Ethnographic and archaeological research shows that hunter-gatherers have colonized and inhabited a diverse range of environmental settings. One example of this is the occupation of the unique sub-arctic, island environment of the Kuril archipelago located in Northeast Asia. This research aims to investigate the strategies used by hunter-gatherers to meet the challenges associated with colonization and habitation of this dynamic landscape. Building from a human behavioral ecology framework, this research develops a model that provides a series of predictions for the structure of social networks in response to differing levels of environmental uncertainty within the Kuril Islands. Using a novel methodological approach, models of social relationships are derived from the compositional data of pottery indicating the movement of artifacts across the landscape. Once network models from archaeological data have been constructed, social network analysis methods are utilized to visually and quantitatively assess archaeological networks in relation to model expectations. In addition to investigating social network patterns, this research also provides a thorough and systematic approach to understanding the production and use of pottery within maritime foraging societies of the Kuril Islands. This includes the development of a regional pottery typology that contributes to the growing body of knowledge concerning the occupation history of the region. The research also investigated the technological attributes of pottery remains by utilizing a range for archaeometric methods to infer the pottery production process as well as regional and cultural differences in the use of pottery technology. Results of this research suggest that the colonization and settlement of the Kuril Islands is a complex process highly influenced by a range of environmental, cultural and demographic factors. In contrast to the theoretical expectations about the influence of biogeography, results suggest that environmental and geographic variables are not the primary influence on the colonization and long-term habitation of the Kuril Islands. Changes in the production and use of pottery vessels as well as differences in social network structures suggest the major differences recognized in the archipelago are primarily due to socio-cultural influences. This research supports a growing body of knowledge that living in marginal island landscapes is not comparable to living in geographic isolation but rather populations in these regions are highly influenced by broader political and economic conditions.