

A geographical model of the locations of prehistoric shell middens and their vulnerability to the changing coastlines of Frenchman Bay, ME, USA

The coast of Maine is highly exposed to wave action. Native American archaeological sites, like shell middens, are a common occurrence on Maine's coast. Because Maine shell middens are located near the shore, they are becoming increasingly threatened by projected sea-level rise and coastal erosion. This study created a vulnerability index to quantify, out of 99 shell midden sites located in Frenchman Bay, how many are at a high risk of being damaged and which ones, based on whether or not they have been excavated, are at the highest priority level in terms of being preserved. By using geographical models and statistical analyses, a Shell Midden Vulnerability Index was formed which uses geological, geographical, and site specific information (i.e. damage to site) to categorize each shell midden in a priority level. Within my study, it is stated why these shell middens are so important for understanding the past and its people and how this tool can be utilized in further research on similar cases.