



Paleosol Stratigraphy and Geochronological Implication in the paleolithic sites of South Korea

J. Y. Kim

(1) Korea Institute of Geoscience and Mineral Resources, Daejeon, South Korea, (2) KIGAM:
(kji@kigam.re.kr / Fax : +0082-42-861-9723/ Phone: +0082-42-868-3056)

In Korea during Last Glacial period slope deposits and paleosol layers are overlain above basement rocks, Freezing and thawing crackings or soil wedges were developed in them. Many middle to upper paleolithic archaeological sites are found in the slope deposits formed during last glaciation. As geochronological bases for subdividing paleolithic cultures of Korea, two typical paleosol layers are very useful because they are mostly found and imprinted with several horizons of frost cracks or soil wedges. The upper parts of the slope deposits are typified by paleosol layers with typical frost cracks (soil wedges) and fragipans. The upper cracked structures were formed under the subboreal to boreal climatic regime under an extremely cold-dry climate in Korea during the Last Glacial Maximum(LGM), i.e 24 Ka ~ 17 Ka based on many paleolithic sites. The lowermost paleosol layer with frost cracks (soil wedge) has been defined in the layers as old as 60 Ka - 75Ka. Both the hillslope sediments and saprolite layers beneath them, found commonly in the weathered basement rocks, were strongly imprinted by cryoturbation structures as a typical soil-geomorphic process in the early last glacial period. Uppermost Pleistocene layers were found in the young fluvial deposits formed since the Last Glacial Maximum(LGM), particularly continued as late as the Pleistocene-Holocene Transition Period.