

## Reevaluation of the Influence of a Gigantic Eruption from the Ilopango Caldera to Ancient Mesoamerican Societies

# Shigeru Kitamura[1]

[1] Hirosaki Gakuin Univ.

In the period from 3rd to 5th century, a gigantic eruption occurred at Ilopango Caldera (size: 8 x 11 km), which is located in the center of El Salvador, Central America. In this eruption, voluminous pumice flow was deposited around the caldera and fine ash named 'TBJ tephra' was dispersed broadly. In many archaeological studies, destructive influences of the eruption to ancient Mesoamerican societies, such as abandonment of populated cities or mass migration to other area, have been presumed.

The TBJ tephra, however, was found to be only 16 to 18 cm thick in Chalchuapa and the surrounding area, ca.70 km from the caldera to the northwest (i.e., downward of local wind), although it had been described to be ca. 50 cm thick in previous study (Hart and Steen-McIntyre, 1983). Accordingly the thickness of TBJ tephra in the area described in the previous study should be reduced, and the scale of the eruption should be also revised. And it was found out that the previous study might have overestimation for deposition of tephra and correlation error.

In order to estimate the scale of the eruption precisely and evaluate the influence to the ancient society exactly, further investigation of the distribution of the TBJ tephra is necessary.

### Reference:

Hart, W. H. E. and Steen-McIntyre, V. (1983): Tierra Blanca Joven tephra from the A.D. 260 eruption of Ilopango Caldera. *In* Sheets, P.D. ed., *Archeology and Volcanism in Central America, the Zapotitan Valley of El Salvador*, pp.14-43, Univ. Texas Press, Austin.