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# Scientists Fight University of California to Study Rare Ancient Skeletons

By [Rex Dalton](#) ✉ May 20, 2011 | 12:29 pm | Categories: [Anthropology](#)



SAN DIEGO — Two ancient skeletons uncovered in 1976 on a bluff overlooking the Pacific Ocean, during construction at the home of a University of California chancellor, may be among the most valuable for genetic analysis in the continental United States. Dated between 9,000 and 9,600 years old, the exceptionally preserved bones could potentially produce the oldest complete human genome from the continent.

But only if scientists aren't barred from studying them.

Attempts to unlock the skeletons' genetic secrets are stalled in a dispute pitting UC scientists against their own administration. Five of the scientists wrote with alarm in a letter published May 20 in the journal *Science* that UC administrators aren't allowing studies on the skeletons, which were discovered on property owned by UC San Diego in La Jolla, California.



Before samples can be extracted for genetic analysis, the scientists fear administrators will give the bones to politically powerful local Native Americans who could permanently block study.

“To give them away without study, would be like throwing the genetic crown jewels of the peopling of the Americas in the ocean,” said Eske Willerslev of the University of Copenhagen in Denmark, who is among about a half dozen researchers who have unsuccessfully sought in recent months to sample or study the bones. “It would be a major loss for all, including Native Americans.”

A few studies were done years ago on the skeletons before UC withdrew access to them, but recent technological advances would allow scientists to do much more, including a digital skull calibration and possibly a full genome sequence.

“The potential loss of the La Jolla skeletons would have a profoundly negative impact on our knowledge of the peopling of the Americas,” wrote the authors of the letter, led by Margaret Schoeninger, an anthropologist at UCSD.

*Science* letter co-author Tim White, a prominent paleoanthropologist at UC Berkeley, told Wired.com, “Administrators are doing everything they can to ignore the scientific value of the specimens. They are trying to illegally repatriate them to a lobbyist for a dozen San Diego County tribes.”

UC officials are seeking to provide the skeletons to the Kumeyaay Nation east of San Diego under a complex process guided by the federal [Native American Graves Protection and Repatriation Act](#) (NAGPRA). But critical scientists say NAGPRA requirements aren’t being followed properly, setting the stage for a potential legal battle over the bones.

“This is Kennewick Man II,” White said, referring to the long federal court battle in 2004 when [scientists](#)

[won the right to study bones](#) found in Washington.

In a May 11 letter, Mark Yudof, president of the 10-campus UC system, authorized UCSD chancellor Marye Anne Fox to dispose of the bones — after clarifications are made to a report done under NAGPRA requirements, and other tribes that may be interested in the bones are consulted.

Steve Benegas, the repatriation spokesman for the Kumeyaay nation's 12 tribes, said they are entitled to the bones and to decide about future analysis. Some Native Americans believe scientific research amounts to desecration of remains, and Benegas said he personally is against studies.

“The university has handled this poorly over the years,” he said. “We have no trust in them. They have treated the remains of our ancestors without respect.”



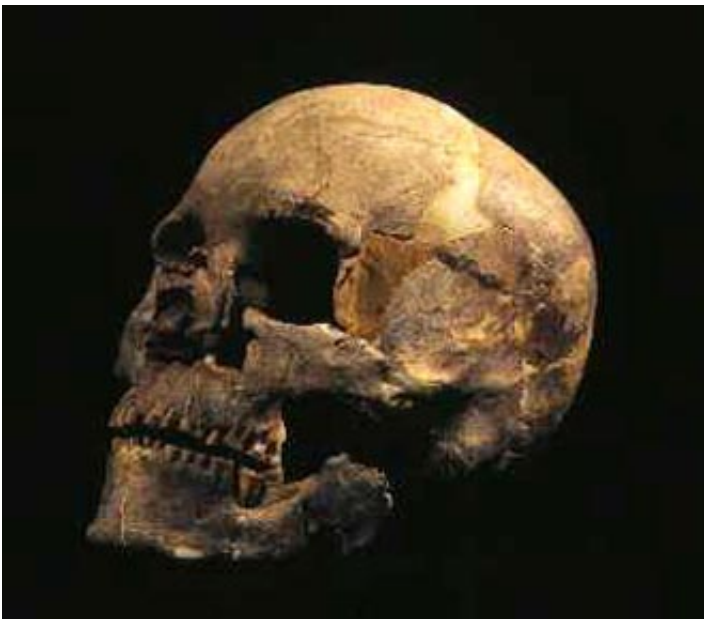
One of the previous analyses done years ago showed the bones have connective tissue and amino acids that are used in cell function. This means it is very likely ancient DNA can be extracted. And two skeletons buried together offers a rare opportunity to compare their genomes to see if they were related.

Genetic reports on human remains this old on the continent are very limited. In 2007, researchers published about 7 percent of the maternally inherited mitochondrial genome of bones found in a cave in southeast Alaska that are about the same age as the La Jolla skeletons. But the full genome of that individual hasn't been sequenced and published, and DNA from bones found in wet caves can be more difficult to extract and analyze.

“The La Jolla skeletons are very special,” said Brian Kemp of Washington State University. Kemp was part of a team that retrieved samples from the Alaska bones before they were repatriated in 2007 to local tribes in an exchange seen as model of cooperation among scientists and Native Americans.

Anthropologist Robert Bettinger of UC Davis, another co-author of the *Science* letter, says he and others would like a similar arrangement for the La Jolla skeletons.

Scientists say UC is overlooking two key points. First, there has been no official determination the bones are actually from ancestors of modern Native Americans. Though many tribes believe their history goes further back, scientists can only confidently trace the ancestry of Native Americans to about 7,000 years ago.



Second, scientific evidence shows skeletons around this age are not always related to those who now live near burial sites. For example, last year Willerslev sequenced the genome of a 5,000-year-old man in Greenland and found he was descended from Siberian ancestors, not today's Greenland tribes.

“It is unscientific to provide them to local people,” said Willerslev.

Since the NAGPRA rules were first issued in 1990, thousands of bones have been repatriated, almost all of which were shown to be culturally affiliated to the tribes that received them. But last year, federal officials issued new NAGPRA rules that make it [easier to return bones and funerary objects](#) that are not culturally affiliated to tribes.

Scientists and museums have been considering a legal challenge to the new rule, fearing the loss of many valuable specimens. The La Jolla skeletons could end up as the case by which that rule is challenged.

UCSD scientists determined the La Jolla skeletons are not culturally affiliated to any tribe. In fact, isotopic analysis done 30 years ago in Schoeninger's lab (and published in 2009) showed the bones reflected a diet of seafood and marine mammals, not terrestrial foods such as nuts and wild fruits like the early Kumeyaay ate.

Schoeninger suspects UC's efforts to give the bones to the tribe stem from a plan to renovate the chancellor's house, and she says that Benegas, the tribe spokesman, told her as much.

UCSD officials want to rebuild the home, also [known as University House](#), because it has become uninhabitable due to structural problems. They have received pledges totaling at least \$6 million for the project from wealthy donors. Earth moving for the renovation is expected to uncover more ancient bones, which could cause costly delays if the tribes make a political or legal issue out of it.

By providing the two skeletons to the Kumeyaay, Schoeninger believes UCSD officials are hoping that refurbishing the home will go smoothly.

When asked about this theory, Benegas chuckled as he told Wired, “We wouldn't be talking if they weren't trying to rebuild the chancellor's house.”

*Images: 1) The chancellor's house at UC San Diego, known as University House. ([Dan Soderberg](#)). 2) The La Jolla skeletons. (Jan Austin/Santa Monica Community College). 3) Excavation of the La Jolla skeletons.*

(photo by Kirby Smith, courtesy of Jeff Bada). 4) One of the La Jolla skulls shortly after excavation. (photo by Kirby Smith, courtesy of Jeff Bada).

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Rex Dalton is a science reporter based in San Diego, California.

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**stevo**

The local tribe has no claim on the bones until they is conclusive proof that they are the ancestors of the local tribe. The bones could be the remains of a tribe wiped out long ago by the local tribe...

[4 hours ago](#) [6 Likes](#)

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**WeThePeople**

How can a tribe claim ownership over something 9000 years old? What's infuriating is that these university big-wigs are so concerned with being politically correct that they give in to these absurd

demands.

[3 hours ago](#) [4 Likes](#)

[Like](#) [Reply](#)



**spAno7**

Wouldn't they need to do DNA tests on the bones in order to see if they're even related to the tribes of that area? That just seems a little ridiculous giving away bones that, potentially, aren't related to those tribes.

[4 hours ago](#) [4 Likes](#)

[Like](#) [Reply](#)



**frantaylor**

We are talking about California here.

Arguments that actually make sense are lost on these people.

[3 hours ago](#) [in reply to spAno7](#)

[Like](#) [Reply](#)



**perspective2**

Another poor decision by University of California President Yudof. It is time the UC President demonstrated leadership that arrests tuition increases. As Californians face foreclosure, unemployment & depressed wages it's time the timid Governor, UC Board of Regents, whining President showed leadership by curbing costs, particularly wages, benefits. As a Californian, I don't care what others earn at private, public universities. If wages are better elsewhere, chancellors, vice chancellors, tenured, non tenured faculty, UCOP should apply for the positions. If wages keep employees committed to UC, leave for the better paying job. The sky above UC will not fall. California suffers from the worst deficit in modern times. UC wages, benefits must reflect California's ability to pay, not what others are paid elsewhere. Campus chancellors, vice chancellors, tenured & non-tenured faculty, UCOP are replaceable by more talented individuals.

Curb UC tuition increases:

No furloughs

18 percent reduction in UCOP salaries & \$50 million cut.

18 percent prune of campus chancellors', vice chancellors' salaries.

15 percent trim of tenured faculty salaries, increased teaching load

10 percent decrease in non-tenured faculty salaries, as well as increase research, teaching load

100% elimination of all Academic Senate, Academic Council costs, wages.

A rose bush blooms after pruning.

The Governor, UC Board of Regents, whining President can bridge the trust gap to the public by offering reassurances that salaries reflect depressed wages in California. The sky above UC has not, will not fall.

Californians are reasonable people. Levy no new taxes until an approved balanced budget: let the Governor/Legislature lead: make the tough-minded (not cold hearted) decisions of elected leadership. Afterwards come to the public for specified, continuing or new taxes.

Thanking you in advance for your partnership & for standing up for Californians, University of California system.

20 minutes ago

[Like](#) [Reply](#)



**Ryan Dufficy**

Potentially the ancestors of these remains could easily be in South America, and the current inhabitants could have been the ones to push them out. Even if they are distantly related (could have been tribes that intermarried) there is no definitive way to prove that the remains belong to their tribe. But with modern P.C. being what it is after the U.S. government nearly wiped out the natives, the pendulum has gone full swing in the opposite direction and we now err on the side of caution rather than upset any minority group. The importance of these bones goes far beyond that of simply studying native american genetics, but rather extends to the whole human "race". Should we return all mummies to the Egyptians because they believed their bodies would be brought to the afterlife once entombed? Or rather use the scientific and cultural knowledge the bodies possess? Within these native american remains we could better determine what background they had genetically, as compared with other sources, and better tell also when asian immigrants (pre-columbus) mixed in with the local populations.

1 hour ago

[Like](#) [Reply](#)



**charlesfrith**, Creative Thinker & Writer

A gullible person would accept the story given why the most interesting bones on the planet cannot be DNA examined. The people who hold that secretive agenda have every incentive in keeping curious people stupid. Fortunately most people aren't curious. They swallow the story they are given.

[1 hour ago](#)

[Like](#)



**Kristina Killgrove**

I'm confused about whether the letter was in Science (as stated) or Nature (as in the link).

[2 hours ago](#)

[Like](#) [Reply](#)



**Joe Rossi**

Probably find out they are related to the Israelites..... hahaha

[4 hours ago](#)

[Like](#) [Reply](#)



**dash2481**

That's just silly. Israelites didn't even exist 9000 years ago. Trolling: you're doing it wrong.

[3 hours ago](#) [in reply to Joe Rossi](#)

[Like](#) [Reply](#)



**Buttons Rock**

He's presenting an absurd scenario to illustrate the equally absurd scenario presented in the article. That's hardly trolling.

Further, Native American tribes didn't exist 9000 years ago either.

[3 hours ago](#) [in reply to dash2481](#)

[Like](#) [Reply](#)



**IceTrey**

There's a site in Texas 15,000 years old.

[2 hours ago](#) [in reply to Buttons Rock](#)

[Like](#) [Reply](#)





stevo

But how do you know the current native tribes are related to them. North America has had several major migration events in the last 15000 years.

[2 hours ago](#) [in reply to IceTrey](#) [1 Like](#)

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