

Abstract

Examination of 11 metric mandibular traits was conducted on data collected from several sites within the Jōmon and the Okhotsk for the purpose of analyzing potential impacts of dietary differences on mandibular morphology for these groups. Based on the dietary history of the populations and their respective regions, Middle Jōmon (5,000 - 3,000 BP) sites would share comparable robusticities across all regions based on social and economic continuity as a stable climate resulted in abundant dietary resources which fostered a growth in population in the Japanese islands of Honshu and Hokkaido. As the climate cooled in the Late/Final Jōmon (4,000 - 2,000 BP), the population of the two islands crashed coinciding with reduced carrying capacity of the environment due to a reduction in available food resources. Late/Final Jōmon were expected to show mandibular reduction in the Honshu interior which had engaged in plant cultivation and emergent agriculture as opposed to populations on the Hokkaido and Honshu coast which engaged in marine subsistence. The success of agriculture resulted in an expansion across Honshu, pushing marine subsistence communities northeastward to Hokkaido where the tradition persisted as the Epi-Jōmon until the arrival of immigrant populations of the Okhotsk (1,000-600 BP). The Epi-Jōmon and Okhotsk would share comparable robusticities based on their shared practice of marine subsistence. The Late/Final Jōmon and Epi-Jōmon/Okhotsk hypothesis were not supported citing the presence of more diversified and complex subsistence practices than was initially anticipated.