## Scientists race to rescue cemetery from ocean

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BARROW, ALASKA — At the edge of the Americas, where the icy Chukchi and Beaufort seas join, archaeologists race against erosion to save an ancient cemetery whose village was long ago taken by the Arctic Ocean.

The people here lived on the treeless frozen land - first in sod-covered pit houses built with driftwood, later in more modern structures - until the 1940s, when their dissolving beachfront and the nearby city of Barrow drained life from the village.

But the natural erosion has quickened in recent years – driven, scientists believe, by warming temperatures churning more wicked winter storms.

Locals knew there were people buried behind where the homes of Nuvuk once stood, but any grave markings have long since disappeared. When human bones began surfacing about a decade ago, archaeologists were called in to retrieve the remains.

The wearing away of Point Barrow may seem of no concern to the residents of South Florida. But scientists say it is a lesson that any coastal area should heed.

"Erosion is not new, it's the rate of erosion we're seeing that is new," said Laura Thomas, the field and lab coordinator on the Nuvuk dig and an employee of the Barrow Arctic Science Consortium. "One year, we lost 20 meters (66 feet)."

Thomas believes the project is two years ahead of the erosion, but funding will end next summer and she's concerned burial sites could be lost.

"We have all of that to do still, and maybe more," Thomas said during a recent June day, pointing behind her to a football-field-size plot of land.

To get to Nuvuk, the archaeology team of about 15 people must ride all-terrain vehicles, first on a washboard dirt-and-gravel road, then onto deep sand. The point is about 10 miles north of Barrow, past plywood hunting shacks and seal, walrus and whale bones that litter the beach.

At the dig site, two tents are set up. One is for lunch; the second houses a "honey pot" – a bucket used as a bathroom.

The team works eight-hour days in the summer, sometimes wrapped in orange marshmallow-puff parkas with fur-trimmed hoods zipped to their bottom lip to keep out freezing temperatures.

They have two armed guards who scan for polar bears on the shore-fast ice, which attaches the frozen Arctic Ocean to land.

About 55 complete "individuals" have been uncovered since the dig began in earnest in 2001. On the day of the summer solstice, June 20, students sat in a 3-foot-deep burial site, where a skeleton had been unearthed the day before.

The project has drawn specialists from around the country because the artifacts found will tell them more about how the ancient people of the Arctic lived and where they came from.

One discovery was of a walrus shoulder blade attached to an animal backbone that scientists believe was used as a shovel.

"For some community members, they don't want their relatives falling into the ocean," said Anne Jensen, a senior scientist with the Ukpeagvik Inupiat Corp., a company whose shareholders are Alaska natives. "The site was originally written off as being recent. After about three years, we found out what was really here."

Claire Alix, an archaeologist from the University of Alaska Fairbanks, worked recently brushing sand from wood jutting out from the 10-foot drop onto the frozen sand shore of the Arctic Ocean.

It's probably just driftwood, she reasoned, but there's a slim chance it could be the floor to an ancient home.

University of Utah anthropologist Dennis O'Rourke is at Nuvuk to extract DNA from small rib samples of the skeletons to compare it with people who lived in other areas of the Arctic.

"It will help us understand how the northern part of the continent was settled," he said. "It will tell us about human adaptability and resiliency."

Thomas said Nuvuk once was bigger than Barrow (population 4,000), but that started to change when white whalers began hunting in the area and a trading station was built in Barrow.

Today, Point Barrow is an area for weekend picnickers, and Thomas and Jensen try to protect burial sites by marking them with small colored flags as they work to uncover what they can.

"The last bit of village fell in 1998," Jensen said. "It was once a mile and a half out into what is now ocean."