

## 動物遺存体のストロンチウム同位体分析による人の移動・狩猟域の解明 - 房総半島における縄文時代の遺跡による検討 - Identifying human migration and hunting area revealed through Strontium isotope analysis of mammal remains

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Human migration, exchange and distribution spread the culture and technology and produces regionality and change of the Japanese archipelago.

Cultural transmission of Jomon period revealed by finding evidence that the human movement. In order to clarify aspects of use of animal resources, we are working to clarify the distribution area and hunting and fishing area using stable isotope analysis. In this paper, we report on the study area in the region of the Boso Peninsula Jomon hunting using strontium isotope ratios.

For this study, we used samples from the 55 tooth enamel of deer (*Cervus nippon*) and wild boar (*Sus scrofa*) excavated from 12 sites which located on the Boso Peninsula during the late and final Jomon period. We collected plant samples from 32 locations in the Boso Peninsula and evaluated regional differences in environmental Strontium isotope ratios by these plant samples.

The strontium isotope analyses, including the pretreatment steps, were performed at the Research Institute for Humanity and Nature. Strontium isotope ratios were measured with a TRITON thermal ionization mass spectrometer (Thermo Fisher Scientific). Sample  $87\text{Sr}/86\text{Sr}$  data was normalized to the standard reference material of the NIST SRM 987 (0.710250). Internal precision based on ion counting 100 times was  $\pm 0.000004\text{--}0.000006$  (=1 standard error).

We created the map of a geographic  $87\text{Sr}/86\text{Sr}$  distribution of plants. The graphic representation was performed with ArcGIS (ESRI, Inc.) software by using the kriging calculation method.  $87\text{Sr}/86\text{Sr}$  ratio showed different range, with high ratios (up to 0.7090) dominating the tip area of the peninsula and low ratios (low as 0.7056) occurring in the base and central area. In addition, Strontium isotope ratios in plants from the river basin had intermediate values. We can distinguish  $87\text{Sr}/86\text{Sr}$  ratio of plants in the tip of Boso Peninsula from the value of base and central areas.

The strontium isotope ratio in the mammal tooth enamel was varied in the range of 0.7056-0.7075. The isotope ratio of A site mammal showed the value from 0.7056 to 0.7059, and B site showed 0.7069 to 0.7075. The strontium isotope ratio of A site and B site showed clearly different value.

The strontium isotope ratio of C site showed from 0.7062 to 0.7068 and was intermediate value of A and B site. Thus, we can determine that the mammal carried to these sites inhabited the different area respectively.

In this announcement, we point out that the evidence that strontium isotope ratio to identify the hunting area.

キーワード: 動物遺存体, 狩猟域, ストロンチウム同位体比, 縄文時代, 房総半島

Keywords: animal remains, hunting area, strontium isotope ratio, Jomon period, Boso peninsula