented two distinct age groups; i.e., 150-300 Ma (Permian to Jurassic) and 1600-2600 Ma (Neoproterozoic to Mesoproterozoic). As there are no correlative candidates for provenance in the neighborhood, the Cretaceous strata of the Atokura nappe were likely exotic. The occurrence of Jurassic granitoids is currently limited to the Hida belt in central Japan, while no Precambrian basement is exposed at all in Japan. Judging from the allochthonous mode of occurrence, the Atokura nappe was derived originally from the back-arc domain of the Cretaceous Japan.

Keywords: Cretaceous, sandstone, detrital zircon, U-Pb age, LA-ICP-MS, Japan