NOTWITHSTANDING EUROCENTRIC NOTIONS, NATIVE AMERICANS DESERVED THE status of Alaska’s “discoverers,” first human explorers, and, perhaps, rightful owners. The story of Western exploitation of Alaskan natural resources is in large part a record of destructive impact on the Natives. Russians (Chapters 1 and 2) enslaved the Aleuts and some of the Koniag Eskimos, Kenaitze Indians, and Chugach Eskimos and fought the Tlingit Indians. Whalers (Chapter 3) hired Eskimos to deplete the sea mammals and caribou on which the Eskimos themselves relied for food. Gold seekers (Chapter 4) dried up stocks of game in the interior. Commercial salmon fishers (Chapter 15) often refused to honor Native fishing territories. Federal officials (Chapter 8) ignored Tlingit claims in establishing the Tongass National Forest and Glacier Bay National Monument. Wildlife managers (Chapter 11) paid more attention to the needs of white trappers and hunters than to those of Alaska Natives. The national and territorial governments overrode and deferred Native land claims, although not denying them in principle. Accidentally introduced disease did by far the most damage to Native populations, but reductions of wildlife also took a toll. More
dependent than the transient whites on fish and mammals, Alaska Natives faced poverty and even starvation when wildlife became scarce. But Native hunters killed excessive numbers of animals for commercial sale of antlers, horns, hides, ivory, and meat.

Scholars have debated whether European and Euro-American intrusion in Alaska is a case of an environmentally consumptive culture replacing an environmentally responsible and stable system. Were Natives the first environmentalists? Did they see themselves as integrally related to their natural environments? Did they believe in sustainability or practice prudent use of resources? The answers have implications not only for cultural understanding but also for future prospects for sustainable use of natural resources in Alaska.

In addressing questions of aboriginal conservation, observers often cite ecologically oriented statements of Native American leaders and the relatively unaltered state of the natural environment when Europeans arrived. Others point to the extirpation of the mammoths and ancient bison in part by hunting and argue that Natives simply did not possess the technology to do more damage. Anthropologists examining these questions have found it difficult to distinguish Native American culture from the influences of European and Euro-American (or Western, or white) culture that have existed for so long. They also point out
the difficulty of translating one belief system into terms that can be understood by the other.

EVIDENCE FROM ALASKA

Alaska, having encountered European and Euro-American culture later than most contiguous American colonies and territories, offered a better opportunity to find uncontaminated evidence of aboriginal behavior. Even there the coastal Natives have been affected for more than 200 years. Only fragments of relevant evidence are available for generalized conclusions about conservation practices in pre-contact Alaska.

George Bird Grinnell thought many Native Americans practiced conservation. He cited an incident recorded near Lake Champlain in 1687 in which Indians trapped deer but let the pregnant females go. He believed Algonquins, Athabaskans, and Aleuts had hunting territories carefully managed by families within a framework of overall tribal jurisdiction so as to maintain long-term abundance of wildlife. Grinnell’s conclusion: “We sometimes think of the Indian as an improvident savage but in his control of the game supply he showed a wisdom which it has taken his white successors generations to ac-
quire. Had we followed his ways from the beginning, the story of American big game would have been quite different.”

Grinnell, however, spent little time in Alaska and based his judgment on anecdotal evidence rather than the findings of modern anthropology. Attempts to identify aboriginal conservation practices among Alaska Natives have been made in recent decades, yielding some relevant information.

Aleuts

Based on Russian accounts, researchers have affirmed aboriginal Aleut use of hunting territories, a system broken up during Russian control. Some scholars viewed the Aleuts as ideally integrated into their oceanside environment in a sustainable manner. They argued that Aleuts exercised an ecologically beneficial, stabilizing effect; for example, consuming sea otters that might otherwise overexploit sea urchins and generate high population oscillations. Other information suggested that Aleuts had taken too many otters at Amchitka Island,
and, as a result, sea urchins must have multiplied and eaten up the kelp beds that harbored and fed fish and other creatures. Russian cleric Ivan Veniaminov noted that Aleut hunters sought status by trying to “kill as many . . . wild animals as possible.”

Henry W. Elliott described the method used by Aleuts in the 1870s to catch finback and blue whales congregating in herds in the Aleutian Island passes:

They tip a large number of spear handles with glass heads deeply notched (in primitive days they used slate), and paddling out quietly into a herd unconsciously feeding, they drive these weapons into forty or fifty of the whales, if the day is a favorable one. The glass head works in a day or two into the vitals of the creature, causing first inflammation, then death; and after a certain amount of time the carcass floats, and the currents carry the burden to the beach or else far out to sea, where it is never heard of again. If the natives manage to secure one whale this way, even though they strike hundreds, they feel well repaid for their labor.

Given that the blue and finback whales are the two largest known vertebrate species ever to have lived on Earth, it is difficult to imagine a more ecologically costly means of acquiring food.

Southeastern Indians

Tlingit, Haida, and Tsimshian Indians of the Southeast also divided their hunting, fishing, and gathering areas into clan-controlled territories and, to a degree, exercised care not to overtax the resources. Economist George Rogers summarized their system:

[T]he Indian had managed to create institutions and organizations which permitted a sound and rational relationship of man to his environment and a balanced utilization of the natural resource base to support something far greater than a bare subsistence existence. . . . [T]he picture is one of a highly rational relationship of population to resource base, a series of striking studies in balanced human ecology. . . . [T]he clans practiced a fairly sophisticated form of sustained-yield resource management in the best “modern” sense.

Other analysts concluded that Southeast Indian land use patterns had been oriented more to ownership than to conservation and that waste of wildlife occurred in the aboriginal culture.

Anthropologist Frederica de Laguna, in a lengthy study of Yakutat Tlingits, found an essentially religious relationship between humans and nonhuman animals. The latter possessed moral standing approximately equal to humans and, according to one myth, had once been humans. They could understand human thoughts and affect the well-being of humans. To take a life of another species,
a hunter had to observe correct preparatory behavior. After the kill the hunter explained, often in a song, why he had taken the creature’s life. Body parts had to be treated in specific ways; for example, a bear’s head would be covered and left facing inland, and salmon bones would be burned. Unnecessary killing and waste of body parts also constituted disrespect for the animal taken. Failure to observe proper etiquette could bring bad luck to the hunter or his relatives, or punishment in the next life. Familial groups maintained hunting territories for their own benefit, not for conservation in the modern sense of conscious sustainable use.7

Athabaskan Indians

For reasons not well understood, evidence of conservation practices is much stronger for Athabaskan Indians, living predominantly in the interior, than for other Alaska Native groups. Dena’ina Indian elder Andrew Balluta, a noted bear hunter, told of a traditional form of utilitarian conservation of brown bears in the Lake Clark vicinity. Certain stream valleys where the bears fished for salmon would be set aside. No activity that disturbed the bears would be allowed. The reserve kept the bears well fed, thus available for use and not hungry enough to be a nuisance to villagers.8

In his studies of the Koyukon (upper Koyukuk River) Indians, anthropologist Richard K. Nelson discovered a pattern of utilitarian conservation and ecosystem maintenance. Koyukons knew every stream, every patch of woods, every stretch of the river. They knew how many fish, mammals, and plants could be gathered from each and took care not to waste or exhaust the resources. Nelson observed that “Koyukon tradition contains an enormous wealth of empirical knowledge covering the entire spectrum of natural history. This includes a sophisticated understanding of interrelationships among natural phenomena, an ecological perspective essentially identical to that recently evolved in Western scientific thought.” At the same time, the Koyukons proffered spiritual explanations for their relationship to Nature and did not appear to perceive any conflict between the two perspectives.9 Nelson noted that “one of the basic themes in Koyukon ideology is a prohibition against wasting anything from nature. . . . Although avoidance of waste is based on spiritual sanctions, Koyukon people also believe it has practical significance in maintaining populations of resource species. They are always encouraged to harvest only what they can use, and to use anything they harvest.”10

Beyond the avoidance of waste, “[S]ustained yield considerations are important to the entire spectrum of hunting, trapping, fishing, and gathering activities. This empirically based approach to conservation of resources derives from the Koyukon people’s practical understanding of ecological dynamics.” Nelson
advised, however, that insufficient data existed to prove in scientific terms the effectiveness of Koyukon conservation practices. He also detected a conservation ethic among the Black River Kutchin Indians of northeastern Alaska, although he cautioned that the idea may not have pre-dated Western influence.

Historian Melodie Webb found that, in the upper Yukon Valley in the 1930s, Athabaskan trappers displayed a much more conservative attitude toward game regulations than white trappers did. Relying primarily on trapping for income and apparently desirous of ensuring adequate furbearer stocks, Indians seldom overtrapped their territories. Webb believed the behavior stemmed from cultural ties to the land.

Research on wood bison in the upper Yukon drainage suggests a lack of sustainable behavior on the part of Athabaskans. Oral tradition consistently described the animals as common in the early 1800s. Buffalo Shirt Mountain in the Sheenjek River country is said to have received its name when a large herd passed over its slope, appearing to cover it. Hunters easily killed the beasts using versatile bows and arrows, dogs, and snowshoes in winter. According to one account they drove herds off a cliff. Stories also blamed excessive hunting for eradicating the bison and causing starvation. Wolf and bear predation could have contributed little to the extirpation, nor would climate or vegetation change likely have had such an impact over a relatively short period.

Examining subarctic Indians including Koyukons and Chipewyans, cultural historian Calvin Martin found their relationship to wildlife to be grounded in a fundamentally different conception of reality than that of Western civilization. The latter viewed Nature as matter to be dominated and exploited, whereas for the Indians,

> [a]nimals lived the majority of time as spirits in the bush, the spirit realm, and were every bit as intelligent and sophisticated as man. . . . Hunting these animals was a series of spiritual maneuvers designed to engage the spirit of the game so that it would agree to make a sacrifice of its flesh to the needy hunter. Hunting was a kind of contract between man and animal: animals, as conscious and intelligent beings, were well aware that their flesh was necessary for man's survival and they willingly donned fleshy clothing from time to time and surrendered themselves to the hunter. But they in turn demanded respect. Respect lies at the heart of North American hunting; it forms the core of the man-animal relationship in Amerindian society.

Therefore, Martin concluded, hunting represented “much more than a straightforward pursuit. It is an act that embraces all of life; it is a relationship of reciprocating esteem and courtesy. . . . Animals are members of man's social universe, and man a member of theirs.”

Martin perceived three deterrents to overexploitation of wildlife: the small number of Native Americans, the low level of technology, and the lack of eco-
Eskimos

Robert F. Spencer cited evidence of conservation practices among Eskimos17: “In the aboriginal culture, the foxes were hunted by means of traps between December and April. . . . [O]nly five of each kind of fox could be taken at a time. The theory was the five skins were sufficient for a parka of matched skins and the fox was offended if more that five of his kind were killed.”18 The same rule applied to the wolf and wolverine. Ethnographer Knud Rasmussen noted that the Icy Cape Inupiat trapped no more than five wolves or wolverines in a season lest the hunter lose his catch or be attacked and killed by the animals.19 As in Indian beliefs, logical sustained-yield principles melded into spiritual explanations. Animals could think and communicate like humans; they sensed human thoughts and actions and could bring bad luck, including reduced hunting success, if mistreated.

In the central Brooks Range, Nunamiut Eskimos reduced Dall sheep populations to low levels between 1885 and 1910. Anthropologist John M. Campbell determined that, following an absence of 600–800 years, the Eskimos moved into the mountains in substantial numbers around 1750. Relying primarily on migrating caribou, they hunted sheep in the summer and at other times when caribou did not appear. They employed bows and arrows and, even more effectively, snares. Periods of starvation came to pass in 1906–1907 and 1910–1911 when few caribou or sheep remained. By 1920, in part because of diseases introduced by whalers, virtually no Eskimos lived in the area. Campbell concluded that sheep had either been gradually hunted out over generations or overutilized during the period of caribou scarcity around the turn of the century. As of the late 1930s, in the near-absence of hunters, sheep herds had recovered.20

Moose and muskox populations also reflected hunting pressure by Eskimos on the North Slope. Both had existed in the region during the Pleistocene Era. As moose began to move northwest to recolonize the area in the 1800s, Nunamiut hunters probably killed off most of the few that crossed the Brooks Range into the northern river valleys. Study of climate, vegetation, and wolf predation indicated that none of these would have been a deterrent to moose range extension. After the Nunamiut left the Brooks Range in the early 20th
Century, moose dispersed from populations south of the range and established themselves in the north.21

Fragmentary fossil evidence suggested that muskoxen existed in small numbers relative to other grazers. Climatic change turned steppes into forest during the Holocene, restricting muskox populations to northern coastal Alaska and the northern foothills of the Brooks Range where they could find suitable feed. Bernik, Inuit, and Nunamiut hunters stalked the creatures from several thousand years bpe into the 19th Century. They ate the meat, used the skins for warmth, and carved ladles and other implements from the horns. Like mountain sheep, muskoxen served as a reserve meat supply in times of scarcity of caribou or, for the Inuit, whales and other sea mammals. Introduction of an improved dogsled permitted hunters to range more widely and find the small and isolated herds. Dogs could be trained to force the animals into their defensive arcs where they could be killed by bow and arrow. Native hunters, therefore, probably caused the virtual extinction of Alaskan muskoxen before the advent of whaling or firearms.22

Anthropologist Ann Fienup-Riordan found that Yup’ik Eskimos on Nelson Island traditionally perceived themselves as integrally and reciprocally related to nonhumans. Both possessed souls, and each could influence the thoughts and behavior of the other. As creatures of equivalent moral standing, humans could not be stewards or owners of others. Humans could justifiably take the lives of nonhumans provided it was done in a proper, respectful manner. In the harvest of herring, individuals earned the right to particular fishing spots through long-term demonstration of appropriate behavior toward the fish by them and their relatives. Failure to fulfill obligations toward wildlife could induce the prey creature to go into hiding or otherwise refuse to make itself available for harvest in the future. If a creature presented itself for harvest, the hunter felt obliged to take it lest it be offended. All creatures eventually returned to life after death; humans could cause local or temporary disappearance of species but not extinction. Therefore, in fulfillment of their obligations, the Yup’ik sometimes engaged in what Euro-Americans would consider unnecessary killing and waste of wildlife, and their belief in reincarnation precluded any concern for species preservation.23

Ecosystem Sustainability

Regarding maintenance of ecosystem integrity, few opportunities for assessment of aboriginal practices have appeared. Sustainable harvest of wildlife by Koyukons and others afforded a degree of ecosystem integrity, if only incidentally. But their care for wildlife did not necessarily apply to vegetation, a vital foundation for wildlife populations. Citing fragmentary evidence, historian
Harold Lutz believed Natives sometimes abused the environment through fire. Eskimos and Indians used fire for a variety of purposes, among them campfires, signaling, warding off mosquitoes, repairing birch bark kayaks and canoes, and felling trees. Carelessness prevailed, and fires often went out of control. An observer wrote in 1898 that in the upper Yukon Valley “the Indian also has a way of signaling by burning trees. When in a locality where he expects to find his friends or family, he sets fire to a tall spruce, and then calmly sits down and watches the horizon for an answering column of smoke. The wind will fan these flames into a fierce forest fire in a short time, and the Indians are too utterly indifferent to think about putting them out.” White men, judged Lutz, exercised even less care in using fire than Natives did.24

Athabaskans in the upper Tanana region, like Algonquins in Canada, employed fire as a tool in a planned strategy to raise the productivity of the taiga. Regularized, prescribed burnings increased furbearers, waterfowl, and big game, especially moose. Fires set in the village periphery suppressed vegetation that might endanger the village in case of wildfire.25 Uncontrolled fire could wreak widespread havoc in the interior but had virtually no capacity to do large-scale damage to the tundra regions of northern and western Alaska or to the rainforest of the Southeast. Except for destruction of wildlife populations, Natives possessed no means of dismantling these ecosystems. Some spoke of the sacredness of the land and the importance of their ties to it, and some tribes allotted territories for harvest. But the notion or practice of ecosystem preservation as such may not have existed.

INTERPRETING THE EVIDENCE

Whether aboriginal Natives can be considered “environmentalists” or “conservationists” depends in part on definitions. It seems clear that Alaskan aboriginal societies felt close to or part of Nature and respected other creatures. Rituals for taking wild creatures might have had the effect of preventing depletion of species. A society that practiced sustainable use of natural resources, however indirectly, might well be considered conservationist. Utilitarian conservationism in the modern sense would call for institutionalized and conscious restraint in harvest of natural resources based on awareness of their limited availability. To be environmentalist, the society would take steps to protect the ecosystem as well and would order itself so as to perpetuate a sustainable relationship to the ecosystem. Such a holistic system would integrate social beliefs, feelings, behavior, technology, and population levels with the characteristics—including resource limits—of the natural environment.

Perhaps no human society, ancient or modern, has achieved an ideally holistic relationship to its natural environment. Numerous barriers have existed,
among them lack of understanding of the environment, changes in the environment, interference by other societies, dissident behavior or beliefs, self-centeredness, and lack of population control. Assessing the evidence for aboriginal environmentalism is not a matter of searching for perfect societies. It is an attempt to find responsible practices by some tribes and individuals that may reflect on their wisdom or, more importantly, may be useful in a modern era of environmental distress.

The apparent infrequency of species extinction and the existence of tribal societies within the land’s carrying capacity, said anthropologist Raymond Hames, led people to assume that aborigines practiced conservation. Many myths, taboos, and rituals reinforced the impression. But Hames insisted that “if a people have a conservation ideology but do not act as conservationists, then they are not conservationists. . . . [C]onservation is a matter of performance, not intent.” The best proof of conservation behavior would be data on the relationship of hunting practices to wildlife populations. In the case of declining prey species, hunters should reduce their take. Yet tribal societies had caused the extinction of some species on islands. Based on his study of Amazonian tribes, Hames believed that none practiced conservation. For conservation to work in a tribal culture, he posited the need for internal rule enforcement to prevent fellow tribesmen from cheating and external defense to prevent outsiders from taking the resources. The former required strong chiefs and the latter some form of territorial control. Amazonians lacked both, but the Polynesians and Micronesians, who possessed both, enforced effective conservation on their fishing grounds. Hames suggested that coastal Alaska Natives, having strong chiefs and territories, may well have practiced conservation.

Numerous observers have commented on the tendency of Alaska Natives to waste wildlife such as caribou, deer, and sea creatures. To the extent that Eskimos thought about population balances, some of this profligacy may have been related to the large groupings and migratory nature of the animals in question. Unlike the interior Indians less dependent on migratory mammals, coastal Eskimos would have found it difficult to acquire a sense of the ecology of the sea and how their behavior could influence it. A premium might then have been put on killing as many (whales, walrus, seals) as possible, never knowing for certain when they might reappear. Similarly, it would have been difficult to imagine that the massive herds of migratory caribou, for example, could be threatened by wasteful killing at a particular time and place.

The extravagant slaughter and waste of whales by the Aleuts, as related by Elliott, may have involved an assumption that the supply could not be exhausted. Given a small number of consumers in a large ocean, the practice by itself would probably not have endangered a species. Added to commercial whaling, it might have contributed materially to whale declines. Whatever the effect,
in comparison to the later use of handheld guns, it represented a rare case of primitive technology being as destructive as modern methods.

Introduction of technologies such as the gun, said Hames, did not necessarily increase the killing of game. It might mean the hunter simply spent less time hunting. But market hunting—for skins, feathers, furs, pets, and other purposes—could quickly exhaust wildlife populations. Contact with modern civilization also encouraged settlement near schools, hospitals, missions, and trading posts, resulting in depletion of natural resources in the vicinity.\textsuperscript{28}

Much of the prodigal behavior of Alaska Natives probably stemmed from the adoption of Western values and technology. When John Muir upbraided a Tlingit for needlessly shooting a gull, the Indian replied that he had learned careless killing of wildlife from whites.\textsuperscript{29} The impact of just one implement, the gun, exceeded the ability of social norms to evolve fast enough to control the weapon’s use. Western culture overpowered the Alaska Natives in several ways. As in nearly all pre-modern societies it has encountered, it weakened the legitimacy of traditional beliefs and practices. It taught Natives to think of wild creatures as commodities to harvest for personal material gain. Knowing that by killing large amounts of wildlife they could earn money to purchase prized luxuries such as guns and alcohol, many Natives did so even though it eroded their life-support base.

Alaska Natives eagerly adopted technologies—the match, rifle, powerboat, modern heating and lighting, medicine—that yielded material comforts and ease of taking game. All of these turned out to be two-edged swords, creating dependency on outside income and resources and undermining traditional culture. Resource exploiters, traders, missionaries, teachers, government officials, and other representatives of Euro-American civilization implicitly or explicitly conveyed a sense of the superiority of white culture. Before the mid-20th Century most educated whites thought assimilation to be in the Natives’ best interest. Many or most Natives adopted these judgments and willingly engaged in behavior that damaged their own heritage. Each village and ethnic group contained individuals for and against Westernization, and considerable regional variation existed. Traditional views prevailed more among tribal leaders, the elderly, and the Athabaskans.

Unlike modern technology, adaptation to the core values of Euro-American culture proved extremely trying. Excepting the Southeast coastal Indians and perhaps the Aleuts, traditional Alaska Native culture emphasized group orientation, cooperation, sharing. It differed vastly from Western industrial values of individualism, aggressiveness, and material acquisitiveness. It sought to minimize skills and attitudes necessary for competitive “success.” Caught between making the difficult transition and returning to traditional material culture often viewed as a form of poverty, Natives experienced identity crises.
High rates of alcoholism, school dropout, violence, suicide, and mental illness followed.\textsuperscript{30}

Some Alaskan aboriginal beliefs and practices demonstrated ecological orientation in a sense of community and mutual obligation with natural surroundings or in awareness of ecological processes. Natives valued animals for a variety of nonconsumptive reasons and regularly granted them a form of rights. Some articulated an appreciation of the land or the ecosystem as a whole. Natives evolved elements of a holistic sense of connectedness to the land that in important respects surpassed the wisdom of the Euro-Americans.

Other Alaska Native practices, especially among Athabaskans, manifested utilitarian conservationist principles, managing and using resources for sustained yield. In some cases this wise use principle may have been a product of the fur trade, an attempt to maximize trapping income by conserving furbearer populations. Groups and, probably, individuals varied in their beliefs and behavior. Practice did not necessarily correspond to belief, as witnessed by many Natives’ swift adoption of the wasteful and disrespectful habits of outsiders. Nor did the felt sense of obligation toward wild creatures always protect hunted species from extirpation.

Alaska Natives engaged in constant efforts to survive, as did other organisms, and the value of physical survival implied the need for a value of sustaining the resources on which they depended. Moreover, the hunted species had an implicit need for survival and, arguably, a corresponding right to exist. It seems relevant, therefore, to consider whether Natives engaged in sustainable use of Nature.

Compared to that of Euro-Americans, Alaskan aboriginal treatment of Nature appears to have been relatively benign. As to whether aboriginal Alaskans qualified as conservationists, the evidence suggests that some people, to some degree, in some places practiced elements of conservation, if the criterion is behavior that had the deliberate effect of conserving natural resources. Similarly, some Natives practiced aspects of environmentalism, including a holistic relationship to the land and an acknowledgment of nonhuman rights. By changing technology, attitudes, and land ownership patterns, Euro-American civilization distorted Native environmental practices and social systems as a whole. Whatever the degree of traditional commitment to environmental protection, not much evidenced itself by the time of statehood.

**IMPLICATIONS OF THE EVIDENCE**

Many scholars and others who attributed ecological wisdom to aboriginal cultures hoped it could be an object lesson to Western civilization, which they viewed as destructive and unsustainable. To the extent that aboriginal Alaskans
practiced principles of modern environmentalism, in particular an ecocentric perspective and ecologically sustainable natural resource use, they lacked the power to transfer those values to arriving Europeans and Euro-Americans. Most outsiders thought they had little to learn from the Natives in the realms of philosophy and economics. In the post-1960s era, Alaska Native environmentalism may have marginally affected the thinking of Alaskan environmentalists, who discovered elements of holism by other means.

Calvin Martin described North American Indians’ reciprocal relationship to Nature as “inherently conservationist” but added that the idea that Western society might adopt it seemed “preposterous.” The gap in perspectives, he argued, is too great. Even the philosophies of Thoreau, Emerson, Muir, and George Perkins Marsh, he thought, had been ethnocentric in that they saw Nature as God’s work. And Aldo Leopold’s land ethic implied a form of human dominance, if benign in intent, of the land. “Surely,” said Martin, “we deluded ourselves when we imagined that the Indian could teach us his particular land ethic; we did not understand that it was not just a land ethic but a comprehensive way of life. Anyway, as far as the Indian is concerned, it isn’t he who does the teaching but rather the land.”

A second reason for asking whether Natives practiced conservation would be to assess the prospects for sustainable living by present-day tribal societies. In post-statehood Alaska many Natives relied substantially on the land for subsistence and cultural identity. Could these values be maintained, and, if not, what would be the fate of the people? Speaking of tribal societies in general, Hames postulated that social and ecological deterioration did not have to occur: “[S]imultaneous conservation of ethnic and biological diversity is possible. Native peoples can exist in equilibrium with game populations if the technology they use is regulated, if hunting and fishing are aimed solely at meeting nutritional demands, and if settlement patterns remain dispersed, mobile, and at low population densities.”

As applied to Alaska, Hames prescribed a difficult set of criteria for social and ecological viability. Resource politics reflected some of the obstacles. Use of wildlife and other natural resources lay at the core of long-standing disputes over Native rights and subsistence rights. Alaska Natives had won a large land settlement through the Alaska Native Claims Settlement Act of 1971, but the state and national governments retained jurisdiction over fish and wildlife. State wildlife managers, like the federal officials they succeeded in 1960, tended to reflect the interests of sport hunters. Management focused on enforcement of licensing, seasons, bag limits, and methods (e.g., snowmobiles and aircraft), backed by biological research aimed at maintaining viable game populations. Natives commonly ignored the regulations and the science, harvesting wildlife according to custom or convenience. Wildlife managers understood little of
Native culture and judged Native hunting behavior in terms of its adherence to regulations. Finding the Natives frequently in violation of the law, they reacted unsympathetically to appeals for special Native rights to wildlife. Constitutional principles of equality cast doubt on claims of special rights. Also, changes in Native society raised questions of what constituted Native culture and led many non-Natives to conclude that modernizing Natives no longer needed or deserved special resource use rights. A cultural and political gap existed over who should have priority rights to wildlife and what level and type of use met the criterion of fulfillment of a true need.33

The gap in perspectives and the remoteness of many Alaska Native hunting grounds resulted in weak enforcement of regulations. Yet some conservation progress occurred. State and federal laws gave Natives a partial priority status in uses of wildlife and included Natives on regulatory panels. Natives found themselves at a disadvantage in competing through the regulatory process, especially in state proceedings. Cooperative management of some federally controlled wildlife, such as bowhead whales and polar bears, incorporated Native participation and succeeded in protecting both wildlife populations and
cultural traditions. At the onset of the 21st Century some species had been safeguarded by cooperative management, some had not, and the broader question of subsistence rights had yet to be resolved.

Hames’s prescription called for controls on technology in taking wildlife and restriction of the harvest to traditional needs. For some species and locales such as bowhead whales and polar bears along the northern coasts, these goals could be feasibly met. Large animals taken near a small number of villages could be easily monitored. For smaller or more dispersed species such as waterfowl or wolverines, monitoring would be much more difficult. Swift and long-range snowmobiles, powerboats, and aircraft carried the potential for excess killing of wildlife. Enforcement of rules restricting harvest to nutritional needs would be expensive and politically contentious. Acceptance of such rules could grow only gradually among hunters who, by historical experience or traditional beliefs, had not practiced conservation of wildlife. Moreover, Natives could hardly be expected to give up the comforts and pleasures of modern society to which they had become accustomed. Yet these advantages and implements depended on substantial monetary income, not easily achievable for many Natives. To the extent that higher income derived from increased consumptive exploitation of natural resources, such as timber and walrus ivory, sustainability would be put in jeopardy.

On the whole, Alaska Natives have behaved much the same as non-Natives in their treatment of natural resources since statehood. Yup’ik Eskimos depleted goose populations but, after intervention by the Fish and Wildlife Service, cooperated in restoration measures. Hoonah Tlingits opposed clearcut logging in their vicinity but engaged in unsustainable logging elsewhere. Gwitch’in Indians opposed oil drilling in the Arctic Refuge for fear it would undermine their traditional lifestyle and caribou supply, while the Alaska Federation of Natives, and Eskimos who stood to gain from oil revenues, advocated drilling. Some individuals, and some groups such as the Koyukon Indians, emphasized conservation values. Others, especially those active in regional corporations, favored rapid exploitation of resources. In environmental controversies, Alaska Natives and environmentalists have made selective and temporary alliances.

Hames also envisioned dispersed, mobile, and small human populations as necessary for cultural and ecological sustainability. Most Alaska Native villages are widely separated and small, but seasonal migration for subsistence has all but disappeared. The last nomadic group, Nunamiut Eskimos, settled at Anaktuvuk Pass in 1947. Television and other influences attracted the young to outside popular culture, almost certainly eroding their ties to the land. Most villages could not support themselves economically; they relied on the land for part of their sustenance and on cash transfers from outside. Native regional corporations, designed for commercial exploitation of natural resources as a path...
to modernization, undertook environmentally destructive logging and mining operations. But population growth constituted the most serious problem. Between 1990 and 2000, Alaska Natives increased at three times the rate of white Alaskans (Table 10.1). This trend alone, if continued, would preclude living in harmony with the land and would probably undermine cultural pride as well.

Remnants of aboriginal beliefs supportive of species or ecosystem sustainability could supplement and enrich modern science in resource management. Each could learn something from the other. Management science might become more holistic, developing a broader understanding of human ties to the land. Conversely, ecological science could help Natives understand the dynamics of wildlife populations and the imperatives of balancing human population and resources. Cooperative wildlife management has achieved this in some degree. Broader success would depend in part on whether aboriginal culture has been ecologically responsible and, even more, on whether Natives and non-Natives believe it to be so.