

Detailed Tephra Catalog of Lower to Middle Part of the Kazusa Group, Lower to Middle Pleistocene, Central Japan

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The Kazusa Group covering the Boso Peninsula, central Japan is one of the typical lower to middle Pleistocene geological formations in the country. It is composed of the continuous sediment formed in deep sea and coastal regions. It is known as reservoir of the water-soluble natural gas and iodine rich brine. The stratigraphic division of the Kazusa Group has been done based on lithofacies of the formations and occurrence of tephra layers. The existence of tephrostratigraphy has been confirmed resulting in the revision of the tephra catalog to be part of the geological research for the Quadrangle Series 1:50000 of the Mobara district, eastern part of Boso Peninsula. The confirmed tephra consist of 139 layers from O7 in the Otadai Formation to Ks4 in the Kasamori Formation. These include the Byk-E (Ku2.3) tephra which indicates the base of the middle Pleistocene formation. Each tephra was identified by refractive index measurement and EPMA analysis of volcanic glass orthopyroxene and hornblende. The oxygen isotope stratigraphy of a coetaneous stratum in the Choshi district, northeastern part of the Boso Peninsula was already determined. Hence it is possible to determine the MIS age of each tephra by correlating the tephra in both districts.

Keywords: Lower to Middle Pleistocene, Upper to Middle Part of the Kazusa Group, Tephra Catalog, Mobara District, Boso Peninsular, Chiba Prefecture