

Human Migrations and Language Diffusion in the Americas: The Origins of American Indian Languages

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We speak of the Pleistocene Ice Age as if it were a long, uninterrupted climactic episode with a thick blanket of snow and ice covering much of North America and northern Eurasia and lasting roughly 100,000 years, ending around 10,000 years ago. In truth, the earth has endured numerous ice ages, which are more accurately called glacial ages, throughout its history. The Huronian, for example, occurred about 2.5 billion years ago and covered most of the planet. The most severe was the Cryogenian Period, which occurred around 700 million years ago and lasted for millions of years, burying the entire planet beneath 1-2 km. of ice.

The Ice Age we associate with Paleolithic human migrations into the New World is the Wisconsin Stage of the Pleistocene, which lasted from about 26,000 to about 11,500 years ago, which includes the end of the Younger Dryas cold spell (about 9,640 BCE). At its peak around 15,000-20,000 years ago, much of North America and northern Eurasia was buried under sheets of ice 1.5-3 kilometers thick

(deeper in some places). In fact, continental glaciers pushed all the way to the 40th parallel. It is estimated that at much as one-third of the planet was covered by ice. Like all glacial ages, the Wisconsin Stage was characterized by cycles of minor glacial advances and retreats, affected by brief periods of global or hemispheric warming and cooling. These fluctuations are called *glacials* and *interglacials*, or *stadials* and *interstadials*.

Geologic processes continue today in much the same way as they did in the past. Sea water evaporates forming clouds, which dissipates the moisture as precipitation. If the air is above freezing, the precipitation takes the form of rain; if the ambient temperature is below freezing, the precipitation takes the form of snow. During the Ice Age, temperatures in the northern hemisphere were colder. As a result, snow did not melt as it generally does today, but instead accumulated to great depths, as much as a mile or two deep in places. Imagine a field of slowly moving snow and ice as much as 5,000 to 10,000 feet deep burying most of Alaska, Canada, Greenland, the northern United States, as well as Russia and Eurasia. In fact, the massive ice sheets were so heavy and the downward pressure so immense, that when they eventually melted, the surface of the earth actually lifted upward, relieved of the strain from the great weight. Even today, the land in some places is still rising incrementally. Geologists call this emergent motion *isostatic rebound*.

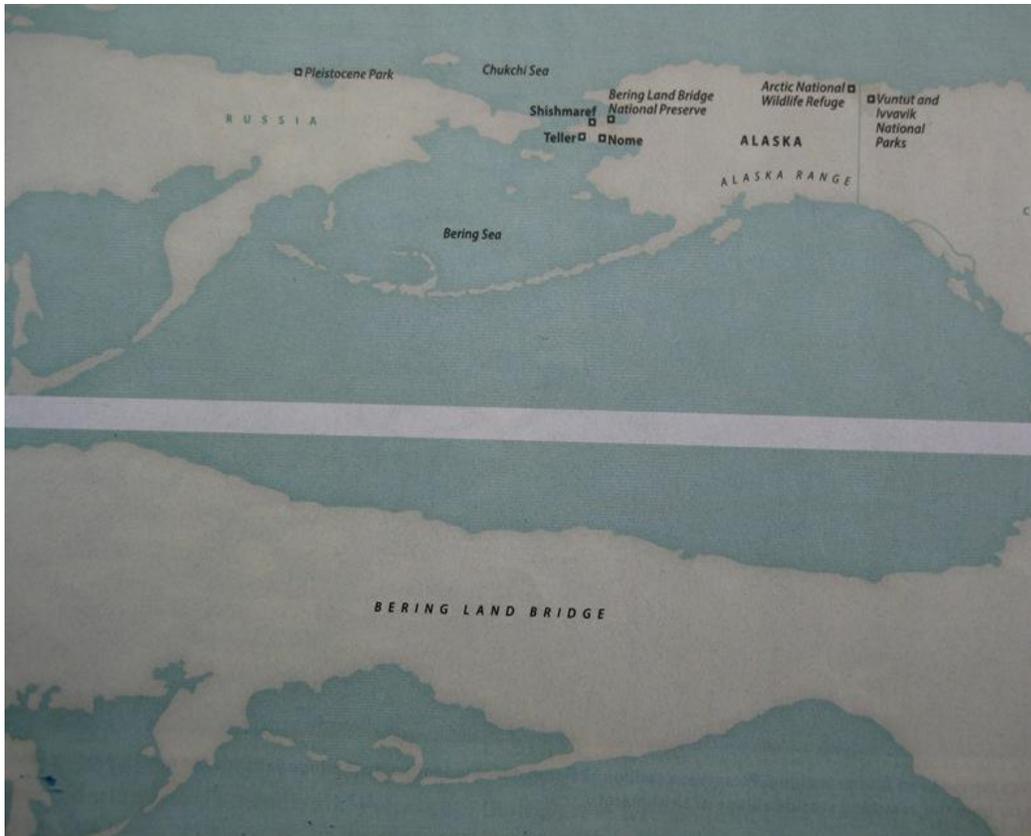
One result of all this accumulation of snow and ice was that sea levels dropped worldwide, scientists estimate by as much as 120 meters (360 ft.) owing to the massive amount of seawater being “locked up” as ice. Whereas snow generally melts to form creeks and rivers, like the Ganges, which eventually return water back to the sea, this process was largely disrupted and, consequently, sea levels dropped markedly, exposing new land and continental shelves previously under water. Imagine how coastlines worldwide must have extended many kilometers out to sea and how islands once submerged

became visible (Look at any map to learn how deep the continental shelf is in your region. If the shelf is less than 360 feet deep, the seafloor would have been exposed as dry land).

Back then, the Gulf of Mexico would have been much smaller than it is today. Look at any physiographic map showing oceanic depths to get an idea. Geologists estimate that whereas Battery Park at the end of Manhattan in New York City currently demarks the coastline, 10,000 years ago the coastline was some 125 miles (190 km) further away. Indeed, the entire eastern coast of North America would have been much different because the eastern continental shelf (called the Blake Plateau) is relatively shallow as far out as 125 miles (the western continental shelf of North and South America is not as shallow or broad). Imagine the Hudson River, the Susquehanna, or the Delaware River running another 125 miles before they emptied into the Atlantic Ocean.

Now imagine all the human settlements that may have existed along the rivers and at the deltas—all abandoned as sea levels rose to present-day levels. Back when sea levels were lower, the newly-exposed land became populated with vegetation, especially what we call pioneer plants (grasses, flowers, and eventually trees) as well as with insects, birds, and animals. Nature has a way of taking a foothold on all available land.

One of the results of this lowered sea level was that the seabed of the shallow Bering Sea between Alaska and northern Eurasia (Siberia) became exposed. Scientists call this land feature *Beringia*, or the Bering Land Bridge. But it was not a bridge at all. Instead, at its height, this newly-exposed land was 900-1,000 kilometers wide in places (600-700 miles from north to south), hardly a bridge.



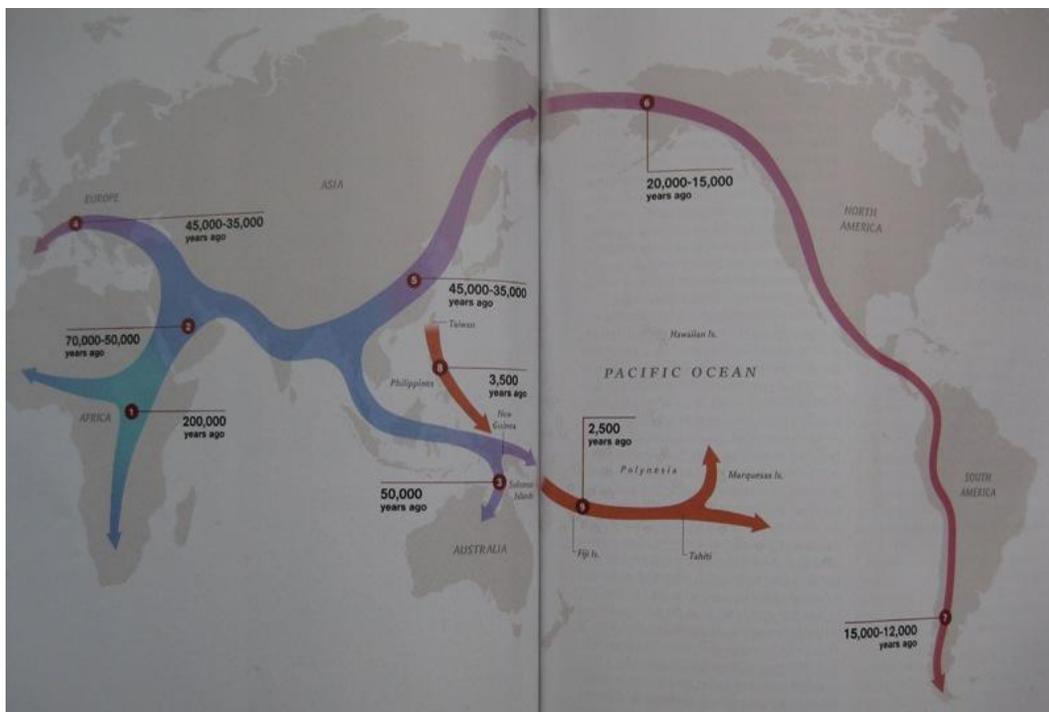
Beringia today (above) and during lowest sea levels 15,000-18,000 years ago (below)

[Source: "In Beringia," p. 34]

Similar "bridges" connected most of the islands in the Indonesian Island chain, allowing for human migration. Similarly, lowered sea levels also exposed land between Australia and Tasmania, allowing Aborigine populations to expand into new territory and exploit its resources.

During the same time that land was exposed between Alaska and Siberia, the United Kingdom isles were connected to each other and to the northern European mainland (modern day France, Germany, Belgium, Denmark, and the Netherlands) by a land mass that was 1,400 km (900 miles) across (at its peak 16,000 years ago), exposing most of what is today the North Sea and the English Channel. Archaeologists call this region *Doggerland* (*National Geographic*, 132). About 8,000 years ago, toward the end of the Pleistocene, rising sea levels (caused in part by the sudden release of water

from a massive North American glacial lake) flooded the region, isolating the people remaining on the isles, and causing languages and cultures to differentiate over time. At about the same time that Doggerland was flooded, underwater archaeologist Robert Ballard, discoverer of the *Titanic* at the bottom of the North Atlantic, has found evidence of a massive, surging flood in the Middle East that may have submerged as much as 100,000 square miles, wreaking havoc on human settlements. His findings of a flood 7,500-8,000 years ago, suggests the veracity of the Biblical Flood Myth in Genesis (Bennett-Smith, 1).



General global human migration patterns out of Africa c. 60,000 to 70,000 years ago

[Source: "Restless Genes," p. 48-49]

All over the planet, and in relatively short time, vegetation quickly took hold on these "bridges" of exposed sea bed (grasses at first, then shrubs and trees), and *megafauna* (mammals, et al) would have expanded their range onto the newly exposed rolling woodland hills and grassy plains (also called a

steppe). In Alaska and North America, imagine regions of woolly mammoths and mastodons, as well as woolly bison, small horses, giant sloths, camelids, and other large and small Pleistocene animals grazing on the lush grasses, followed by hungry carnivores like short-faced cave bears, cave lions, saber-tooth scimitar cats (*Smilodon*), dire wolves, and scavengers like giant condors, slowly working their way across the short distance between Siberia and Alaska, never once realizing that they were crossing continents. Beavers the size of small bears went about business as usual. Imagine, too, the giant flocks of geese, cranes, and other birds that annually migrate to the far north. We know that Beringia was grassy from the research of University of Alaska Fairbanks paleobiologist, Dale Guthrie, who studied the frozen gut contents of preserved woolly mammoths in Alaska and Siberia. One especially well-preserved mammoth was actually discovered with butter cup flowers still in its mouth. Guthrie determined that roughly 75 percent of the animal's diet had been grass. Some scientists now call Beringia the "mammoth steppe."



Distribution of woolly mammoths during Pleistocene



British Museum of Natural History (c. 1900)



10,000 year old baby woolly mammoth recovered from permafrost in Siberia in 2007
(Genetic analysis revealed this mammoth differs from African elephants by only 0.6%.)

Most importantly, humans also crossed from northern Eurasia into North America hunting the animals, fishing the new streams and rivers, gathering clams and seafood along the newly exposed coastline, most likely in small familial bands, or clans. They too were completely unaware that they were moving to a new world; no signs welcomed them to Alaska or North America. Along with their stone technology and cultures, they also brought their religions and languages. These *proto-languages* and *proto-religions* are the origins, or foundations, of contemporary indigenous religions and languages. Thus, Alaska was the all-important gateway into North, Central, and South America. If the Bering Sea had been deeper, the Americas would not be as they are today. If the Bering Sea was deeper than the 120 meter drop in world sea levels, then it would not have been exposed, and migrations probably would not have occurred, and the Americas would have remained unpopulated by humans when “discovered” by Western Europeans in the late fifteenth century.

Because the *interstadial* glacial advances and retreats happened many times during the past 100,000 years—exposing land, submerging land, contracting and expanding ice fields, opening and closing temporary pathways into the New World—it is important to note that the human migrations were not constant, nor were they of the same cultural group(s). Instead, many different peoples made their way across Beringia at many different times, representing diverse cultures and languages. Genetic sequencing of mitochondrial DNA [mtDNA] supports this (Meltzer, 164-165). However, blocking the route to the rest of North America were the massive Cordilleran and Laurentide ice sheets that covered almost all of northern North America (present day Canada).

While there is debate about precisely when “passable” corridors were open between the sheets, thereby allowing migration out of Alaska, general consensus is that humans moved through the region around 12,500-13,500 years ago and, in relatively short time (say, 1,000 years) made an astonishing dash through North, Central, and South America (Meltzer, 36-37).

Archaeological dates coincide with periods of glacial recession, those “windows of opportunity” when glaciers retreated enough to allow human migration. But consider, too, that migrations may not have always been trans-land, but followed the western continental coastline, which would have been much different than today. Such a hypothesis allows for the fact that some carbon dates indicate that humans made it from North America to the tip of South America fairly quickly (groups may have, at times, used canoes, boats, or rafts to follow the coast, thereby circumventing groups already claiming habitable coastal regions and avoiding conflict). Coastal migration would also allow that dates for human migration could be “pushed back” another 1,000 to 2,000 years from previous estimates, suggesting that people were in the New World as far back as 14,000 to 15,000 years following now-submerged coastlines (a more direct route between the Americas). A recent article in *Scientific American* (Nov. 2011) seems to concur with what I’ve been saying for over a decade.

As groups transmigrated from Asia into Alaska and into what is now Canada and down into the region presently known as the United States, they settled in places rich with resources: along rivers, at the confluences of rivers, wherever rivers emptied into the sea, on vast plains full of bison—anywhere food was abundant. It is important to remember that river deltas, estuaries, and bays were not located where they are today. Instead, rivers would have flowed much longer until they finally reached the sea, perhaps dozens of kilometers. Small human communities would most certainly have existed along the riverbanks, especially at the confluence of river and sea. Other groups coming across Beringia later would compete for those same subsistence resources, likely leading to acts of aggression.

Some things never change.

Thus, these hunters and gatherers were constantly on the move, either because they were in search of resources or because they had been forcibly ejected from a region by a larger, stronger group or

groups determined to have access to the resources. Naturally, these various peoples brought their own languages with them.

As the groups moved from their origins, following the coastline—or in landward journeys crossing rivers, plains, and mountains—their languages altered over time (as all languages do). In short, over many generations, the New World languages would have grown into distinct dialects, eventually into distinct languages—wholly new, wholly and idiosyncratically distinct systems. No doubt, because of contact with other bands or tribes, *miscegenation* (intermarriage between differing cultural groups) occurred, further complicating linguistic diversity. In addition, slavery was prevalent among pre-contact Native American cultures, including Alaska Native cultures. Eventually, slaves would have learned the language of their captors, some words (and ideas, including myths) being shared or borrowed as loanwords.

The population of the New World by humans can best be described as a constant movement southward and eastward, with no awareness whatsoever by the new settlers that they were on a new continent. There were no maps. They only followed the eternal need for food and a place to call home. In a relatively brief period—only a couple thousand years—the pressure to keep moving, to find a niche, led to the human populating of North, Central, and South America, from the northernmost climates all the way down to Tierra del Fuego. Radiocarbon dating broadly supports this migration pattern, though some ambiguous dates exist, which can be generally explained. Recent genetic findings further support this theory of migration.

While most of the migrating peoples moved southward and eastward, some groups stayed north, keeping to the Arctic coastlines. During the Ice Age, Greenland was also accessible. The descendants of those people are often, and inaccurately, called Eskimo, though they call themselves by a variety of names: Inuit, Yupit, and Inupiat. Over time, their cultures adapted to the Arctic climate. Indeed, they

may already have been circumpolar-dwellers *before* they crossed from Siberia, following the circumpolar coastline, an environment suited to their culture and subsistence practices.

Eventually, around 10,000 years ago, global temperatures increased, and the thick ice sheets slowly melted, returning sea levels to current states, closing the door to human migrations and drowning archaeological sites along previously exposed Ice Age coastlines. Consider how in the past century divers have discovered archaeological structures (temples, etc.) in the shallow waters of the Mediterranean, evidence that sea levels are not constant (albeit these sites are only a couple thousand years old. Consider the myth of the lost city of Atlantis). Today, underwater archaeology is a burgeoning field of study. Indeed, the oldest habitations of human migration into the Americas may yet lie beneath the sea along shallow coastal shelves.

One effect of the thousands of years of human transmigration into the New World was, as mentioned earlier, the isolation of the languages from their original, pre-Beringia languages. Early on, as humans first crossed into Alaska, many of the languages would have had a good deal in common. Indeed, the thirteen Athabaskan languages of interior Alaska and the additional Athabaskan languages that promulgated southward were all related thousands of years ago. Even today—Navajo, the language of the indigenous people in the region that is called Four Corners (eastern Arizona, western New Mexico, southern Colorado, and southeast Utah)—is a member of the same linguistic family, called Diné. *The Ahtna Noun Dictionary and Pronunciation Guide* (Smelcer, 1998, 2011 revised) includes a small chapter on comparative linguistics, showing words that are similar in neighboring Athabaskan languages. In many cases, the words are nearly the same. For instance, the Ahtna word for lynx (*Lynx canadensis*) is *niduuyi*. In neighboring Tanacross the word is *niidûu*; and in Upper Tanana it is *niduuy*. Similarly, the corresponding words for moose (*Alces alces*) are *deniigi*, *dendîg*, and *denigi*. Noam Chomsky, the world's most influential linguist, graciously provided a foreword to the dictionary.

Time changes everything, even languages. As time passed, the original languages brought over from Eurasia-Siberia transmuted, or changed. All languages change. Every year, in major world languages, dictionaries are published with new words added, some words removed from usage or their original meanings modified. Consider such modern additions as *computer*, *laptop*, *internet*, *thumbdrive*, *floppy disk*, *gigabyte*, *terabyte*, *quarks*, *cinplex*, and *mouse*, which used to be exclusively, a small, furry rodent. Given enough time, those early North American languages no longer resembled their proto-linguistic parents. The same can be said of larger aspects of the cultures. They too differentiated.

It is estimated that at the time the first Western Europeans settled in New England (the northeastern coast of America) there were as many as a thousand different languages in North America (excluding Central and South America), each belonging to a unique and distinct culture. Imagine such diversity. The image of Christopher Columbus standing on sandy shores of North America in 1492 holding the flag of Spain with his three ships anchored behind him expresses a ludicrous fallacy. He never set foot on the mainland continent itself. The idea that he “discovered” the New World is equally erroneous. Estimates suggest that tens of millions of people already lived in North America at the time. They didn’t need to be found. Pre-contact population estimates vary widely. In the 1960s, Henry Dobyns estimated that as many as 90-100 million people lived on the continents before 1492. In the 1970s, Woodrow Borah and Sherburne Cook estimated that over 25 million people lived on the pre-contact Mexican plateau alone. Conservative estimates suggest that as many as 60 million people lived in the New World at the moment Columbus “discovered” the New World.

Scientists believe that diseases transmitted by post-Western European contact, killed as much as 80% to 90% of the human population. Epidemics raced across the continent unchecked, decimating pan-American Indians on both continents. Ostensibly, it was the largest accidental ethnocide in history. Other infections were not accidental. Centuries later, in a gesture of friendship, the US government

purposefully gave small-pox-infected blankets to Indians. It is arguably one of the earliest acts of biological warfare (it is known that Genghis Khan used Bubonic Plague-infested corpses as biological weapons in his war campaign). A similar and more recent epidemic occurred during 1918-1920, when a worldwide influenza pandemic (the Spanish Flu) hit Alaska, killing more than 60-70 percent of all Alaska Native peoples. Along with people, the diverse cultures and languages were also devastated. Natives still call this period The Great Death.

After more than four hundred years of colonization (imperialism) by Britain, France, Spain, and Americans, only about 175-200 Native American languages are spoken today. Most are on the brink of extinction. Han, for instance, an Alaska Native language, has two speakers, both over the age of 80. In January 2008, Eyak, another Alaska Native language, went extinct when the last tribal speaker, Marie Smith, died in Anchorage. Anthropologist and linguist John Smelcer had studied Eyak with her, and he attended her funeral service. Smelcer himself is among the last speakers of two Alaska Native languages: Ahtna, the language of the Copper River Indians; and Alutiiq, the language of Prince William Sound (where the Exxon Valdez ran aground on Bligh Reef in 1989, spilling 11 million gallons of crude oil).

The policy of the colonizers was simple: Eradicate the original inhabitants and take their land and resources. Ironically, while the American Indians were themselves displaced to make room for the expanding United States, their ancient names for places were largely kept. Nearly half of the names of the fifty states come from Indian words, not to mention many of the names of cities, towns, and rivers. It's the same story seen around the world whenever a larger culture dominates an indigenous culture. Similar histories exist in the way the British treated Indian, Australian, Tasmanian, and New Zealand (Maori) Aborigines, and the way the Spanish treated South American cultures. The same can be said in Asia and Africa. In North America, the policy of eradication was best summed up by the words of

Headmaster Richard Henry Pratt, his words engraved above the iron gates of Carlisle Indian School in Pennsylvania, the first boarding school for American Indian children (1879): “Kill the Indian to save the man.” Loosely interpreted, it was the American government’s official policy to eliminate everything Indian, slowly but absolutely: their customs, their spiritual beliefs, and most importantly, their languages. Beginning in 1879, school-aged Indian children were forcibly removed from their homes and sent to distant boarding schools, where they were punished harshly if caught speaking their Native language. At its peak, the federal government operated 153 Indian schools. The insidious plan worked. The loss of Native American languages escalated during the eighty years during which schools turned out generations of Indians who had little or no access to their tribal customs or languages, their language of home. Many of author John Smelcer's relatives attended such schools, some as far away as two thousand miles from home. Australia had a similar policy regarding Aborigines. Those children were called The Stolen Generation. Both governments ended their practice in the early 1960s. Australia recently apologized to Aborigines. In 1992, the United States government reversed their policy of assimilation with the Native American Languages Act, which provides funding for the preservation of the remaining Native American languages, albeit too late in many instances.

Coincidentally, the rise of Native American literature began around the same time. African American literature had gained popular foothold decades earlier, especially during what is termed The Harlem Renaissance in the 1920s and 1930s. It is interesting to note that the descendants of slaves were given the right to vote *before* the original people of the nation. Today, American Indian literature is a canon of its own, widely studied in colleges and universities. The body of writing comes in many forms—poetry, short stories, novels, and drama—and comes from authors from many of the hundreds of recognized tribes. The myths, folktales, belief systems, and histories of the various tribes inform the literature, which is often about cultural loss and recovery, social injustice, returning home, and finding a

place in the world. But the literature is not bound by such topics as contemporary Black writers are not bound to write about slavery or racial segregation or discrimination.

One of the criticisms of American Indian literature is that it takes the literary forms of the colonizer. All the above-mentioned literary genres originate from Western culture. Not only that, but almost all of the published writing is in English, the language of the colonizer. Thus, Navajo, Apache, Kiowa, Creek, Pueblo, Cherokee, and Spokane/Coeur d'Alene Indians are all writing in English. Many contemporary American Indian writers will use a Native word or phrase in their writing from time to time, but because they do not speak their language fluently, they are unable to create an original literature in their original Native tongue. Only a handful of Native American writers (the author of this essay included) regularly publish fully and completely in their Native language.

It took longer than ten thousand years for the indigenous languages of North and South America to evolve. It took only a few centuries to eradicate them.

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About the Author

John E. Smelcer is the author of over forty books, including a dozen books on Alaska Native/Native American cultures. He co-edited *Durable Breath: Contemporary Native American Poetry* (1995) and *Native American Classics* (2013), an anthology of 19th and early 20th century writing by Native Americans. As one of the last speakers of Ahtna and Alutiiq, he has worked with tribal elders, many of whom have since passed away, to compile and edit dictionaries of both languages. His education includes a Ph.D. in comparative literature, a Ph.D. in English, and a degree in anthropology and archaeology (John was a student in Professor Guthrie's Paleobiology of Beringia class at the University of Alaska-Fairbanks), as well as postdoctoral studies at Cambridge, Oxford, and Harvard. In November of 2012, he delivered the keynote address for the FBI's annual National Native American Heritage Program held in New York City.