The Color Of Bones

How a 9,000-year-old skeleton called Kennewick Man sparked the strangest case of racial profiling yet.

By Scott L. Malcomson

When Will Thomas and Dave Deacy waded along the western shore of the Columbia River one hot Sunday afternoon in 1996, they were not expecting to spark a crisis in American anthropology, or fuel a debate over the peopling of the Americas or further poison relations between Native Americans and the rest of society. The young friends were trying to sneak into the Water Follies, an annual event for residents of Richland, Kennewick and Pasco, three riverside Washington towns just north of Oregon that are known as the Tri-Cities. Then Thomas hit something hard and round with his foot. He picked it up and saw that it was a skull. Thomas and Deacy stashed it in some bushes, then turned their attention to the final Columbia Cup hydroplane race, the highlight of the follies.

After the race, Thomas and Deacy returned to the skull. They took the skull to a law-enforcement officer; the sheriff’s office gave it to other bones found at the site to the Benton County coroner, Floyd Johnson. The coroner called James Chatters, a forensic anthropologist who runs a business, Applied Paleoscience, from a ground-floor room in his modest Richland home. He thought the skull was of a white man in his 50’s who had died 100 years ago or more. However, the man had an ancient-looking stone projectile stuck in his right hip, which has not been common among whites for ages. He sent part of one finger bone away for carbon dating. The news came back that whoever this man was, he had died about 9,000 years ago. Dave Deacy told The Tri-City Herald, “It’s hard to imagine someone that old in the Columbia Basin.”

The effort to imagine Kennewick Man, as he came to be called, had been going on ever since, in what must be the strangest instance yet of racial profiling. None of the participants in the Kennewick saga relished using the language of race, yet it seems to crop up at every juncture. Local Native American leaders imagine Kennewick Man as an ancestor and want to rebury him as soon as possible. But because no one can assert an exclusive tie to that strip of the Columbia River — and because the bones are so old — the Native American claim quickly becomes more “racial” than tribal. Scientists interested in studying Kennewick Man have sometimes abandoned caution in describing what one anthropologist called a 9,000-year-old “white person.” So enough, the media spread far and wide the possibility of a European wandering across North America many millennia ahead of schedule.

It is as if we cannot help thinking in terms of race even when we don’t want to. “History offered a feeble and delusive smile at the sound of the word race,” Henry Adams wrote back in 1918. “Evolutionists and ethnologists disputed its very existence; no one knew what to make of it yet, without the clue, history was a fairy tale.” Race has come to be the concept we use to make sense of our world, but the line between “making sense” and just making things up, between reasonableness and fantasy, has always been vague in racial matters. In the rather ghoulish case of Kennewick Man, that line has all but disappeared.

FROM YOUNG WILL THOMAS ONWARD, THE KENNEWICK STORY HAS been one of chance occurrences and unintended consequences. Because that bit of shoreline where the skeleton was found is property controlled
by the Army Corps of Engineers, the remains came under the Native American Graves Protection and Repatriation Act of 1990 (Nagpra). The act requires federal agencies to consult with local tribes when remains are found on federal land. Five native groups expressed an interest to the corps: the Confederated Tribes of the Umatilla Indian Reservation, the Nez Percé, the Yakima Indian Nation, the Wanapum band and the Confederated Tribes of the Colville Reservation.

By that time, local news coverage had made it clear that if one or more tribes gained possession of Kennewick Man, the remains would probably not be studied, or if they were, it would be at the Indians’ discretion. Soon, new claimants emerged. Several whites who wanted the bones to be studied filed claims with the corps, using possible ancestry as a cover for gaining possession. A few other claimants said they thought Kennewick Man actually was their ancestor, on dim ethnic grounds (Scandinavian, Celt). And then there was the Asatru Folk Assembly in Northern California, which is seeking to revive (or invent) a quasi-Norse tribal identity.

"There's a perception among the Indians that this is a joke," Stephen McNallen, founder of Asatru, told me over preprandial wine, cheese and crackers at his home in the woods near Nevada City, about 60 miles from Sacramento. But the Asatru claim on Kennewick Man—that he might have been European and that scientists should be permitted to determine whether he was, and if he was, the Asatru, a loosely affiliated group, should be permitted to bury him with full ancient European respect, whatever that might be—was not a joke. The Asatru claim was, McNallen believed, identical to those of the Indians and just as legitimate. When he heard that Kennewick Man might be white, he e-mailed the Umatillas in a friendly, one-tribalist-to-another way. But the Indians, he told me, couldn't shake the feeling that he, his wife, Sheila, and the several hundred or so other Asatru believers were making fun of them.

McNallen, originally from Texas, became interested in Odinism, a pre-Christian religion with roots in northern Europe, 30 years ago in the course of parting with his parents' Catholicism. The immediate spur was a historical novel, "The Viking," McNallen was attracted by the warrior spirit, the passion and adventure. Later, he found many similarities between Odinism and Native American tribal spirituality. He wrote an article against "wanna-ber" (white people who want to be Indians), telling them that in pagan days "our way of living was much like that of the American Indians whom you admire. The Earth was our mother, Thor ratted in the thunder, Odin led the Wild Hunt, Freyja showed us that women could be both beautiful and strong."

McNallen, an Army veteran, is a tall, fit, powerful man and a little disappointed at having entered his 50's. He still fills out his polo shirt impressively, has a well-trimmed beard, and might be seen as Thor-like. The Asatru, McNallen says, feel a connection to anyone "whose essence we carry." This link of kinship "transcends time and space" and is like a "folk soul." When McNallen heard news of Kennewick Man, he thought there might be a connection to the folk soul. Only scientific study, including DNA analysis, could, in the Asatru view, settle the question of whether Kennewick Man had the same racial essence as Stephen McNallen and other Europeans. After being rebuffed by the Indians, the Asatru, as Americans, not just Odinists, decided to sue.

Nonetheless, all of those tribes happen also to be Native American, and tribal membership is based on genealogy, so the layperson might be forgiven for thinking that federal law considers Indians a race. Equal-protection claims are the cutting edge of race law. Opponents of affirmative action have successfully argued that discrimination on behalf of various nonwhite groups constitutes a denial of equal protection to whites. Indeed, one very good reason that lawmakers and courts have been reluctant to recognize Indians as a race is precisely that such recognition would create equal-protection problems. Another, related reason is that recognizing a race would mean having to define it.

And that is where science comes in. The Indians, the Odinists and miscellaneous private claimants were joined in the battle over Kennewick Man by eight eminent scientists. They share an interest in new theories about the settlement of the Americas and, for them, Kennewick Man is valuable evidence, joining less than a dozen well-preserved skeletons more than 8,000 years old. These plaintiffs believe the Army Corps of Engineers did not submit the remains to adequate scientific examination.

Internal corps communications abundantly make clear that the corps hoped to give the bones to whatever Indian group wanted them, and the sooner the better. The alternative, of course, was for the corps to determine, somehow, what sort of person was likely to have been deposited along the Columbia river 9,000 years ago—a difficult and politically fraught undertaking, but this is what the scientists, what science, would like to see happen. Nagpra does not distinguish between ancient and modern remains. It simply requires that remains be given to interested "indigenous," or Native American, groups who can demonstrate the likelihood of descent from, or cultural affiliation with, the dead person in question. But the act does not define "indigenous," and this gives scientists a point of entry into the debate. The scientists believe that if any group can say who came to America

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When it is theirs. Among the plaintiffs are researchers at the forefront of investigations into the peopling of the Americas. These and other scientists have been working for years, in some cases decades, on studies that all point toward roughly the same conclusions: that the Americas were settled over a lengthy period by different types of people and that the direct ancestors of what we call Native Americans were merely one group among several. These ancestors were also not the first group of what John Jeldeh, the district court judge hearing the scientists' case, has referred to as "immigrants." The scientists pursuing such paleo-American studies appear to be near the point of crossing from the wilderness of crankdom into the calm civilization of scientific orthodoxy. Kennewick Man is their test case for deciding how much power they will have in determining the meaning of "indigenous" and whether their minority position will become tomorrow's scientific consensus.

For much of the 20th century, the scientific consensus had been that Native Americans came here during a relatively brief period of time across a land bridge that existed where there is now the Bering Strait. Therefore, all Native Americans were thought to be "related," though even those maintaining this view were troubled by, among other things, the diversity of languages, physical appearances and material cultures in pre-Columbian America.

The newer studies, based on data gathered as a result of technical advances in radiocarbon dating and using such techniques as statistical comparisons of cranial measurements, have concentrated on evidence that cannot be fit into the old single-migration model. Luzia, a skeleton found in Brazil and thought to be 11,500 years old, seems to have Negroid features. Some scientists have found Polynesian traits in early skeletons from the Peruvian coast and evidence of an early Japanese and Chinese presence on the North American coast.

Even among the more adventurous scientists in the field, the consensus is holding, for now, that all or most pre-Columbian Americans came from northern Asia and, at the outside, Southeast Asia. However, the public imagination, and to a degree the scientific imagination, has tended to fasten on the possibility of ancient Europeans reaching America prior to the ancestors of Native Americans. Within the scientific literature, ancient European migration is a contentious issue with African migration for last place. Nevertheless, when the lead plaintiff in the scientists' lawsuit, Robson Bonnichsen, tried to explain in a court affidavit why Kennewick Man deserved careful study, he said current science suggests "that the earliest inhabitants of this continent may have no modern descendants. . . . Multiple colonizing groups appear to be represented and many of the oldest studied skeletons have strong Caucasian skeletal features."

To make the circle complete, the plaintiff scientists' lawyers argued that their clients were being denied equal protection of the law because they are all Caucasian Americans." So while "science" may not recognize race, scientists (and their lawyers) sometimes do, when it suits their purposes.

Perhaps no one finds this more irritating than James Chatters, who has had to take the blame for starting it all. I visited him late one morning this past winter at his Richland home. He was carving away at a cylinder of mud from a pond in Kentucky, looking for pollen and carbon samples. When he finished, we discussed how Kennewick Man became white. As far as Chatters is concerned, the relevance of his finding European characteristics in the skull was not that Kennewick Man was white but that he did not look Inian. He blamed the media for picking up the ancient-white-man theme "He's not white," Chatters told me, his voice rising. "He's green!"

I was taken aback. Chatters, who is small, quick and visibly nervous (though affable) man, bounded around his worktable to a surface next to me and pulled up at opaque cover to reveal . . . Kennewick Man. He was indeed green, a head modeled of clay atop an armature wrapped in black friction tape. "Does he look white to you?" Chatters asked.

I stared at Kennewick Man and tried my best. I had to say that he did not look white; nor did he look like any other color, except green. I had read in the papers that he looked like the actor Patrick Stewart, but I couldn't see the resemblance, nor that I have had the opportunity to closely examine Patrick Stewart's face.

Chatters was kind enough not to sound triumphant, although I had just supported his thesis that Kennewick Man, like other ancient American skulls, indicates a population that predates modern craniocultural divisions — that is, the differing appearances we sometimes call races. Chatters is just finishing a look on Kennewick Man that will present
this argument. He took me over to his computer and showed me a graph he had made. It compared the craniofacial dimensions of several ancient American skeletons, including Kennewick Man, with those of modern Europeans, Africans, Asians, Native Americans and Pacific Islanders. The paleo-Americans were grouped over to the left, while all the others were clustered on the right. The paleo-Americans — all seven of them, men only — showed more variation among themselves than the other groups did compared with one another. Indeed, one of the paleo-Americans, whom Chatters seemed not to want to discuss, was tucked away all by himself in a far corner of the graph, like a wallflower. When you are dealing with such a small sample population, of course, one anomaly can really throw things off. In any case, Chatters believes this shows that ancient Americans were external to modern racial divisions. That does not mean that one or more of them weren't ancestral to modern Native Americans, only that they didn't look like modern Native Americans.

I wondered about these classifications and the databases that reflected them. When, in the early 20th century, anthropological science abandoned the idea of races as both scientifically unsound and morally hideous, it turned to population characteristics and tracing how populations moved from place to place. In looking at these populations with the available evidence (skeletons, DNA, material cultures, languages), the tendency has been to think of them as discrete peoples; otherwise they would not be identifiable as different from one another. So the geographical terms Africa, Asia, Europe, Pacific Islands and America replaced the racial terms.

You can’t help noticing, however, that the new terms refer, or can be understood as referring, to the same populations as the old racial terms. This is particularly clear in the Kennewick Man controversy, in the course of which scientists, not to mention journalists and politicians, have found themselves drifting into the language of race, rather in spite of their personal inclinations. The ancient American skulls don’t look like modern Native American skulls, which is to say they don’t appear to be of the same race-population group as modern Indians.

There is a certain circularity of argument at work here: races (or Africans, Asians, Europeans) may be identified by how different they look from one another, and they look different from one another because they are races (or are Asian, African, European). Ask a racial question; get a racial answer.

Native American tribes, unlike more recent population groups who have arrived in America, have not tended to consider looks very important in deciding who a person is. In contemplating themselves, they have not thought much about skull dimensions, the frequency of mitochondrial DNA haplogroups or the Bering Land Bridge. What being a member of a given tribe means and what being an Indian means are not, for those most concerned by them, scientific questions. Native American life has place, admittedly unscientific, to the barrel-chested Indian man in black on karaoke night at the Brand Iron in Toppenish, Wash., as he gripped the mike, dedicating a mournful country song to his wife: “the most beautiful woman I ever married.” Then, too, there is a place for the full-figured young Indian woman who followed him with a Modesty Crane tune. There is also room for the man who spoke of Indian unity, and the man who boasted that his tribe had enslaved other tribes. (“We were the first slaveholders in America!”)

White people (of various skull shapes) are also a significant presence in and around Indian country, among them James Chatters — who told me he has lost many of his Indian friends over the Kennewick business — and, arguably, his part-Indian wife and their daughter. It was Chatters who suggested I talk to Rex Buck, a religious leader of the Wanapum band, up the Columbia River from where Kennewick Man was found.

The Wanapum band’s core population lives in a village called Priest Rapids, at the base of the Priest Rapids Dam. To reach the Wanapum village — about a dozen houses, each painted a different color — you have to drive across the dam. The Wanapum are not recognized as a tribe by the federal government. The Wanapum do not have a casino or a flag, or sovereignty, or anything for sale. They have almost no property and no political power. Their village is not on maps.

At the band’s communal long house, I met Buck, who was sitting on a sofa near a picture of an eagle and an American flag. He wasn’t a Doctor of Philosophy, but he was a Dr. He wore mocassins, as did the other people in the long house, because they had just finished a seven-drum ceremony that included dancing on the rectangle of earth that ran down the middle of the house. The rectangle, Buck explained, was aligned according to the trajectories of the stars.

Buck said that the Wanapum had not suffered inordinately from white attention. His people had still been fishing for salmon and using buildings made from reeds as recently as the 1940’s. Buck said that the Priest Rapids area “seemed like there was nothing, desolated, to people who come here. Wasn’t good for anything. Was too ugly. But to the Indian it was beautiful and had everything he needed and she needed.”

When non-Indians finally took an interest in the remote area, the Wanapum faced a choice. “I could stay here, and I could victimize myself,” Buck said as his son stood nearby, his wife sat on the next couch and his grandchild played on the floor. “I could say: No, you owe me this, you owe me that. You did this to me, you did that to me; that’s why I’m the way I am.” I could have done that. But our elders, my parents — my dad, he spoke a little bit of English; he could only write his name. But he had two hands, two feet; he was willing to learn; he was willing to work. When we were growing up, he encouraged us to learn your language, to learn what your livelihoods were. He said, ‘You have to have a friendship relationship with the people in order to stay here.’”

The scientific wish to have control over Kennewick Man does not augur...
well for that friendship relationship. Buck places Kennewick Man within a tradition of ancestors whose rest has been disturbed by people with college degrees, people who believe their own understanding of life is both superior to that of the Indians and free of self-interest, people who have arrived from time to time to "stir around our remains, like they don't: mean anything. Then they go back, and we pick up the pieces with a heavy heart and tears in our eyes. And we ask the Creator that he might forgive those ones that do that, for they must not know any better."

In his hesitant English, Buck tried to explain that his tribe's land had in it words from the Creator, and that the land was the means for God to speak to humans. One means for humans to speak to their Creator was by returning themselves to the earth. Being buried gave people a permanent place in this conversation with forces greater than they.

"Our ancestors have returned back to the earth," he said. "Their body has become earth, as the word was put here. And their heart returned, and their life and spirit went on. But it's of no significance to the nonunderstanding race. But yet it holds the sacredness of the words that were passed through their generation, that are still living today. Those words were passed through those people that had no significance." As for Kennewick Man, he, too, was almost dirt. He, too, was giving himself back.

The conversation among people, land, Creator and ancestors is open-ended and not obviously purposeful. "To really understand the people of here," Buck said, "this place—how it was, how it came to be—those things live every day, not just one day. You walk outside, and you listen to what the water is telling you. You listen to the things that are around you. And you interpret that earth."

"The silliness of all this, to us," Jerry Meninick, vice chairman of the Yakima Nation council, told me, is the notion that "the judicial system is scientific, that it has the credentials to make a scientific determination. We think not." Meninick said he believed that if the court finds for the scientist plaintiffs, then the tribes will challenge pretty much anything done or proposed by anyone calling himself a scientist.

As scientists seek links between 9,000-year-old skeletons and modern people, they need evidence. Scientists always need more evidence; theirs is an ongoing inquiry, and from this perspective, Kennewick Man cannot be reburied because you never know when a new technique might come along and you would have to dig the man up again. (He is now under lock and key at a Seattle museum.) Nor should other bones be reburied, as is currently happening under Nagpra. As Bonnichsen and Douglas Owsley, a fellow plaintiff, have pointed out, all those bones of dead Indians collected over the years have scientific value. Nagpra has, indeed, touched off a new interest in studying Native American bones—precisely the opposite of what it was intended to do.

The scientists' opponents in the Kennewick case also recognize the problem of evidence. The Department of the Interior, led by the National Parks Service's chief archaeologist, Francis McManamon, has commissioned a number of studies on Kennewick Man. These studies, still incomplete, seem to lean toward the possibility that there is a plausible affiliation between the dead man and one or more modern tribes. Of course, some of these studies have themselves relied on earlier studies performed on the very bones that could, under Nagpra, be given to native tribes and perhaps buried.

The trial of evidence does not stop with bones. Judge Jelders recently gave the government six more months to do DNA testing. This raises the possibility of having to extract comparative DNA samples from other bones (say, a verified 150-year-old Umatilla skeleton that has not yet been repatriated) and perhaps to get DNA from representatives of the five claimant tribes, preferably people without an Anglo-Irish-French greatgrandparent. Beyond that, on a global scale the DNA databases are also quite incomplete. For example, recent research indicates that Europeans and Native Americans share a distinctive genetic feature, but there has not been enough sampling of north Asian people to determine whether this trait came to North America by that route. So someone will have to go to eastern Siberia and persuade people to give up DNA. From a thoroughly scientific viewpoint, there is no dividing line between today and 9,000 years ago. This is true for many Indians too, but they tend to communicate with their dead without digging them up.

One might have thought that ancient bones could be bracketed as prehistory and removed from contention. If the scientists most actively seeking those bones weren't so interested in finding non-Indian, pre-Indian Native Americans, matters might indeed have turned out different. But ancient bones are of interest because of what they might tell us about ourselves. It isn't their remoteness that fascinates, but their potential for closeness. We look for what we might have in common with them. This probably explains why even some scientists have looked at Kennewick Man and seen a white person. They find a connection by that means. Race, however, is our category, not Kennewick Man's.

The problem is that most human groupings, including races, are highly subjective. Looking for objective scientific answers to subjective human questions—like what a Native American is or the meaning of ancestry—can distort both science and humans. Tribes already depend on anthropologists and historians in order to secure federal recognition. The Kennewick Man case raises the prospect of their needing to depend in the future on geneticists or perhaps craniometrists. For a federal judge to be sitting through the current science in order to reach a "final" answer to the question, What does indigenous mean? seems rather curious and arbitrary. But then the Kennewick Man story has been curious, and not a little arbitrary, ever since Will Thomas and Dave Deacy went to the Water Folks. Which helps to explain why the participants in the story have so often reached for racial language—so curious, so arbitrary—to try to make sense of it.
Plaintiffs, for their April 1, 2000 status report, advise the Court of the following:

A. Defendants' Response to Plaintiffs' request for clarification of deadlines demonstrates the need for Court intervention.

As the Court is aware, plaintiffs have filed a motion for a clarification of the Court's order extending the government's deadline to respond to the study requests. Plaintiffs have asked the Court to direct the government to respond to the portions of their study requests that do not depend upon the government's DNA studies (which the government states is being done solely
to determine whether there is any cultural affiliation. The government has objected, and responded that while it now permit study if it is unable to establish cultural affiliation, it is not able to be more specific at this time, more than 3-1/2 years after it made its first attempt to repatriate the skeleton. However, defendants provide no reason why they cannot answer plaintiffs' questions now.

B. The government is now stating that it believes plaintiffs are obligated to make an "official administrative request to study."

Over the past several weeks, the parties have exchanged correspondence about the plaintiffs' study requests.

Defendants had provided an incomplete summary of "the study request," and in connection with that stated:

"... there has not been any official administrative request to study..." Letter of Allison B. Rumsey, March 8, 2000

Plaintiffs have seen no regulation that requires them to make an "official administrative request to study", and frankly, plaintiffs thought that the Court settled that issue long ago. Plaintiffs raised their concern about procedural traps in the hearing held October 23, 1996. On that occasion, defendants tried to avoid plaintiffs' lawsuit by stating that plaintiffs had not "claimed the remains. Plaintiffs' concern then was that the government would argue that, technically, no claim had ever been made despite thousands of pages being filed with the court.

As a result, plaintiffs raised that issue with the Court just so nothing like this would happen again, and the Court commented that a simple letter would suffice to avoid a later argument that..."
"filing a lawsuit must make a claim under the Act" (Tr. 55). The then-attorney for defendants accepted, without challenge, that plaintiffs had timely made their position clear. Tr. 57.

Plaintiffs frankly don't know what defendants want by their apparently secret rule that there has to be an "official administrative request to study." Defendants have, incidentally, never advised what sort of "official" request they need to see. Plaintiffs sense that their study requests will be ultimately denied in September, 2000 (or later) with the statement that they were never made "officially." Plaintiffs accordingly request the Court to require defendants to consider all the requests contained in the administrative record, regardless of whether they meet the government's definition of an "official administrative request to study." Otherwise, this issue will undoubtedly have to be addressed at the fourth anniversary of this litigation.

C. Defendants continue to refuse to share information needed by plaintiffs to participate in the administrative process.

Defendants have stated a "commitment" to make their study data "available and accessible to educators, reporters, scientists, and interested citizens." See Kennewick Man: The Initial Scientific Examination, Description, and Analysis of the Kennewick Man Human Remains. Department of the Interior, October 15, 1999, Chapter 1 at page 1. However, plaintiffs have been excluded from reviewing that data.

Among other things, plaintiffs have requested copies of the x-rays and CT scans that defendants made of the skeleton's cranium and that portion of the hipbone containing the embedded projectile point. Defendants have refused to provide these copies unless plaintiffs agree not to disclose them to "anyone other than plaintiffs" until the administrative record has been filed with the Court. Other researchers, however, have apparently been allowed...
unrestricted access to the same x-rays that CT scans. See attached affidavit of Dr. Douglas Owsley, who cites a request from a graduate student who was apparently given that access.

In addition, plaintiffs have requested copies of the expert reports and other information gathered by defendants relating to whether the skeleton can be culturally affiliated to any modern tribe. No response has been received to this request.

D. Defendants have provided further inaccurate information.

Defendants' February 16, 2000 filing with the Court includes a statement by Dr. Trimble that the Munsell Soil Color Charts could not be used to describe colors on the Kennewick bones because the charts do not contain green sequences and because the colors of the Kennewick bones are "mottled" rather than solid. See Trimble Affidavit at page 7. In fact, however, the Munsell Charts contain charts that depict green sequences, including colors derived from plant materials (such as algae). See attached affidavit of Dr. Thomas Stafford. Moreover, mottled colors can be described by giving the appropriate color chart reference for each color. See Stafford Affidavit at page 2.

Dr. Trimble also states that "[h]andling causes the greatest damage to fragile bone," and cites as support "[r]ecent research by the University of Bradford." Trimble Affidavit at page 4. This statement is misleading to say the least. It is unfair and inappropriate to compare students who are still learning how to identify and handle skeletal remains with experienced researchers like plaintiffs and their colleagues. Furthermore, the University of Bradford research he cites is a

Dr. Trimble's affidavit also states, "[t]he soil chart includes 322 chips on nine charts with seven hues or yellow-red." See Trimble Affidavit at page 6, lines 21-22. This statement appears to be a careless editorial rewrite of the following (more accurate) sentence from the Munsell website: "322 color chips are mounted on the nine charts: seven (7) hues [of red, yellow, brown colors] and two Green hues and green colors . . . ." See Attachment 2 to Stafford Affidavit.

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study being conducted by a graduate student. It is still preliminary and has yet to undergo peer
review of any kind.

E. Plaintiffs have provided further recommendation for DNA tests.

On March 23, 2000, Dr. Owsley answered questions from Dr. McManamon concerning
DNA testing of the skeleton. Their teleconference which was scheduled on two day's notice
lasted for approximately one hour.

In addition to other recommendations, Dr. Owsley advised Dr. McManamon that a
complete taphonomic evaluation of the skeleton should be conducted before any samples are
taken for DNA testing. He informed Dr. McManamon that such an evaluation will require a number
of different experts including specialists in physical anthropology, geoarchaeology, bone
fracture analysis, bone taphonomy, photography and digital imaging. These experts should be
experienced in working with skeletal remains as old as the Kennewick skeleton. Dr. Owsley also
advised Dr. McManamon that important information concerning the skeleton and its after-death
history could be lost if the necessary taphonomic data are not obtained before more samples are

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removed. The importance of conducting a complete taphonomic evaluation was also emphasized in a letter sent to defendants on March 29, 2000.

Dated this 3rd day of April, 2000.

By

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By Fax and mail

Re: Ronnichsen et al. v. United States, CV-96-1481 JE

Dear Alan and Paula,

In my February 24, 2000 letter I informed you that the agencies would be using the March 11, 1997 Motion for Access to Study filed with the court as the basis for responding to the plaintiffs' study requests. In an attempt to ensure that the agencies respond as accurately as possible to the studies the plaintiffs wish to carry out, I made the reasonable request that you supplement that study request, if appropriate, with citations to the other documents that contain details of the proposed studies.

This is reasonable as there has not been any official administrative request to study, other than the two letters of September 24 and 26, 1996, which I am sure do not encompass all that plaintiffs wish to do. Your response that the March 11, 1997 filing that contains your Request to Study is not in fact your request to study and subsequent refusal to provide any clarity to what your request to study is, is not helpful. While the agencies are looking at every filing and letter ever submitted, much of which has nothing to do with study they cannot ensure the most accurate response to plaintiffs' request unless you help them.

Therefore, until the agency receives an official request to study or the additional information that
we requested, we will continue to assume that the basis of your request to study is contained in the March 11, 1997 filing.

Sincerely,

Allison B. Rumsey

cc: Frank McManamon
    Carla Martin
    Sonny Trumble
    Russ Petit
    Rebecca Ransom
    Jason Roberts
March 9, 2000

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By Fax and mail

Re: Bonnichsen et al v. United States, CV-96-1481 JE

Dear Alan and Paula,

Dear Paula and Alan,

You appear to have misinterpreted my letter of March 8, 2000. The agencies are working in good faith to respond to the scientists’ request to study. We merely sought some assistance from you to ensure that they responded most accurately to the request to study. My earlier letter was not in any way a denial of the plaintiffs’ request to study.

Sincerely,

Allison B. Rumsey

cc: Frank Mennen
    Carla Marus
    Sonny Temble
    Russ Peto
    Ronald Kalcolm
IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

ROBSON BONNICHSEN, et al., )

Plaintiffs, )

v. )

UNITED STATES OF AMERICA, )
DEPARTMENT OF THE ARMY, et al., )

Defendants.

STATE OF OREGON
County of Multnomah

1. Douglas W. Owsley, being first duly sworn, do depose and state as follows:

2. I am one of the plaintiffs in the above-entitled case.

3. I am a Curator and the Division Head of Physical Anthropology of the National Museum of
Natural History, The Smithsonian Institution, Washington, D.C.

4. I recently received a request from a graduate student at the University of Arkansas,
Fayetteville, for permission to take x-rays and CT-scans of selected long bones from human skeletal remains that are part of the National Museum's collections. It is my understanding that the purpose of such x-rays and CT-scans is to obtain information on bone remodeling and biomechanics in humans from known time periods, subsistence patterns and environments. It is also my understanding that this student has already examined cross-sections from the Kiembreck skeleton. I do not personally know where she obtained access to such cross-sections. However, Dr. Jerome Rose, who was a member of defendants' first phase study team, is on the faculty of the University of Arkansas, Fayetteville.

4. I have given the student permission to use the facilities of the National Museum to obtain the data she has requested.

DATED this 25th day of March, 2000.

Douglas W. Owsley

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SUBSCRIBED and SWORN to before me this 25th day of March, 2000.

Notary Public for State of Virginia
My Commission Expires: 2/30/2000

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

ROBSON BONNIHSEN, et al., )
 )
 ) Plaintiffs,
 )
 )
 ) V
 )
 )
 ) UNITED STATES OF AMERICA,
 ) DEPARTMENT OF THE ARMY, et al.,
 )
 )
 ) Defendants.
 )

STATE OF COLORADO

County of Boulder

I, Thomas W. Stafford, Jr., being first duly sworn, do depose and state as follows:

1. I am the founder and president of Stafford Research Laboratories, Inc., Boulder, Colorado (hereafter "SRL"). Further details of my professional experience and qualifications are contained in affidavits previously filed with the Court. See Plaintiffs' Motion for Order Granting Access to Study the Skeleton (March 11, 1997); Plaintiffs' Reply (Motion for Immediate Response) (August 10, 1999).
2. Munsell Soil and Plant Tissue Color Charts (also commonly referred to as "Munsell Soil Color Charts" or "Munsell Charts") are routinely used by geologists, archaeologists and other scientists to describe the color of a wide variety of objects and natural materials. These charts can be used for any substance having color, including bones regardless of their condition. In addition to red, yellow and brown hues, the Munsell Charts include two charts of "Gley" colors (i.e., blue, green and gray). Attachment 1 is a copy of three pages from my edition of the Munsell Charts showing how those colors are depicted. In addition to those two charts of Gley colors, there are other Munsell Charts that can be purchased for identifying and describing colors derived from plant materials (including algae). They provide an even wider range of greens.

Attachment 2 is a copy of two pages from the Munsell website describing the Munsell color chart system. The website address is: munsell.com/muncheck.htm.

Objects such as bones that are mottled or multi-colored can be described by giving the appropriate Color Chart reference for each color. In such situations, the predominate color is usually described first and then the secondary or subsidiary colors. If any color on an object has multiple shades or hues, such variation can be described by giving the range of the variation. For example, a green color could be described as 5Y6'4" - 5Y6'3".

DATED this 31st day of March, 2000.

Thomas W. Stafford, Jr.

SUBSCRIBED and SWORN to before me this 31st day of March, 2000.

[Signature]

Notary Public for Colorado
My Commission Expires: June 23, 2001
Munsell Specialty Color Charts

Munsell® offers unique color reference materials that play a vital role in many industrial and scientific fields.

- GretagMacbeth ColorChecker
- Munsell Soil and Plant Tissue Color Charts
- Munsell Color Charts for Color Coding
- Munsell USDA Fruitletry Standards

GretagMacbeth ColorChecker®

One of the most photographed images in the world, the ColorChecker is a unique test pattern scientifically designed to help determine the true color balance of any color rendition system. It allows you to avoid costly mistakes by checking for potential problems.

Some of its applications include:

- Photography: Check films, lights, filters and paper.
- Graphic Arts: Check any printing or proofing process.
- Electronic Publishing: Check scanners, monitors and proofing devices.
- Television: Check cameras, monitors, lights and film.

The ultimate goal of any process of photography, electronic publishing, printing or television is to reproduce all colors perfectly. To help make meaningful judgments about color rendition, a totally non-subjective standard of comparison is needed. That is why the GretagMacbeth ColorChecker chart was developed. It provides the needed standard with which to compare, measure and analyze differences in color reproduction: in various processes.

The ColorChecker is a checkerboard array of 24 scientifically prepared colored squares in a wide range of colors. Many of these squares represent natural objects of special interest, such as human skin, foliage and blue sky. These squares are not only the same color as their counterparts, but also reflect light the same way in all parts of the visible spectrum. Because of this unique feature, the squares will match the colors of natural objects under any illumination and with any color reproduction process.

The ColorChecker chart provides an easy way to recognize and evaluate the many factors that can affect color reproduction. To evaluate the effect of varying any given factor, simply compare the chart's color image (photograph, television picture, computer monitor or printed sample) with the actual ColorChecker. This comparison may be made visually or through optical density measurements.

The ColorChecker chart is produced in the Munsell Color Lab at GretagMacbeth.

http://www.munsell.com/colorcheck.htm
Individual components from the soil color charts are available. They are:

**Individual Soil Color Chart Components**

**Part Number** 00322

Used for tropical and semitropical soils.

**Supplementary 7SR Soil Color Chart**

**Part Number** 50322

Used for Australian and Southeast Asian soils.

**Supplementary 5SR Soil Color Chart**

**Part Number** 50321C

7.25" chip size. 112 x 581mm. Bound with color name diagrams and masks. 1984 Revised edition. Chart size: 4.25" x 7.25". Two large color chips are mounted on one card: seven (7) hues (10R, 7.5YR, 2.5Y) and two gray (blue and green) colors. Each chip is surrounded by chips facilitating comparison. Color charts are required in loose leaf binders with color name diagrams and masks. 1984 Revised edition. Chart size: 4.25" x 7.25". Two large color chips are mounted on one card: seven (7) hues (10R, 7.5YR, 2.5Y) and two gray (blue and green) colors. Each chip is surrounded by chips facilitating comparison. These charts were developed by Munsel and the USDA Soil Conservation Service.

**Munsell Soil and Plant Tissue Color Charts**

**Part Number** 50310J

For soil and plant tissue color determination. They are also used for interpreting rocks, hydric soils.
Munsell Specialty Color Charts

- Soil Book Binder, Part Number: 50209
- Individual Soil Chart, 10R, Part Number: 50223
- Individual Soil Chart, 2.5YR, Part Number: 50224
- Individual Soil Chart, 5YR, Part Number: 50225
- Individual Soil Chart, 7.5YR, Part Number: 50226
- Individual Soil Chart, 10YR, Part Number: 50227
- Individual Soil Chart, 2.5Y, Part Number: 50228
- Individual Soil Chart, 5Y, Part Number: 50229
- Individual Soil Chart, Gley Set, Part Number: 50230

Munsell Plant Tissue Color Charts

These color charts provide a means for determining and recording the color of plant tissues. This information is important to scientists working with growth rates, nutrient deficiency, plant disease and other plant processes. Approximately 320 matte color chips are permanently mounted on charts of 17 hues (2.5R, 5R, 10R, 2.5YR, 5YR, 7.5YR, 2.5Y, 5Y, 2.5GY, 5GY, 7.5GY, 2.5G, 5G, 7.5G, 5BG, 2.5B and 5RP) in a loose leaf binder. Chart size 4 25" x 7.25". Chip size: 1/2" x 5/8". Mask included.

Part Number: 50150

Munsell Color Charts for Color Coding

Used for color coding of wire and cable insulation and by Electronics Industries Assoc. (Std. RS359-A) for use with electronics components. Ten color charts in binder: Red, Orange, Brown, Yellow, Green, Blue, Violet (Purple), White, Gray (Slate), and Black. Each chart defines the Centroid (ideal) color and the permissible tolerances. High gloss chips are permanently mounted on a 8.5" x 11" chart. Includes 3" x 5" swatch of each Centroid and copy of STD. RS359-A. Minimum order of 10.

Part Number: 50110

USDA French Fry Standards

Printed color ranges meet specifications set by USDA for frozen french fry potatoes. Set of 5 identical reproductions in a folder with instructions.

Part Number: 50040

For information on how to order, click here.
COLOR NAME-DIAGRAM FOR COLOR CHART FOR GLEY

Explanation of Color Chart for Gley. This supplement to the Soil Color Chart is primarily for colors of chroma less than 1/3 in hue 5Y to 30Y. The volume of 2-chrome colors in hue 50 affords some coverage for the rare instances of chromas up to 1/5. Gley color darker than modelable with this supplement may be estimated by comparison with N 3½ and N 4½. When high accuracy is desired, use a mask.
STATE OF OREGON

County of Multnomah

I, Tamara L. Thorud, being duly sworn, depose and say: (1) I am a competent person over the age of 18 years and am not a party nor an attorney in the proceeding entitled Bonneville, et al. v. United States of America, et al. in the United States District Court for the District of Oregon and bearing docket number CV96-1481-JE in said court; (2) I am a person regularly employed by Barran Liebman LLP, with offices at 601 S.W. Second Avenue, Suite 2300, Portland, Oregon 97204-3159, who are attorneys for plaintiffs in said proceeding; (3) On April 3, 2000, I served the foregoing document upon defendants in said proceeding by mailing a copy thereof to the attorney(s) for said parties at the last known address:

Timothy W. Simmons Jr.,
Assistant U.S. Attorney
U.S. Attorney's Office
1000 S.W. 3rd Ave., Suite 600
Portland, Oregon 97204-2902

Allison Rumsey
U.S. Department of Justice
Office of the Assistant General Counsel
950 Penn. Ave., NW, Room 2740
Washington, D.C. 20530-0001
Attorneys for federal defendants (via mail and fax)

David Cummings
Douglas Nash
Nez Perce Tribal Executive Committee
P.O. Box 305
Lapwai, ID 83540
Attorneys for Nez Perce Tribe

Michael T. Clinton
32919 NE 88th Cir
Camas, WA 98607
Attorney for Asatru Folk Assembly

Signed and sworn to before me this 3rd day of April, 2000.

Tamara L. Thorud
Notary Public for Oregon
My commission expires: 10-21-03

FAFIDAVIT OF MAILING

Baran Liebman LLP
601 S.W. Second Avenue, Suite 2300
Portland, Oregon 97204-3159

DOI 08246