

Great cooling event in the 11th century BC prompted the appearance of the merchants and the arrival of Yayoi people in the 10th century BC

*Hodaka Kawahata¹

1. School of Creative Science and Engineering, the Faculty of Science and Engineering, Waseda University

Yayoi period started in the 10th century BC: (1) One or two decades ago, textbooks and reference books stated that the Yayoi period started around the 5th - the 4th century BC. However, based on radiocarbon dates of carbonized rice by the research group of the National Museum of Japanese History in 2003, rice cultivation in Japan started in the first half of the 10th century BC. (2) Based upon the DNA analysis, Japanese paddy rice originated in China, not the Korean Peninsula. (3) Paddy rice cultivation in China had moved north from the Yangtze river basin to the Shandong Peninsula by about 4,000 years ago. (4) The main Y-chromosome DNA haplotype of the people for developing rice cultivation is estimated to be the Y-chromosome haplotype O1b2, originating in the lower Yangtze River basin.

Close linkage between the appearance of merchants/commerce and the first arrival of Yayoi people under great cooling event: [1] According to the result of alkenone- temperature in sediments of the Yellow Sea, the climate showed great cooling event in the 11th century BC. It is consistent with our results for Hiroshima Bay, Hakata Bay, and Tokyo Bay. [2] The Shang dynasty fell in 1046/1027 B.C.E. (unconfirmed date) and was replaced by the Zhou dynasty. [3] The people of the Shang dynasty were dispersed to various places and made a living by contacting and exchanging goods. Here merchants and commerce appeared. [4] The Y-chromosome haplotype of the people of the Yellow River civilization is presumed to be O2. [5] Due to the social turmoil caused by the cold climate, it is highly likely that some group of the people around the Shandong Peninsula (O1b2) happened to arrive at northern Kyushu, Japan to become Yayoi people in Japan.

Keywords: Great cooling event, Yayoi era, Merchants