

## Correlation of tephtras occurring near the boundary between Tertiary and Quaternary in the southern Kanto Province

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In the central part of the Boso Peninsula, the Kazusa Group consisting of Pliocene to Pleistocene marine sediments is widely distributed. Tephtras, microfossils and paleomagnetism of Tertiary to Quaternary strata have been studied in detail. On the basis of calcareous nannofossils, Takayama et al. (1995) concluded that the Tertiary-Quaternary boundary is around a key tephtra layer 'Kd38' in the Kiwada Formation of the lower part of the Kazusa Group. The 'Kd38' tephtra has been described by many authors. It is characterized by presence of Fe-rich orthopyroxene with  $XMg=26$  (Yokoyama, 1997). The tephtra was confirmed at several localities in central part of the Boso Peninsula and at the Choshi area. 'Kd39' tephtra occurring below the 'Kd38' tephtra is also unique tuff, characterized by homogeneous orthopyroxene with  $XMg = 58$ . It was also found in two areas. Both the 'Kd38' and 'Kd39' can be recognized as a key bed occurring around the T-Q boundary.

In this study, we analyze the modal proportions and chemical compositions of the heavy minerals in tephtras in other areas of the southern Kanto Province: Yokosuka (Miura Peninsula), Tama Hills and Chikura (southern part of the Boso Peninsula).

Mitsunashi et al. (1977) correlated the tephtras in the Yokosuka area and Boso Peninsula based on the lithostratigraphic study. Recently, Fujioka et al. (2001) clarified that 'Kd19' by Mitsunashi et al. (1977) is corresponding to 'Kd38' based on the mineral assemblage and chemical composition of glass. Our study supports their correlation and also shows that the underlying 'Kd23' tephtra by Mitsunashi et al. (1977) is corresponding to 'Kd39' in the Boso Peninsula.

In the Tama Hill, only a few tephtras occur around the T-Q boundary (Takano, 1994), compared the abundance of tephtras in the central Boso Peninsula. The thick tuff, 'YM', is analyzed. Although it is characterized by a moderate amount of cummingtonite, there is no suitable candidate in the central Boso Peninsula.

In the Chikura area, 40 tephtras occurring near the T-Q boundary were analysed. Several tephtras among them have unique modal proportions or chemical compositions. In addition to the absence of 'Kd38' and 'Kd39' in the Chikura area, such critical tephtras were not described in any of the areas studied.

This study shows that tephtras around the T-Q boundary can be well correlated in three areas, central Boso, Choshi and Yokosuka, which are roughly arranged at west-east direction. Tama Hills and Chikura area are located at northern and southern sides of the central Boso Peninsula, respectively. As volcanic ash is carried mostly eastwards due to the jet stream in this Province, it is probable that correlation of tephtra including heavy mineral is difficult even in the restricted region such as the southern Kanto Province .