The End of the Paleolithic Age

The people of the Paleolithic Age migrated in pursuit of mammoths, moose and other large animals. The oldest relics in Hokkaido date back 30,000 years to the late Paleolithic Age.
As mentioned earlier, this period was also known as the last glacial stage, but from the beginning of the coldest period around 20,000 years ago, a stone tool known as a “microlith” suddenly started appearing and came into more frequent use between 13,000BC and 10,000BC. The microliths, which were long, thin stone chips that measured 3 to 5cm in length, were attached to wooden or bone handles to be used as tools such as spears for hunting. These were very useful tools as they could be created from a small amount of stone and were easy to replace with sharper blades. As many microliths have been found in Siberia dating back to an older period than that of the tools found in Hokkaido, it is thought that humans migrated from the Asian continent down through Sakhalin Island and into Hokkaido which formed part of the peninsula in pursuit of large animals.
On the other hand, apart from this northern route, microliths were also introduced into the west side of the archipelago a little later, approximately 15,000 years ago. With the sudden rise in temperature and environmental changes that were to come, the Jomon culture was born in the Japanese archipelago, on the base of precedent microlithic industry.

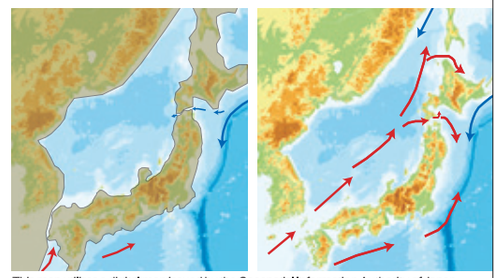
Microblades (top) and microcores
Akatsuki Site (Obihiro City)
Photo: Masahiko Sato

Osseous projectile point with microblades (Sakhalin)

Photo source:Vasilevski Alexander 2008, Мамонтовая фауна и адаптация человека на Сахалине. Human Ecosystem Changes in the Northern Circum Japan Sea Area in the Late Pleistocene. The University of Tokyo, PP.44-67.及び Василевский А.А., Высоков М.С. 2012, Сахалин и Курильские острова. История с древнейших времен до образования Сахалинской области. Южно-Сахалинск: изд-во «Рубеж», 320с.

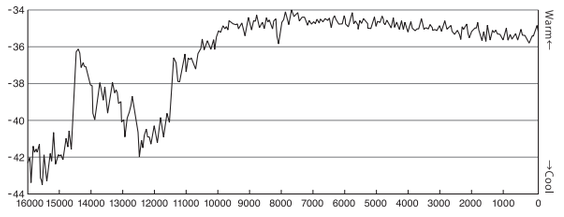
Rise in Temperature and the Birth of Jomon Culture

A look into the earth’s history reveals that we are visited by cold “glacial periods” and warmer “interglacial periods” in cycles of 10,000 years or so, and approximately 15,000 years ago saw a sudden rise in temperature known as Bølling-Allerød.
This climatic warming caused the sea level to suddenly rise by 130m, separating Hokkaido and Sakhalin from the Asian continent. The Tsushima Strait, which was closed for most of the glacial period, opened up and the Tsushima Current (Kuroshio Current) began to flow in great volumes into the once lake-like Sea of Japan. Furthermore, as there were so many sea currents running into the Sea of Japan, overflowing warm currents began to flow through the Tsugaru Strait that separates Hokkaido and Honshu, and into the Pacific Ocean. One current began to flow south off the east coast of northern Honshu, and another flowed north of the southeast region of Oshima Peninsula. The rise in sea level caused by the increase in temperature and the change in the flow of the currents are important elements when considering the formation of the natural environment of the Japanese archipelago and the prosperity of the Jomon culture. The steam rising from the warm currents on the surface of the water turned into rain or snow, and the warm weather and humidity brought about four distinct seasons. Green forests and rivers started to form in the mountains, the currents became more active with the rising of the sea level, and the seas became inhabited with various forms of marine life. The Jomon culture, a hunting, gathering and fishing society, was born together with the diversifying natural environment.
On a global scale, another freeze known as the Younger Dryas occurred in the North American and European continents (from 10,900BC to 9,500BC), however, perhaps due to the fact that it was surrounded by warm currents, it is thought that the Japanese archipelago was not as severely affected by this as other areas in the northern hemisphere. The warm currents surrounding the archipelago helped sustain a stable environment, which turned out to be a very fortunate thing for the birth of Jomon culture.



This map utilizes a digital map issued by the Geospatial Information Authority of Japan.

The currents 20,000 years ago (left) and after the Jomon Period (right)
*Red: Warm currents (Tsushima Current), Blue: Cold currents (Oyashio Current)



A graph predicting the changes in climate from icicle cores in north Greenland