

August 31, 2014

For a break from contemplating the detritus left in the wake of the execrable miscreants in our governments, we spend some time looking at new interpretations of the life and times of Kennewick Man, the 9,000 year old skeleton found 18 years ago in Washington state. First we get the high points from [The Daily Mail, UK](#).

It has been 18 years since two men sneaking into boat races in Washington stumbled on an ancient skeleton in the shallows of the Columbia River. With five broken ribs, several dents in his head and a spear lodged deep into his hip, the 9,000 year-old skeleton, dubbed the Kennewick Man, had suffered in a rough world. Now a book, titled 'Kennewick Man: The Scientific Investigation of an Ancient American Skeleton', provides the most thorough analysis yet of Kennewick Man's appearance, life and ancestors. ...

... Kennewick Man has been at the centre of a decade-long legal battle with Native American tribes and scientists. Tribal leaders who claim the bones are of Native American ancestry want to bury them according to Native American tradition. In 2004, a U.S. Circuit Court of Appeals ruled the remains were not protected by the federal Native American Graves Protection Act because they were too old to credibly establish a link with modern Native Americans. ...

[The Smithsonian Magazine](#) has a more detailed look and even covers the bad behavior of the Army Corps of Engineers.

In the summer of 1996, two college students in Kennewick, Washington, stumbled on a human skull while wading in the shallows along the Columbia River. They called the police. The police brought in the Benton County coroner, Floyd Johnson, who was puzzled by the skull, and he in turn contacted James Chatters, a local archaeologist. Chatters and the coroner returned to the site and, in the dying light of evening, plucked almost an entire skeleton from the mud and sand. They carried the bones back to Chatters' lab and spread them out on a table.

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Thus began the saga of Kennewick Man, one of the oldest skeletons ever found in the Americas and an object of deep fascination from the moment it was discovered. It is among the most contested set of remains on the continents as well. Now, though, after two decades, the dappled, pale brown bones are at last about to come into sharp focus, thanks to a long-awaited, monumental scientific publication next month co-edited by the physical anthropologist Douglas Owsley, of the Smithsonian Institution. No fewer than 48 authors and another 17 researchers, photographers and editors contributed to the 680-page [Kennewick Man: The Scientific Investigation of an Ancient American Skeleton](#) (Texas A&M University Press).

The book recounts the history of discovery, presents a complete inventory of the bones and explores every angle of what they may reveal. Three chapters are devoted to the teeth alone, and another to green stains thought to be left by algae. Together, the findings illuminate this mysterious man's life and support an astounding new theory of the peopling of the Americas. If it

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... In the weeks after the Army engineers announced they would return Kennewick Man to the tribes, Owsley went to work. "I called and others called the corps. They would never return a phone call. I kept expressing an interest in the skeleton to study it—at our expense. All we needed was an afternoon." Others contacted the corps, including members of Congress, saying the remains should be studied, if only briefly, before reburial. This was what NAGPRA in fact required: The remains had to be studied to determine affiliation. If the bones showed no affiliation with a present-day tribe, NAGPRA didn't apply.

But the corps indicated it had made up its mind. Owsley began telephoning his colleagues. "I think they're going to rebury this," he said, "and if that happens, there's no going back. It's gone." So Owsley and several of his colleagues found an attorney, Alan Schneider. Schneider contacted the corps and was also rebuffed. Owsley suggested they file a lawsuit and get an injunction. Schneider warned him: "If you're going to sue the government, you better be in it for the long haul." ...

... Owsley and his group were eventually forced to litigate not just against the corps, but also the Department of the Army, the Department of the Interior and a number of individual government officials. As scientists on modest salaries, they could not begin to afford the astronomical legal bills. Schneider and Barran agreed to work for free, with the faint hope that they might, someday, recover their fees. In order to do that they would have to win the case and prove the government had acted in "bad faith"—a nearly impossible hurdle. The lawsuit dragged on for years. "We never expected them to fight so hard," Owsley says. Schneider says he once counted 93 government attorneys directly involved in the case or cc'ed on documents. ...

... Ultimately, the scientists won the lawsuit. The court ruled in 2002 that the bones were not related to any living tribe: thus NAGPRA did not apply. The judge ordered the corps to make the specimen available to the plaintiffs for study. The government appealed to the Court of Appeals for the Ninth Circuit, which in 2004 again ruled resoundingly in favor of the scientists, writing:

because Kennewick Man's remains are so old and the information about his era is so limited, the record does not permit the Secretary [of the Interior] to conclude reasonably that Kennewick Man shares special and significant genetic or cultural features with presently existing indigenous tribes, people, or cultures.

During the trial, the presiding magistrate judge, John Jelderks, had noted for the record that the corps on multiple occasions misled or deceived the court. He found that the government had indeed acted in "bad faith" and awarded attorney's fees of \$2,379,000 to Schneider and his team. ...

... A vast amount of data was collected in the 16 days Owsley and colleagues spent with the bones. Twenty-two scientists scrutinized the almost 300 bones and fragments. Led by Kari Bruwelheide, a forensic anthropologist at the Smithsonian, they first reassembled the fragile skeleton so they could see it as a whole. They built a shallow box, added a layer of fine sand, and covered that with black velvet; then Bruwelheide laid out the skeleton, bone by bone, shaping the sand underneath to cradle each piece. Now the researchers could address such questions as Kennewick Man's age, height, weight, body build, general health and fitness, and injuries. They could also tell whether he was deliberately buried, and if so, the position of his body in the grave.

Next the skeleton was taken apart, and certain key bones studied intensively. The limb bones and ribs were CT-scanned at the University of Washington Medical Center. These scans used far more radiation than would be safe for living tissue, and as a result they produced detailed, three-dimensional images that allowed the bones to be digitally sliced up any which way. With additional CT scans, the team members built resin models of the skull and other important bones. They made a replica from a scan of the spearpoint in the hip.

As work progressed, a portrait of Kennewick Man emerged. He does not belong to any living human population. Who, then, are his closest living relatives? Judging from the shape of his skull and bones, his closest living relatives appear to be the Moriori people of the Chatham Islands, a remote archipelago 420 miles southeast of New Zealand, as well as the mysterious Ainu people of Japan.

“Just think of Polynesians,” said Owsley.

Not that Kennewick Man himself was Polynesian. This is not Kon-Tiki in reverse; humans had not reached the Pacific Islands in his time period. Rather, he was descended from the same group of people who would later spread out over the Pacific and give rise to modern-day Polynesians. These people were maritime hunter-gatherers of the north Pacific coast; among them were the ancient Jōmon, the original inhabitants of the Japanese Islands. The present-day Ainu people of Japan are thought to be descendants of the Jōmon. Nineteenth-century photographs of the Ainu show individuals with light skin, heavy beards and sometimes light-colored eyes.

Jōmon culture first arose in Japan at least 12,000 years ago and perhaps as early as 16,000 years ago, when the landmasses were still connected to the mainland. These seafarers built boats out of sewn planks of wood. Outstanding mariners and deep-water fishermen, they were among the first people to make fired pottery. ...

... There’s a wonderful term used by anthropologists: “osteobiography,” the “biography of the bones.” Kennewick Man’s osteobiography tells a tale of an eventful life, which a newer radiocarbon analysis puts at having taken place 8,900 to 9,000 years ago. He was a stocky, muscular man about 5 feet 7 inches tall, weighing about 160 pounds. He was right-handed. His age at death was around 40.

Anthropologists can tell from looking at bones what muscles a person used most, because muscle attachments leave marks in the bones: The more stressed the muscle, the more pronounced the mark. For example, Kennewick Man’s right arm and shoulder look a lot like a baseball pitcher’s. He spent a lot of time throwing something with his right hand, elbow bent—no doubt a spear. Kennewick Man once threw so hard, Owsley says, he fractured his glenoid rim—the socket of his shoulder joint. This is the kind of injury that puts a baseball pitcher out of action, and it would have made throwing painful. His left leg was stronger than his right, also a characteristic of right-handed pitchers, who arrest their forward momentum with their left leg. His hands and forearms indicate he often pinched his fingers and thumb together while tightly gripping a small object; presumably, then, he knapped his own spearpoints.

Kennewick Man spent a lot of time holding something in front of him while forcibly raising and lowering it; the researchers theorize he was hurling a spear downward into the water, as seal hunters do. His leg bones suggest he often waded in shallow rapids, and he had bone growths consistent with “surfer’s ear,” caused by frequent immersion in cold water. His knee joints suggest he often squatted on his heels. ...

... The most intriguing injury is the spearpoint buried in his hip. He was lucky: The spear, apparently thrown from a distance, barely missed the abdominal cavity, which would have caused a fatal wound. It struck him at a downward arc of 29 degrees. Given the bone growth around the embedded point, the injury occurred when he was between 15 and 20 years old, and he probably would not have survived if he had been left alone; the researchers conclude that Kennewick Man must have been with people who cared about him enough to feed and nurse him back to health. The injury healed well and any limp disappeared over time, as evidenced by the symmetry of his gluteal muscle attachments. ...

For another change of pace, **Wired** has the scariest theme park rides. This is going to be an awesome summer for thrill seekers. Taller, faster, steeper, and more stomach-dropping amusement park rides are opening across the country. Zip your pockets, take your Dramamine, and check out some of the craziest new record-breaking screamers. We'll be hiding behind the snack bar. ...

... **ZUMANJARO** Six Flags Great Adventure Jackson, New Jersey

Zumanjaro: Drop of Doom will be the world's highest drop ride, rocketing riders up 415 feet, pausing momentarily, then releasing them for a 10-second trip to the bottom at the vomit-inducing speed of 90 mph.

Daily Mail, UK

[The hard life of Kennewick Man - the first American - is revealed: Mysterious 9,000-year-old nomad had cracked ribs, a spear in his hip and a wrecked shoulder](#)

A book, titled 'Kennewick Man: The Scientific Investigation of an Ancient American Skeleton', provides most thorough analysis of Kennewick Man

- 1. It suggests Kennewick Man has ancestors in common with Polynesians***
- 2. For years, it has been believed he was an ancestor of Native American***
- 3. He lived off big-game animals and drank glacial meltwater to survive***
- 4. He had 5 broken ribs, dents in his head and a spear lodged into his hip***
- 5. Genetic testing on Kennewick Man is currently taking place in Denmark***

by Ellie Zolfagharifard

It has been 18 years since two men sneaking into boat races in Washington stumbled on an ancient skeleton in the shallows of the Columbia River.

With five broken ribs, several dents in his head and a spear lodged deep into his hip, the 9,000 year-old skeleton, dubbed the Kennewick Man, had suffered in a rough world.

Now a book, titled 'Kennewick Man: The Scientific Investigation of an Ancient American Skeleton', provides the most thorough analysis yet of Kennewick Man's appearance, life and ancestors



This clay facial reconstruction of Kennewick Man was carefully sculpted around the morphological features of his skull, and lends a deeper understanding of what he may have looked like nearly 9,000 years ago

Its most controversial finding suggests that Kennewick Man has ancestors in common with Polynesians, based on the long, thin shape of his skull.

The origin of Kennewick Man is a key issue as Native American tribes have claimed him as one of their ancestors and have sought to rebury the remains, without further study.

But scientists in the book, which will be published in September, argued that there is no evidence linking any of today's tribes to the skeleton.

The 688-page book also suggests that Kennewick Man was a strong, skilled spear-thrower, living off big-game animals and relying on glacial water meltwater to survive.

THE DECADES-LONG LEGAL BATTLE

Kennewick Man has been at the centre of a decade-long legal battle with Native American tribes and scientists.

Tribal leaders who claim the bones are of Native American ancestry want to bury them according to Native American tradition.

In 2004, a U.S. Circuit Court of Appeals ruled the remains were not protected by the federal Native American Graves Protection Act because they were too old to credibly establish a link with modern Native Americans.

The Burke Museum at the University of Washington has held the remains since 1998.

Despite these findings, tribal leaders still believe Kennewick Man was a Native American.

Called the 'Ancient One' by American Indians, he was 5ft 7 inches tall, weighed 163lbs (74kg) and, despite his injuries, was well-muscled.

His wide-bodied frame helped him navigate the steppe-like habitat of his surroundings along the northwest coast of North America where he hunted and fished.

He likely lived among big-game animals such as deer, pronghorn antelope and bighorn sheep but primarily consumed fish and marine mammals.

This diet, along with Kennewick Man's reliance on glacial meltwater in rivers, is consistent with the lifestyle of a traveller from the northern part of the continent who made his way down the Pacific coast to Washington State.

It is believed the Americas were peopled in multiple migrations, some walking and other rowing, along the coast.

The Kennewick Man, with its resemblance to Asian populations, suggests that a pan-Pacific journey via boat brought some of the first Americans to shore over the Bering Strait.

Kennewick Man's hand, arm and shoulder bones suggest that he was right handed and was adept at flint knapping and throwing spears with an atlatl.

Kennewick Man survived two major injuries during his life, including six broken ribs from blunt-force trauma to the chest and an adversarial encounter with a spear.

The resulting impact from the spear left a stone projectile point permanently lodged in Kennewick Man's pelvis for multiple years during his lifetime.



A spear point embedded in Kennewick Man's right hip gave researchers the first clue that he belonged to an ancient human population. The spear point likely became lodged following a fight

WHAT DO WE KNOW ABOUT KENNEWICK MAN?

Kennewick Man was about 40 years old at the time of his death, the cause of which remains a mystery.

His skull closely resembles Pacific Rim populations such as the Ainu of Japan and Polynesians, reflecting deep roots in coastal Asian groups.

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As well as looking at Kennewick Man's life and appearance, the book sheds light on other ancient and highly unique burials.

There is a chapter about On Your Knees Cave in southeast Alaska where the bear-scavenged remains of a 10,200-year-old young adult male were found, and another featuring Horn Shelter

2 in central Texas, which contained skeletons of a young child and man buried with distinctive cultural items that identify the man as a shaman.

The study of these sites provide a broader context for understanding Kennewick Man's place in the Paleoamerican world, a time period that has produced few well-preserved, nearly complete skeletons.

Professor Owsley and his colleagues plan to continue their study of Kennewick Man in the future to answer remaining questions about his identity.

'The human skeleton teaches us a wealth of information about human population dynamics across time,' said Douglas Owsley at the Smithsonian Institution and co-editor of the book.

'Kennewick Man has become a teacher for all ages, acting as an informative ambassador to the ancient past in North America.'

Scientists have attempted to reconstruct the life of Kennewick Man before, but this book is the first to combine all the research after scientists sued for access to the bones.

Genetic testing on Kennewick Man is currently taking place in Denmark, and the results of that study could help flesh out even more details of this mysterious skeleton.



Forensic anthropologist Kari Bruwelheide arranges Kennewick Man's remains, which revealed that he was tall for his time and used his wide-bodied frame to navigate the Pacific northwest coast as a traveller and hunter

The Smithsonian

[The Kennewick Man Finally Freed to Share His Secrets](#)

He's the most important human skeleton ever found in North America—and here, for the first time, is his story

By [Douglas Preston](#)

In the summer of 1996, two college students in Kennewick, Washington, stumbled on a human skull while wading in the shallows along the Columbia River. They called the police. The police brought in the Benton County coroner, Floyd Johnson, who was puzzled by the skull, and he in turn contacted James Chatters, a local archaeologist. Chatters and the coroner returned to the

site and, in the dying light of evening, plucked almost an entire skeleton from the mud and sand. They carried the bones back to Chatters' lab and spread them out on a table.

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Some 20 years before his death, Kennewick Man took a spearpoint to the hip that remains lodged in his bone. Other injuries include skull fractures, perhaps from rock throwing, and broken ribs that never fully healed.



Before eroding out, Kennewick Man lay faceup with his head upstream. Scientists concluded from his position (right, at the discovery site but deeper into the bank) that his body was buried intentionally.

The storm of controversy erupted when the Army Corps of Engineers, which managed the land where the bones had been found, learned of the radiocarbon date. The corps immediately claimed authority—officials there would make all decisions related to handling and access—and demanded that all scientific study cease. Floyd Johnson protested, saying that as county coroner he believed he had legal jurisdiction. The dispute escalated, and the bones were sealed in an evidence locker at the sheriff's office pending a resolution.

“At that point,” Chatters recalled to me in a recent interview, “I knew trouble was coming.” It was then that he called Owsley, a curator at the National Museum of Natural History and a legend in the community of physical anthropologists. He has examined well over 10,000 sets of human remains during his long career. He had helped identify human remains for the CIA, the FBI, the State Department and various police departments, and he had worked on mass graves in Croatia and elsewhere. He helped reassemble and identify the dismembered and burned bodies from the Branch Davidian compound in Waco, Texas. Later, he did the same with the Pentagon victims of the 9/11 terrorist attack. Owsley is also a specialist in ancient American remains.

“You can count on your fingers the number of ancient, well-preserved skeletons there are” in North America, he told me, remembering his excitement at first hearing from Chatters. Owsley and Dennis Stanford, at that time chairman of the Smithsonian’s anthropology department, decided to pull together a team to study the bones. But corps attorneys showed that federal law did, in fact, give them jurisdiction over the remains. So the corps seized the bones and locked them up at the Department of Energy’s Pacific Northwest National Laboratory, often called Battelle for the organization that operates the lab.

At the same time, a coalition of Columbia River Basin Indian tribes and bands claimed the skeleton under a 1990 law known as the Native American Graves Protection and Repatriation Act, or NAGPRA. The tribes demanded the bones for reburial. “Scientists have dug up and studied Native Americans for decades,” a spokesman for the Umatilla tribe, Armand Minthorn, wrote in 1996. “We view this practice as desecration of the body and a violation of our most deeply-held religious beliefs.” The remains, the tribe said, were those of a direct tribal ancestor. “From our oral histories, we know that our people have been part of this land since the beginning of time. We do not believe that our people migrated here from another continent, as the scientists do.” The coalition announced that as soon as the corps turned the skeleton over to them, they would bury it in a secret location where it would never be available to science. The corps made it clear that, after a monthlong public comment period, the tribal coalition would receive the bones.

The tribes had good reason to be sensitive. The early history of museum collecting of Native American remains is replete with horror stories. In the 19th century, anthropologists and collectors looted fresh Native American graves and burial platforms, dug up corpses and even decapitated dead Indians lying on the field of battle and shipped the heads to Washington for study. Until NAGPRA, museums were filled with American Indian remains acquired without regard for the feelings and religious beliefs of native people. NAGPRA was passed to redress this history and allow tribes to reclaim their ancestors’ remains and some artifacts. The Smithsonian, under the National Museum of the American Indian Act, and other museums under NAGPRA, have returned (and continue to return) many thousands of remains to tribes. This is being done with the crucial help of anthropologists and archaeologists—including Owsley, who has been instrumental in repatriating remains from the Smithsonian’s collection. But in the case of Kennewick, Owsley argued, there was no evidence of a relationship with any existing tribes. The skeleton lacked physical features characteristic of Native Americans.

In the weeks after the Army engineers announced they would return Kennewick Man to the tribes, Owsley went to work. “I called and others called the corps. They would never return a phone call. I kept expressing an interest in the skeleton to study it—at our expense. All we needed was an afternoon.” Others contacted the corps, including members of Congress, saying the remains should be studied, if only briefly, before reburial. This was what NAGPRA in fact required: The remains *had* to be studied to determine affiliation. If the bones showed no affiliation with a present-day tribe, NAGPRA didn’t apply.

But the corps indicated it had made up its mind. Owsley began telephoning his colleagues. “I think they’re going to rebury this,” he said, “and if that happens, there’s no going back. It’s gone.” So Owsley and several of his colleagues found an attorney, Alan Schneider. Schneider contacted the corps and was also rebuffed. Owsley suggested they file a lawsuit and get an injunction. Schneider warned him: “If you’re going to sue the government, you better be in it for the long haul.”

Owsley assembled a group of eight plaintiffs, prominent physical anthropologists and archaeologists connected to leading universities and museums. But no institution wanted anything to do with the lawsuit, which promised to attract negative attention and be hugely expensive. They would have to litigate as private citizens. “These were people,” Schneider said to me later, “who had to be strong enough to stand the heat, knowing that efforts might be made to destroy their careers. And efforts were made.”

When Owsley told his wife, Susan, that he was going to sue the government of the United States, her first response was: “Are we going to lose our home?” He said he didn’t know. “I just felt,” Owsley told me in a recent interview, “this was one of those extremely rare and important discoveries that come once in a lifetime. If we lost it”—he paused. “Unthinkable.”

Working like mad, Schneider and litigating partner Paula Barran filed a lawsuit. With literally hours to go, a judge ordered the corps to hold the bones until the case was resolved.

When word got out that the eight scientists had sued the government, criticism poured in, even from colleagues. The head of the Society for American Archaeology tried to get them to drop the lawsuit. Some felt it would interfere with the relationships they had built with Native American tribes. But the biggest threat came from the Justice Department itself. Its lawyers contacted the Smithsonian Institution warning that Owsley and Stanford might be violating “criminal conflict of interest statutes which prohibit employees of the United States” from making claims against the government.

“I operate on a philosophy,” Owsley told me, “that if they don’t like it, I’m sorry: I’m going to do what I believe in.” He had wrestled in high school and, even though he often lost, he earned the nickname “Scrapper” because he never quit. Stanford, a husky man with a full beard and suspenders, had roped in rodeos in New Mexico and put himself through graduate school by farming alfalfa. They were no pushovers. “The Justice Department squeezed us really, really hard,” Owsley recalled. But both anthropologists refused to withdraw, and the director of the National Museum of Natural History at the time, Robert W. Fri, strongly supported them even over the objections of the Smithsonian’s general counsel. The Justice Department backed off.

Owsley and his group were eventually forced to litigate not just against the corps, but also the Department of the Army, the Department of the Interior and a number of individual government officials. As scientists on modest salaries, they could not begin to afford the astronomical legal bills. Schneider and Barran agreed to work for free, with the faint hope that they might, someday, recover their fees. In order to do that they would have to win the case and prove the government had acted in “bad faith”—a nearly impossible hurdle. The lawsuit dragged on for years. “We never expected them to fight so hard,” Owsley says. Schneider says he once counted 93 government attorneys directly involved in the case or cc’ed on documents.

Meanwhile, the skeleton, which was being held in trust by the corps, first at Battelle and later at the Burke Museum of Natural History and Culture at the University of Washington in Seattle, was badly mishandled and stored in “substandard, unsafe conditions,” according to the scientists. In the storage area where the bones were (and are) being kept at the Burke Museum, records show there have been wide swings in temperature and humidity that, the scientists say, have damaged the specimen. When *Smithsonian* asked about the scientists’ concerns, the corps disputed that the environment is unstable, pointing out that expert conservators and museum personnel say that “gradual changes are to be expected through the seasons and do not adversely affect the collection.”

Somewhere in the move to Battelle, large portions of both femurs disappeared. The FBI launched an investigation, focusing on James Chatters and Floyd Johnson. It even went so far as to give Johnson a lie detector test; after several hours of accusatory questioning, Johnson, disgusted, pulled off the wires and walked out. Years later, the femur bones were found in the county coroner's office. The mystery of how they got there has never been solved.

The scientists asked the corps for permission to examine the stratigraphy of the site where the skeleton had been found and to look for grave goods. Even as Congress was readying a bill to require the corps to preserve the site, the corps dumped a million pounds of rock and fill over the area for erosion control, ending any chance of research.

I asked Schneider why the corps so adamantly resisted the scientists. He speculated that the corps was involved in tense negotiations with the tribes over a number of thorny issues, including salmon fishing rights along the Columbia River, the tribes' demand that the corps remove dams and the ongoing, hundred-billion-dollar cleanup of the vastly polluted Hanford nuclear site. Schneider says that a corps archaeologist told him "they weren't going to let a bag of old bones get in the way of resolving other issues with the tribes."

Asked about its actions in the Kennewick Man case, the corps told *Smithsonian*: "The United States acted in accordance with its interpretation of NAGPRA and its concerns about the safety and security of the fragile, ancient human remains."

Ultimately, the scientists won the lawsuit. The court ruled in 2002 that the bones were not related to any living tribe: thus NAGPRA did not apply. The judge ordered the corps to make the specimen available to the plaintiffs for study. The government appealed to the Court of Appeals for the Ninth Circuit, which in 2004 again ruled resoundingly in favor of the scientists, writing:

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During the trial, the presiding magistrate judge, John Jelderks, had noted for the record that the corps on multiple occasions misled or deceived the court. He found that the government had indeed acted in "bad faith" and awarded attorney's fees of \$2,379,000 to Schneider and his team.

"At the bare minimum," Schneider told me, "this lawsuit cost the taxpayers \$5 million."

Owsley and the collaborating scientists presented a plan of study to the corps, which was approved after several years. And so, almost ten years after the skeleton was found, the scientists were given 16 days to examine it. They did so in July of 2005 and February of 2006.

From these studies, presented in superabundant detail in the new book, we now have an idea who Kennewick Man was, how he lived, what he did and where he traveled. We know how he was buried and then came to light. Kennewick Man, Owsley believes, belongs to an ancient population of seafarers who were America's original settlers. They did not look like Native Americans. The few remains we have of these early people show they had longer, narrower skulls with smaller faces. These mysterious people have long since disappeared.

To get to Owsley's office at the National Museum of Natural History, you must negotiate a warren of narrow corridors illuminated by fluorescent strip lighting and lined with specimen cases. When his door opens, you are greeted by Kennewick Man. The reconstruction of his head is striking—rugged, handsome and weather-beaten, with long hair and a thick beard. A small scar puckers his left forehead. His determined gaze is powerful enough to stop you as you enter. This is a man with a history.

Kennewick Man is surrounded on all sides by tables laid out with human skeletons. Some are articulated on padded counters, while others rest in metal trays, the bones arranged as precisely as surgeon's tools before an operation. These bones represent the forensic cases Owsley is currently working on.

"This is a woman," he said, pointing to the skeleton to the left of Kennewick Man. "She's young. She was a suicide, not found for a long time." He gestured to the right. "And this is a homicide. I know there was physical violence. She has a fractured nose, indicating a blow to the face. The detective working the case thinks that if we can get a positive ID, the guy they have will talk. And we have a positive ID." A third skeleton belonged to a man killed while riding an ATV, his body not found for six months. Owsley was able to assure the man's relatives that he died instantly and didn't suffer. "In doing this work," he said, "I hope to speak for the person who can no longer speak."

Owsley is a robust man, of medium height, 63 years old, graying hair, glasses; curiously, he has the same purposeful look in his eyes as Kennewick Man. He is not into chitchat. He grew up in Lusk, Wyoming, and he still radiates a frontier sense of determination; he is the kind of person who will not respond well to being told what he can't do. He met Susan on the playground when he was 7 years old and remains happily married. He lives in the country, on a farm where he grows berries, has an orchard and raises bees. He freely admits he is "obsessive" and "will work like a dog" until he finishes a project. "I thought this was normal," he said, "until it was pointed out to me it wasn't." I asked if he was stubborn, as evidenced by the lawsuit, but he countered: "I would say I'm driven—by curiosity." He added, "Sometimes you come to a skeleton that wants to talk to you, that whispers to you, *I want to tell my story*. And that was Kennewick Man."

A vast amount of data was collected in the 16 days Owsley and colleagues spent with the bones. Twenty-two scientists scrutinized the almost 300 bones and fragments. Led by Kari Bruwelheide, a forensic anthropologist at the Smithsonian, they first reassembled the fragile skeleton so they could see it as a whole. They built a shallow box, added a layer of fine sand, and covered that with black velvet; then Bruwelheide laid out the skeleton, bone by bone, shaping the sand underneath to cradle each piece. Now the researchers could address such questions as Kennewick Man's age, height, weight, body build, general health and fitness, and injuries. They could also tell whether he was deliberately buried, and if so, the position of his body in the grave.

Next the skeleton was taken apart, and certain key bones studied intensively. The limb bones and ribs were CT-scanned at the University of Washington Medical Center. These scans used far more radiation than would be safe for living tissue, and as a result they produced detailed, three-dimensional images that allowed the bones to be digitally sliced up any which way. With additional CT scans, the team members built resin models of the skull and other important bones. They made a replica from a scan of the spearpoint in the hip.

As work progressed, a portrait of Kennewick Man emerged. He does not belong to any living human population. Who, then, are his closest living relatives? Judging from the shape of his skull and bones, his closest living relatives appear to be the Moriori people of the Chatham Islands, a remote archipelago 420 miles southeast of New Zealand, as well as the mysterious Ainu people of Japan.

“Just think of Polynesians,” said Owsley.

Not that Kennewick Man himself was Polynesian. This is not Kon-Tiki in reverse; humans had not reached the Pacific Islands in his time period. Rather, he was descended from the same group of people who would later spread out over the Pacific and give rise to modern-day Polynesians. These people were maritime hunter-gatherers of the north Pacific coast; among them were the ancient Jōmon, the original inhabitants of the Japanese Islands. The present-day Ainu people of Japan are thought to be descendants of the Jōmon. Nineteenth-century photographs of the Ainu show individuals with light skin, heavy beards and sometimes light-colored eyes.

Jōmon culture first arose in Japan at least 12,000 years ago and perhaps as early as 16,000 years ago, when the landmasses were still connected to the mainland. These seafarers built boats out of sewn planks of wood. Outstanding mariners and deep-water fishermen, they were among the first people to make fired pottery.

The discovery of Kennewick Man adds a major piece of evidence to an alternative view of the peopling of North America. It, along with other evidence, suggests that the Jōmon or related peoples were the original settlers of the New World. If correct, the conclusion upends the traditional view that the first Americans came through central Asia and walked across the Bering Land Bridge and down through an ice-free corridor into North America.

Sometime around 15,000 years ago, the new theory goes, coastal Asian groups began working their way along the shoreline of ancient Beringia—the sea was much lower then—from Japan and Kamchatka Peninsula to Alaska and beyond. This is not as crazy a journey as it sounds. As long as the voyagers were hugging the coast, they would have plenty of fresh water and food. Cold-climate coasts furnish a variety of animals, from seals and birds to fish and shellfish, as well as driftwood, to make fires. The thousands of islands and their inlets would have provided security and shelter. To show that such a sea journey was possible, in 1999 and 2000 an American named Jon Turk paddled a kayak from Japan to Alaska following the route of the presumed Jōmon migration. Anthropologists have nicknamed this route the “Kelp Highway.”

“I believe these Asian coastal migrations were the first,” said Owsley. “Then you’ve got a later wave of the people who give rise to Indians as we know them today.”

What became of those pioneers, Kennewick Man’s ancestors and companions? They were genetically swamped by much larger—and later—waves of travelers from Asia and disappeared as a physically distinct people, Owsley says. These later waves may have interbred with the first settlers, diluting their genetic legacy. A trace of their DNA still can be detected in some Native American groups, though the signal is too weak to label the Native Americans “descendants.”

Whether this new account of the peopling of North America will stand up as more evidence comes in is not yet known. The bones of a 13,000-year-old teenage girl recently discovered in an underwater cave in Mexico, for example, are adding to the discussion. James Chatters, the first archaeologist to study Kennewick and a participant in the full analysis, reported earlier this

year, along with colleagues, that the girl's skull appears to have features in common with that of Kennewick Man and other Paleo-Americans, but she also possesses specific DNA signatures suggesting she shares female ancestry with Native Americans.

Kennewick Man may still hold a key. The first effort to extract DNA from fragments of his bone failed, and the corps so far hasn't allowed a better sample to be taken. A second effort to plumb the old fragments is underway at a laboratory in Denmark.

There's a wonderful term used by anthropologists: "osteobiography," the "biography of the bones." Kennewick Man's osteobiography tells a tale of an eventful life, which a newer radiocarbon analysis puts at having taken place 8,900 to 9,000 years ago. He was a stocky, muscular man about 5 feet 7 inches tall, weighing about 160 pounds. He was right-handed. His age at death was around 40.

Anthropologists can tell from looking at bones what muscles a person used most, because muscle attachments leave marks in the bones: The more stressed the muscle, the more pronounced the mark. For example, Kennewick Man's right arm and shoulder look a lot like a baseball pitcher's. He spent a lot of time throwing something with his right hand, elbow bent—no doubt a spear. Kennewick Man once threw so hard, Owsley says, he fractured his glenoid rim—the socket of his shoulder joint. This is the kind of injury that puts a baseball pitcher out of action, and it would have made throwing painful. His left leg was stronger than his right, also a characteristic of right-handed pitchers, who arrest their forward momentum with their left leg. His hands and forearms indicate he often pinched his fingers and thumb together while tightly gripping a small object; presumably, then, he knapped his own spearpoints.

Kennewick Man spent a lot of time holding something in front of him while forcibly raising and lowering it; the researchers theorize he was hurling a spear downward into the water, as seal hunters do. His leg bones suggest he often waded in shallow rapids, and he had bone growths consistent with "surfer's ear," caused by frequent immersion in cold water. His knee joints suggest he often squatted on his heels. I like to think he might have been a storyteller, enthraling his audience with tales of far-flung travels.

Many years before Kennewick Man's death, a heavy blow to his chest broke six ribs. Because he used his right hand to throw spears, five broken ribs on his right side never knitted together. This man was one tough dude.

The scientists also found two small depression fractures on his cranium, one on his forehead and the other farther back. These dents occur on about half of all ancient American skulls; what caused them is a mystery. They may have come from fights involving rock throwing, or possibly accidents involving the whirling of a bola. This ancient weapon consisted of two or more stones connected by a cord, which were whirled above the head and thrown at birds to entangle them. If you don't swing a bola just right, the stones can whip around and smack you. Perhaps a youthful Kennewick Man learned how to toss a bola the hard way.

The most intriguing injury is the spearpoint buried in his hip. He was lucky: The spear, apparently thrown from a distance, barely missed the abdominal cavity, which would have caused a fatal wound. It struck him at a downward arc of 29 degrees. Given the bone growth around the embedded point, the injury occurred when he was between 15 and 20 years old, and he probably would not have survived if he had been left alone; the researchers conclude that

Kennewick Man must have been with people who cared about him enough to feed and nurse him back to health. The injury healed well and any limp disappeared over time, as evidenced by the symmetry of his gluteal muscle attachments. There's undoubtedly a rich story behind that injury. It might have been a hunting accident or a teenage game of chicken gone awry. It might have happened in a fight, attack or murder attempt.

Much to the scientists' dismay, the corps would not allow the stone to be analyzed, which might reveal where it was quarried. "If we knew where that stone came from," said Stanford, the Smithsonian anthropologist, "we'd have a pretty good idea of where that guy was when he was a young man." A CT scan revealed that the point was about two inches long, three-quarters of an inch wide and about a quarter-inch thick, with serrated edges. In his analysis, Stanford wrote that while he thought Kennewick Man had probably received the injury in America, "an Asian origin of the stone is possible."

The food we eat and the water we drink leave a chemical signature locked into our bones, in the form of different atomic variations of carbon, nitrogen and oxygen. By identifying them, scientists can tell what a person was eating and drinking while the bone was forming. Kennewick Man's bones were perplexing. Even though his grave lies 300 miles inland from the sea, he ate none of the animals that abounded in the area. On the contrary, for the last 20 or so years of his life he seems to have lived almost exclusively on a diet of marine animals, such as seals, sea lions and fish. Equally baffling was the water he drank: It was cold, glacial meltwater from a high altitude. Nine thousand years ago, the closest marine coastal environment where one could find glacial meltwater of this type was Alaska. The conclusion: Kennewick Man was a traveler from the far north. Perhaps he traded fine knapping stones over hundreds of miles.

Although he came from distant lands, he was not an unwelcome visitor. He appears to have died among people who treated his remains with care and respect. While the researchers say they don't know how he died—yet—Owsley did determine that he was deliberately buried in an extended, prone position, faceup, the head slightly higher than the feet, with the chin pressed on the chest, in a grave that was about two and a half feet deep. Owsley deduced this information partly by mapping the distribution of carbonate crust on the bones, using a magnifying lens. Such a crust is heavier on the underside of buried bones, betraying which surfaces were down and which up. The bones showed no sign of scavenging or gnawing and were deliberately buried beneath the topsoil zone. From analyzing algae deposits and water-wear marks, the team determined which bones were washed out of the embankment first and which fell out last. Kennewick Man's body had been buried with his left side toward the river and his head upstream.

The most poignant outcome? The researchers brought Kennewick Man's features back to life. This process is nothing like the computerized restoration seen in the television show *Bones*. To turn a skull into a face is a time-consuming, handcrafted procedure, a marriage of science and art. Skeletal anatomists, modelmakers, forensic and figurative sculptors, a photographic researcher and a painter toiled many months to do it.

The first stage involved plotting dozens of points on a cast of the skull and marking the depth of tissue at those points. (Forensic anatomists had collected tissue-depth data over the years, first by pushing pins into the faces of cadavers, and later by using ultrasound and CT scans.) With the points gridded out, a forensic sculptor layered clay on the skull to the proper depths.

The naked clay head was then taken to StudioEIS in Brooklyn, which specializes in reconstructions for museums. There, sculptors aged his face, adding wrinkles and a touch of weathering, and put in the scar from the forehead injury. Using historic photographs of Ainu and Polynesians as a reference, they sculpted the fine, soft-tissue details of the lips, nose and eyes, and gave him a facial expression—a resolute, purposeful gaze consistent with his osteobiography as a hunter, fisherman and long-distance traveler. They added a beard like those commonly found among the Ainu. As for skin tone, a warm brown was chosen, to account for his natural color deepened by the harsh effects of a life lived outdoors. To prevent too much artistic license from creeping into the reconstruction, every stage of the work was reviewed and critiqued by physical anthropologists.

“I look at him every day,” Owsley said to me. “I’ve spent ten years with this man trying to better understand him. He’s an ambassador from that ancient time period. And man, did he have a story.”

Today, the bones remain in storage at the Burke Museum, and the tribes continue to believe that Kennewick Man is their ancestor. They want the remains back for reburial. The corps, which still controls the skeleton, denied Owsley’s request to conduct numerous tests, including a histological examination of thin, stained sections of bone to help fix Kennewick Man’s age. Chemical analyses on a lone tooth would enable the scientists to narrow the search for his homeland by identifying what he ate and drank as a child. A tooth would also be a good source of DNA. Biomolecular science is advancing so rapidly that within five to ten years it may be possible to know what diseases Kennewick Man suffered from and what caused his death.

Today’s scientists still have questions for this skeleton, and future scientists will no doubt have new ones. Kennewick Man has more to tell.

Wired

[5 New Record-Breaking Rides That Will Terrify You This Summer](#)

by Elise Craig

This is going to be an awesome summer for thrill seekers. Taller, faster, steeper, and more stomach-dropping amusement park rides are opening across the country. Zip your pockets, take your Dramamine, and check out some of the craziest new record-breaking screamers. We’ll be hiding behind the snack bar.



GOLIATH Six Flags Great America Gurnee, Illinois

It's a wooden roller coaster, but steel layers in the track make possible the tallest, steepest drop (180 feet, 85 degrees) and fastest ride (72 mph) among its wooden brethren.



SKYSCREAMER Six Flags New England Agawam, Massachusetts

This vertiginous version of the swing ride will dangle riders' legs 400 feet up, spinning them in a circle till they hit 40 mph. Be warned: Six Flags says "only the birds will hear you scream."



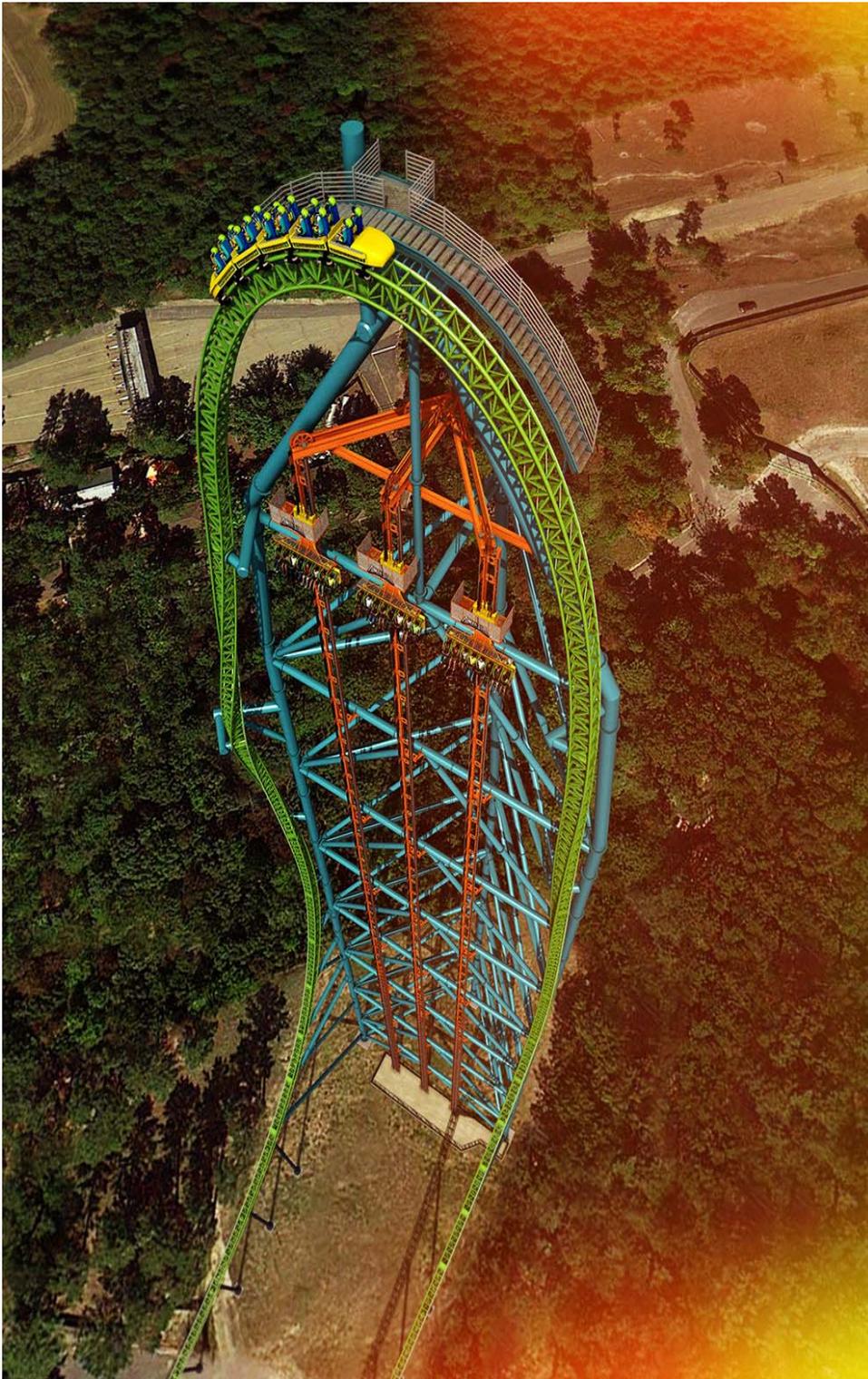
VERRÜCKT Schlitterbahn Kansas City, Kansas

At 17 stories, this waterslide is taller than Niagara Falls. Four riders hop on a raft and plunge at speeds that could exceed 65 mph, whooshing to the bottom, then up five stories—to drop again. Verrückt? German for *insane*.



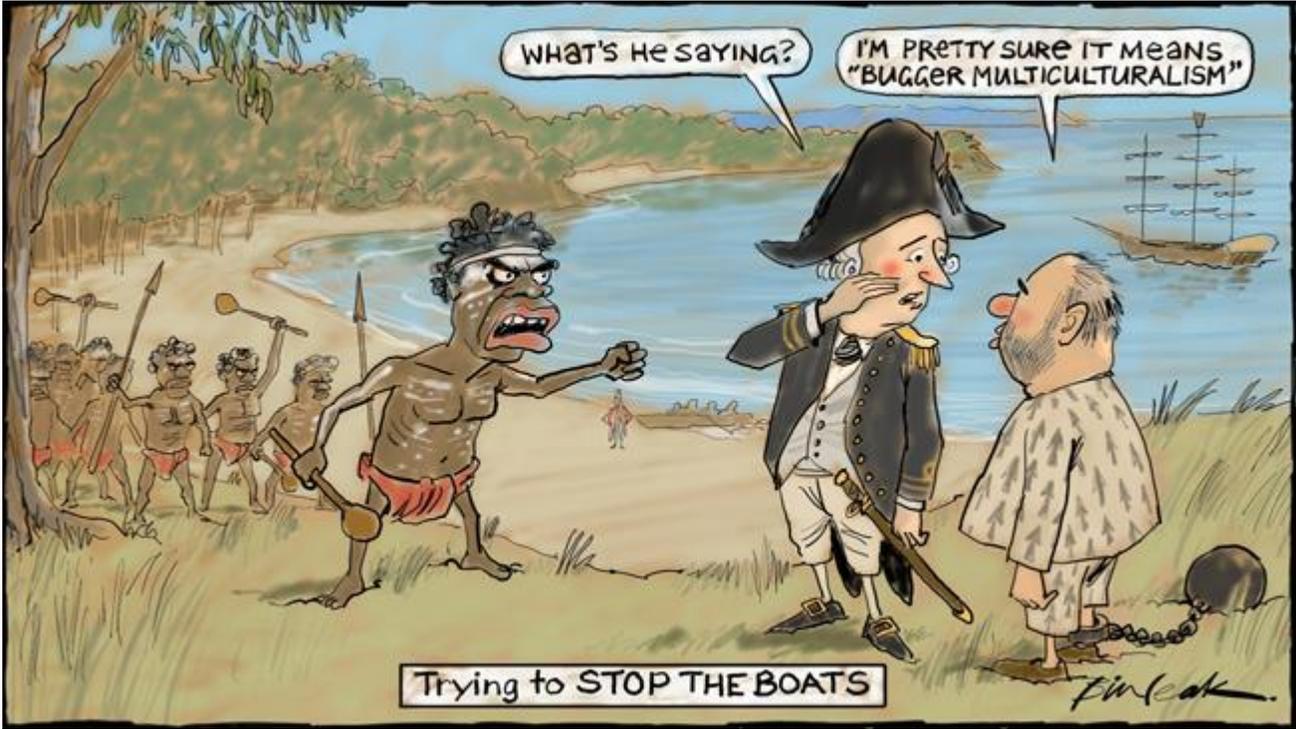
BANSHEE King's Island Mason, Ohio

Tear through seven inversions across 4,124 feet of track. It's the world's longest inverted coaster, complete with a spiral and a zero-G roll. Hello, lunch! It's nice to see you again.



ZUMANJARO Six Flags Great Adventure Jackson, New Jersey

Zumanjaro: Drop of Doom will be the world's highest drop ride, rocketing riders up 415 feet, pausing momentarily, then releasing them for a 10-second trip to the bottom at the vomit-inducing speed of 90 mph.



" I just loved your *Potatoes O'Squanto !* "

