

## The lithic raw material network of the coast of the Japan sea region in the early upper palaeolithic

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The early Upper Palaeolithic is characterized by the presence of the Palaeolithic stone axe (PSA), which has its calibrations <sup>14</sup>C age are ca. 38,000-29,000 cal yB.P. On Japanese islands, the layers in which this axe is found lie below the Aira-Tn tephra (AT) layer. Eight hundred or more PSAs have now been reported throughout the entire country.

The following examinations of each of the available 342 PSAs were made:

- a) stereomicroscope observation, b) measurement of specific gravity, c) a magnetic test, and
- d) a measurement of magnetic susceptibility. The results may be summarized as follows.

The lithic raw material of the Palaeolithic stone axe (PSA):

The Chiba area- The vast majority of the stones called serpentinite are greenstone (basaltic tuff origin and basalt origin) and amphibolite. The coast of the Japan sea region- The vast majority of the stones called serpentinite are tremolite rock (nephrite and semi-nephrite). In comparison to serpentine, the tremolite is a denser and hard, tough, and less magnetic mineral, which lends itself better to the making of these axes.

Place of origin of tremolite rock:

Tremolite rock is produced on the following four serpentinite rocks of the Omi-Renge area: 1) along the Himekawa main stream; 2) in the Omi area, 3) along the upper stream of the Oodokoro river ~ Mt. Asahidake, and 4) in the Hakuba-happou area. Large stones of tremolite rock with an unevenness in the surface used as the material of the stone tool can be found in the Matsukawa Valley in the Hakuba-happou area.

The lithic raw material network of the Coast of the Japan Sea region:

The PSAs from tremolite rock of the Omi-Renge area spread to the Coast of the Japan Sea region, including the Toyama area (the Uwadaira I site and the Shiraiwa-Yabunoue site), Nojiri-ko sites (the Hinatabayashi B site, Kannoki site, and Nakamachi site), Iiyama city (the Taishibayashi site), Shibata city (the Sakanosawa C site), and Akita city (the Jizouden site).

In light of the lithic raw material of the stone axe, the origin of the stone network with the coast of the Japan Sea region was the early Late Palaeolithic.

Keywords: upper palaeolithic, the coast of the Japan sea region, the lithic raw material, stone axe, tremolite rock