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Anthropological Study on the Cremated Bones of the Late Silla Kingdom Period in Korean History

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ABSTRACT Anthropological studies on burnt bones revealed patterns by which the nature of archaeological cremation cases can be hypothesized. However, there have been very few histological analyses performed on cremated bones obtained from archaeological sites in East Asia. The researchers, therefore, endeavored to isolate the heat-induced changes in *Late Silla Kingdom* bones that probably had been subjected to post-mortem cremation. When the researchers examined the bone samples by S-4700 scanning electron microscope (SEM), color changes in the bones were observed, showing that the cremation temperature might have reached a high level. By the detailed SEM study on bony microstructure, the researchers estimated that the temperature in one case (*Gangneung*) reached about 800°C and in another (*Pyeongtaek*), possibly as high as 1000-1400°C. The histological nature of ancient cremated bones in Korea is revealed for the first time ever in the present study, by which the cremation temperature of them could be successfully estimated.