

THINKING SUSTAINABILITY RESEARCH



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Life in a Yup'ik community in Alaska. What sustainable solutions are available?

Translation in English

In south-west Alaska, in the delta of the Yukon and Kuskokwim rivers, lives the largest native community in the United States: the Yupiit (Yup'ik in the singular), a people related to the Inuit, from whom they differ in their language and some of their traditions. In both cases, these societies see themselves as the «People" (*Inuit*), the «real" (*-piit*) people (*Yuk*).

For the Yupiit, a people with a seasonal lifestyle, the Bering Sea coastline and its wet tundra covered in snow in winter are their main habitat. Activities revolve around fishing camps in spring and summer, dedicated in particular to harvesting the various species of salmon, while the Yupiit are more communal and sedentary in winter, engaging in more craft (basketry, woodwork and bonework, for example) and ceremonial activities. These winter occupations are carried out in the *qasqiq* («men's house»), a veritable living space, day and night, for men and children. The women traditionally live in the neighbouring *ena* house. Before the development of modern prefabricated buildings, the abundance of driftwood, carried by rivers from the more temperate inland areas, allowed them to develop a particularly rich architecture and material culture, as evidenced by the remains of Nunalleq, «the old village», abandoned around 350 years ago, now right on the shore (probably some thirty or fifty metres inland at the time the site was occupied). The driftwood dwellings are linked by tunnels and plank paths to insulate them from the dampness of the swampy tundra environment. They are covered in peat to protect them from the cold in winter, but also appear to be occupied at other times of the year, with two separate entrances depending

on the season. This ancestral site, which is now archaeological, was home to at least three generations during the Little Ice Age (1350-1850)¹ The tragic conditions of its abandonment are still faithfully recounted in the oral tradition of the village of Quinhagak², a few kilometres to the north, at the mouth of the Qanirtuuq River, where the last survivors of the attack on «this old village» around 1675 AD moved to.

This Little Ice Age, a cold climatic period mainly located on either side of the North Atlantic Ocean, had a different impact depending on the region. Until the first half of the 19th century, there were cold spells, particularly in summer, which caused major damage. Four lows have been recorded (~1350, 1640, 1820 and 1850), the second corresponding to a period of intense conflict in the Yukon-Kuskokwim delta region where many Yupiit communities were settled. Although sometimes seen as an advantage for Arctic societies, the cooling periods recorded during the Little Ice Age seem to be correlated with periods of more intense conflict. The climatic and environmental impacts on animal populations, salmon in particular, the Yupiit's main food resource alongside marine mammals and deer, need to be clarified. This is one of the objectives set by the YUP'IK archaeological project (C. Houmard dir.)³. The aim of this project is to understand the ways in which Yupiit societies have adapted to climatic and environmental variations in the past, and also to integrate the data recorded and the results obtained into a more general reflection on the notions of sustainable development in these remote Alaskan regions. The village of Quinhagak, along with many other coastal Yupiit villages, is currently facing a rise in sea level, which in some places is already more than 6 metres, according to CReSIS⁴. More frequent flooding linked to the inevitable rise in sea levels is causing severe coastal erosion, which is exacerbated by increasingly severe and frequent autumn and winter storms. The ground, for its part, is also warming and freezing later, accentuating the effects of erosion on coastlines previously protected by pack ice. The Yupiit people, disarmed and unable to fight the devastating effects of global warming on their own, are wondering about their future. In Quinhagak, in particular, where legend has it that the inhabitants move five times in their lifetime, preparations are already underway for the installation of a new village, with all the questions that this move raises, first and foremost about its location. To do this, they need a 'dry', well-drained location, further inland, in a river bend that is large enough and stable enough to accommodate a few thousand people, an airport and a harbour so that they can be supplied by the barge that supplies the village twice a year during the very high tides (March and September). The plane is a faster means of transport, but it is much more expensive and limited in terms of volumes transported. The new site must also be meaningful to the Quinhagak community, located on their territory and close to traditional fishing and hunting grounds. At present, residents are unable to agree on a new location, despite the imminent upheaval ahead.

In the face of these increasingly pressing threats, archaeology has a role to play, not only in recovering and preserving as many remains as possible that have been damaged by erosion and melting permafrost, but also in documenting more accurately the tangible and intangible heritage of this Yup'ik community. The archaeological digs undertaken in recent years, and the returns made to residents after each campaign, have had a particularly beneficial impact on the community of Quinhagak. Ancestral knowledge is rediscovered through the study of material culture and ways of life, both through archaeology and through the testimony of elders. At a time when young people were tending to abandon their past, much to the chagrin of their elders, the archaeological project initiated by Rick Knecht in 2009 enabled some young people to proudly assume their identity and stimulated their desire to reconnect with ancestral traditions, particularly through song and dance⁵. Co-constructed by the Yup'ik community and the University of Aberdeen, this project has gradually become international, bringing together European (Scotland, Estonia, Germany, France) and American (Canada, USA) scientists. A young man from the village came up with the idea of creating an application to translate Yupiit words (from the Yugtun language) into English, thus reviving the use of local dialects. The development of genetic analyses (palaeogenetics and genomics) is also helping to trace the origins of human, plant and animal populations, migratory movements and the evolution of landscapes, particularly in terms of the spread/ reduction of the flora and fauna available and exploited at different periods. The results to come could provide a wealth of information on current issues, particularly on the question of berries collected for consumption, the abundance (and sometimes simply the presence) of which appears to be highly dependent on the vagaries of the weather. A better characterisation of the ways in which the environment has been adapted and exploited in the past⁶can therefore inform the choices to be made in the future. Sustainable development naturally implies best practices in terms of hunting and fishing, health and social issues, on a local, regional and international scale. The Yup'ik people have always been aware of this, but not all decisions are theirs to make. Some depend on provincial and federal governments, such as whether or not to grant fishing licences, which are crucial to the economic model of these remote villages. Through the prism of archaeology, we hope to contribute to a collective international awareness of the fragility of these coastal populations, in Alaska and elsewhere.

1 Ledger P.M., Forbes V., Masson-MacKean E., Hillerdal C., Hamilton W.D., McManus-Fry E., Jorge A., Britton K. et R.A. Knecht, 2018, Three Generations Under One Roof? Bayesian Modeling of Radiocarbon Data from Nunalleq, Yukon-Kuskokwim Delta, Alaska, *American Antiquity*, vol. 83, no. 3, pp. 505-524.

2 Riordan A. et A. Fienup-Riordan, 2013, Erinaput Unguvaniartut. So Our Voice Will Live. Quinhagak History and Oral Traditions, Yupik Languages Edition, Alaska Native Language Center, 413 p

3 The project has the support of the French Ministry of Europe and Foreign Affairs, as well as the French Embassy in the United States via the Villa Albertine, which is associated with the ENGIE Foundation on this programme for the period 2023-2025.

4 Center for Remote Sensing and Integrated Systems https://cresis.ku.edu/research/data/sea_level_rise/index.html

5 Knecht R. et W. Jones, 2019, « The Old Village": Yup'ik Precontact Archaeology and Community-Based Research at the Nunalleq Site, Quinhagak, Alaska, *Etudes/Inuit/Studies*, vol. 43, no. 1-2, pp. 25-52.

6 Masson-MacLean E., Houmard C., Knecht R., Sidéra I., Dobney I. et K. Britton, 2020, Pre-Contact adaptations to the Little Ice Age in Southwest Alaska: New evidence from the Nunalleq site, *Quaternary International*, vol. 549, pp. 130-141.