

Island Civilization: A Vision for Human Occupancy of Earth in the Fourth Millennium

**A Presentation to the Simon Fraser Institute for the Humanities,
Oct. 16, 2008**

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“What we call wildness is a civilization other than our own.” Henry David Thoreau (1859)

“Darwin’s dice have rolled badly for Earth.” Edward O. Wilson (1998)

“The beauty of Island Civilization is that it permits humans to fulfill their evolutionary potential without compromising or eliminating the opportunity of other species doing the same.”
Roderick Nash (2001)

Note: this presentation is offered in “op-ed” style. The underlying research appears in two of my books: *Wilderness and the American Mind* (Yale University Press, 2001) and *The Rights of Nature: A History of Environmental Ethics* (University of Wisconsin Press, 1989).

- 1 The new, third millennium we are just entering affords an excellent opportunity to think big about the history and future of wilderness and civilization on planet Earth. Of course a millennium is an entirely synthetic (as opposed to astronomical) concept. Measuring time in thousand-year units only began in 1582 when Christian officials arbitrarily fixed a date for the birth of Christ. So there was nothing special about December 31, 999; it wasn’t even recognized as the end of the first millennium. But we made a big deal about the end of the second one a thousand years later on December 31, 1999. Here was an opportunity to transcend our species’ characteristic myopia. Rarely do humans make plans more than a couple of years in advance. And we don’t do history very well either. It’s a safe bet that you can’t name two of your eight great-grandparents. Right? Similarly, we don’t often think in the wider angles that encompass our species as a whole.
- 2 So my mission here is to review the history of human-nature relations and to extend our concern to the big picture. What could the human tenure on Earth be like a thousand years from now—at the start of the Fourth Millennium? My proposal involves some really major changes and will be controversial. At first glance you may think Island Civilization is crazy and impossible. But not so fast, my friends; don’t stop with criticism. The whole purpose of this essay is to put forward for discussion a strategy for occupation of this planet that will work in the very long run and for all the natural world. This is simply the greatest challenge facing our species, and, in a sense, facing evolution on Earth. If you disagree with some or all of my vision, create your own. Particularly, if you think staying the present course is the way to go, put forward your evidence and reasoning. The essential thing is that we occasionally lift our eyes from everyday details and five-year plans to the far horizons of planetary possibility. Having such a goal is a vital first step to solving problems. Without it we lack direction and the means to evaluate options as they come into focus.
- 3 As a starting point let’s consider wilderness. It’s a state of mind, a perception, rather than a geographical reality, and prior to the advent of herding and agriculture about 10,000 years before the present, it didn’t exist. But after we began to draw mental lines between ourselves and nature, and to place walls and fences on the land, the

idea of controlled versus uncontrolled environments acquired meaning. The root of the word “wilderness” in Old English was something that had its own will. The adjective that came to be used was “wild.” For example, wildfire, wild (undammed) rivers, wildcats. You can’t herd them! The other important part of the word, “ness,” indicates a condition or place. So “wilderness” literally means self-willed land, a place where wild (undomesticated) animals roam and where natural processes proceed unencumbered by human interference.

- 4 After humans created farms, and literally bet our survival on them instead of on hunting and gathering, uncontrolled nature became the enemy of the new civilization. Pastoral societies, like those that produced the Old and New Testaments, became obsessed with making the crooked straight and the rough places plain. For thousands of years the success of civilization seemed to mandate the destruction of wild places, wild animals and wild peoples. In the Bible “wilderness” was the land God cursed. Its antipode was called “paradise.” Adam and Eve lost it when they angered God and found themselves banished into the wild. The first European colonists of the New World carried in their intellectual baggage a full load of bias against wilderness. The last thing settlers of the eastern seaboard had in mind was protecting wild nature or establishing national parks! Indians were savages who needed to be “civilized” or eliminated. After a rocky start, these pioneers became very good at breaking the “will” of uncontrolled land and peoples. Axes, rifles and barbed wire—and more recently railroads, dams and freeways—were the celebrated tools of an environmental transformation that left the wilderness in scattered remnants.
- 5 Lost in the celebration of westward expansion, however, was the possible irony in the process. When does success in too great a dose produce failure? We always thought of growth as synonymous with progress, but maybe bigger is not better if it creates a civilization that is unsustainable. Maybe what really needs to be conquered is not wilderness but rather our technological, capitalist-driven culture in its cancer-like tendency to self-destruct.
- 6 Americans began to explore these revolutionary ideas as the second millennium drew to a close in the 19th and 20th Centuries. As early as 1851 Henry David Thoreau thought that wildness held the key to the preservation of the world. George Perkins Marsh, a well-traveled diplomat who spoke twenty-one languages, understood in 1864 in his remarkable book *Man and Nature* that with their improved technology humans had become a new and destructive force of nature. He suspected that what humans assumed to be victory against the forest primeval could end up defeating their dreams of progress and prosperity. Beginning in the 1870s, John Muir reversed thousands of years of Judeo-Christian attitude by publicizing mountain forests as temples and cathedrals. What shocked Americans of this generation the most was the United States Census’ pronouncement in 1890 that there was no more frontier. With the Indians crushed, the buffalo almost gone and big, industrial cities losing their lustre, it was possible to think that the cherished civilizing process could go too far. The appearance in the early 20th century of best-selling books with a primitivistic slant like Jack London’s *The Call of the Wild* (1903) and Edgar Rice Burroughs’ *Tarzan* (1913) indicated that the relative valuations of wilderness and civilization were changing.
- 7 As the 20th Century began a scarcity theory of value began to reshape the relative importance of wilderness and civilization in the United States. It explains the national angst over the ending of the frontier. Attitude toward wilderness was passing over a tipping point from liability to asset. Of course the pioneers did not go camping for fun!

- Wilderness appreciation, and later preservation, began in the cities where wild country was perceived as a relative novelty and substantially less threatening.
- 8 The rationale of the early movement for wilderness was almost entirely anthropocentric. Scenery, recreation and the economics of a new nature-based tourism underlay the growing popularity of wild places. More sophisticated, but no less utilitarian, were ideas of wilderness as a church, a museum of national history, a stimulant to a unique art and literature and a psychological aid. These were good arguments for their time and they underlay the establishment of the first national parks and wilderness. The Wilderness Act of 1964 was revolutionary but, make no mistake, its point was the benefit of people.
 - 9 A new, biocentric rationale for wilderness emerged in the last fifty years of the Second Millennium. At its core was the idea that wilderness had intrinsic value, that its protection was not about us at all! Rather, it was a place where our civilization took a badly-needed “time out” from our ten thousand year old obsession with the control and modification of the planet. In honoring wilderness we manifested a capacity for restraint. Preserved wilderness was a gesture of planetary modesty, a way to share the spaceship on which all life travels together.
 - 10 The roots of this valuation of wilderness run back in the United States to Henry David Thoreau’s belief that “wildness is a civilization other than our own.” John Muir wrote about “the rights of all the rest of creation” that civilized humans had consistently ignored. The case for the rights of certain animals had been vigorously made in England and the United States in the 19th Century, and in 1915 Albert Schweitzer extended the ideal to “reverence for life.” The implication here and in Cornell University botanist Liberty Hyde Bailey’s book *The Holy Earth*, also 1915, was not just being a good manager or “steward” of nature but respecting it as an ethical equal because it had been created by God. As Bailey put it, humans should “put our dominion into the realm of morals. It is now in the realm of trade.” This theological holism, which has a long history in Western thought and, even longer, in Asian cultures, received major support from the new science of ecology. The phrase “food chains” first appeared in 1927 and “ecosystem” in 1935. Focusing on interdependencies, ecologists gave scientific reason to believe that nature was a community to which mankind belonged, not a commodity it possessed.
 - 11 In essays written in the 1920s and 1930s, and particularly in his book *A Sand County Almanac* (1949) wildlife ecologist Aldo Leopold became the major American articulator of what he called “the land ethic.” It is significant that wilderness preservation was one of Leopold’s highest priorities. It constituted, Leopold argued, “an act of national contrition” on the part of a species notorious for “biotic arrogance.” In the 1960s the emergence of Leopold’s book as a best-seller, along with the popularity of ecologist Rachel Carson, particularly her *Silent Spring* (1962), evidenced a changing American attitude toward nature. “Conservation,” around as a term since 1907, had been strictly utilitarian in its emphasis on national strength and prosperity. “Preservation,” which John Muir favored, implied human benefit from uncontrolled and unutilized environments. A new 1960s word, “environmentalism,” took a broader view of utility, gave rise to the term “pollution” (which impacts many species), and added momentum to the idea of the rights of nature. Theologians and philosophers joined environmentalists in arguing that the nation’s natural rights tradition, which had extended the moral community in the past to include black people, natives and women, should now turn to the task of liberating another oppressed minority: nature.

- The phrase “deep ecology” appeared in 1973 to describe a belief in the right of every life form to function normally in a shared ecosystem. Some philosophers extended their application of natural rights to land forms like rivers and mountains and to ecosystems.
- 12 This line of ethical thinking suggested that just as John Locke’s “social contract” mandated restrictions on individual freedom in the interest of creating a sustainable society, so an “ecological contract” might restrain the human species in its relations to the ecosystem. The passage of the Marine Mammals Protection Act (1972) and the Endangered Species Act (1973) were remarkable in that they endowed non-human species with rights to life, liberty and the pursuit of happiness (in appropriate terms of course). Significantly, many of the species protected were not considered cute or useful to humans in any way; their value was intrinsic and their membership in the biotic community indisputable.
- 13 The appearance of biocentrism and environmental ethics were encouraging, but an avalanche of evidence suggested that civilization continued to wreck havoc with natural rhythms and balances as the Third Millennium began. Awareness of the problems has penetrated deeply into contemporary thought and discussion. Accelerated human-caused decline in biodiversity amounts in the opinion of many biologists to a Sixth Great Extinction. More humans than existed since the start of the species occupied the planet in 1950 and population surged upward at a billion every fifteen years. Sprawling into open space at the rate in the United States alone of 6,000 acres each day, people dominated most of the preferred locales in the temperate latitudes. Climate change now seems to be at least partially human-induced. Fresh water, soil, forest and food issues make headlines daily. Lurking just over the horizon are concerns over massive epidemics and the dark, cold specter of a nuclear war that would take down most life on the planet. Civilization, in a word, appears vulnerable. Making the point explicit, Jared Diamond’s book *Collapse* (2005) underscores the lack of sustainability in many human cultures over the last 10,000 years, and suggests strongly that we are not exempt. There will be a resolution of environmental problems, he argues, if not by intelligent choice then by ecological disaster and social disintegration.
- 14 As for wilderness, where most of the thirty-odd million species sharing Earth reside, it’s now an endangered geographical species. Only about two percent of the contiguous forty-eight states are legally wild, and the same amount is paved! Much of the American landscape has been modified to some degree. And the United States is a leader in national parks and wilderness preservation and is only a little more than a century beyond its frontier era. In other, older regions, France and Japan come to mind, environmental control is near total. At least in the temperate latitudes we are dealing with remnants of a once-wild world, and we face irreversible decisions about their future on a planet that suddenly seems small and vulnerable. In a century wilderness could disappear or become so fragmented as to be ecologically meaningless. Some now view this not just as a violation of the rights of humans to enjoy wild nature but of the rights of other species and self-willed environments themselves.
- 15 Looking toward the Fourth Millennium, a thousand years ahead, there seem to be several ways that the natural world we evolved in could end. The wasteland scenario anticipates a trashed, poisoned and used-up planet that can support only a pathetic remnant of its once-miraculous biodiversity and civilization. Humans have proved to

be terrible neighbors to most of the rest of life on the planet. We did not share well. Growth was confused with progress. Centuries of deficit environmental financing of too large and sprawling civilization has brought the ecosystem, ourselves included of course, to its knees. Maybe, in the height of ingratitude and irresponsibility, we have abandoned and discarded this planet. A vanguard of humans, no wiser for their history, moves through the stars seeking new frontiers to plunder. Perhaps wilderness conditions eventually return to what Alan Weisman thinks of as a world without humans, but the setback to evolution would be profound and slow in healing.

- 16 The second possible future is the garden scenario. Imagine by the Fourth Millennium human control of nature is total, but this time it's beneficent. Our species has occupied and modified every square mile and every planetary process from the oceans to weather to the creation and evolution of life. It is finally, as some feared, all about us! We're no longer part of nature; we've stepped off, or more exactly, over the biotic team. Scores or even hundreds of billions of people occupy this planetary garden. Dammed rivers flow clean and cold (but without much diversity of life) and waving fields of grain stretch to the horizon. The only big animals around are those we eat. Maybe such a world could be made sustainable for a few species, but the wilderness, and the diversity of life that depends on it, is long gone. So, it may prove to be, is environmental health long thought to be linked to the normal and natural functioning of ecosystems. The gardeners of Eden may not be quite as sapient apes as they imagined and become victims of homogenization, biotic impoverishment and their own excessive appetites.
- 17 There is a third scenario that has captured the imagination of some thoughtful environmental philosophers. It might be called the future primitive. It involves writing off technological civilization as a 10,000 year bad experiment. Either by choice or necessity small numbers of humans resume the kind of hunter and gatherer existence that indeed worked quite well for our species for millions of years. But the downside is that the extraordinary achievements and breath-taking potential of civilization are lost. A better goal, I feel, is Henry David Thoreau's who wished "to secure all the advantages" of civilization "without suffering any of the disadvantages." Don't humans have as much right to fulfill their evolutionary potential as other species? The vital proviso is that in so doing we don't compromise or eliminate the opportunity of other members of the biotic community to fulfill theirs. This means not discarding technology but using it responsibly.
- 18 The fourth scenario for the Fourth Millennium I call Island Civilization. It's a vision, a dream, if you prefer, like Martin Luther King's, and it means clustering on a planetary scale. Boundaries are drawn around the human presence not around wilderness. Advanced technology permits humans to reduce their environmental impact. For the first time in human history, better tools mean peace rather than war with nature. Of course Island Civilization means the end of the idea of integrating our civilization into nature. The divorce that began with herding and agriculture is final! Since we proved clever enough to create our environment, rather than adapt to what nature provided, we've taken that option to the logical extreme. We impact only a tiny part of the planet. The rest is self-willed. The matrix is wild not civilized.
- 19 Of course a change like this one involves compromises with human freedom. On a finite planet, shared with millions of other species, only limited numbers of humans can enjoy unlimited opportunities. The first step toward Island Civilization is to check population growth and turn it back to a total of about 1.5 billion or a quarter of the

present level. Of course this can be done! Here's one problem for which we know the cause and the solution. It's the motivation that is thus far lacking. A new, expanded earth ethic and plain fear about the crash of a bloated species might change things around. The essential first step is to put nature above people: Earth First! As it is humans increase and multiply at the rate of 10,000 per hour, a rate that wipes out any gains friends of wildlife and wilderness try to make today. Limiting (either politically and ethically or biologically with a chip implanted at birth) every woman to the use of one egg for reproduction would in a century bring things back into the balance Island Civilization demands. Do the math! Two people have one descendant. We could reach that 1.5 billion level in a century. Want a bigger family? Then buy a reproductive right from a woman with no birth expectations.

- 20 The other need for restraint is in the realm of living space. We've historically demanded too much of a planet we supposedly share with other species. We've pushed wild beings into the least desirable corners of the environment. It's time our species took some of the "marginal" lands which we can modify with our intelligence. The fact is that we've been horrible roommates in the earth household. What species would support an endangered species act for us? One version of Island Civilization might mandate that the 1.5 billion people live in five hundred concentrated habitats scattered widely over Earth. Food production, energy generation, waste treatment and cultural activities take place in 100-mile closed-circle units supporting three million humans. "Cities" cannot begin to describe the new living arrangements that the architects and engineers of the Fourth Millennium might create. They might be on the poles, around mountains, in the air, underground and undersea. Rivers might run through some of them. Some of the islands might be mobile on water or in the air. There would be cultural exchange, of course, but no need for global trade in food, energy or materials among the islands. The concept of "hundred mile meals" would be a reality. We would get back to an arrangement that worked well on a small scale for Greek city-states, medieval monasteries and pueblos of the Southwest. Sure, wild nature will be severely-altered on the islands we occupy, but isn't that fairer and better than a planet-wide sacrifice to a single species. Moreover, I am counting on my descendants to make human impact end sharply at the edge of their islands. There would be no pollution a thousand years from now. And we would have moved beyond war. At least the old-style border conflicts would have no meaning.
- 21 Exciting as the possibilities are for this new way for humans to live, it is what's outside the islands (or more clearly what is not outside them!) that is especially compelling. Sprawl is over; the human presence has imploded. Fences are down. Dams are gone. Roads, railroads, pipelines, telephone lines, ocean-going ships indeed all terrestrial forms of transportation will be unnecessary in a millennium. I'm counting on amazing new technology to make all this possible. Nuclear fusion may be just the tip of the new technological iceberg. Science fiction? Well, consider what was said about television and computers a century ago. And the pace of technological change is accelerating dramatically. Of course I can't prove marvels such as transportation by teleportation will exist in a thousand years, but by the same token you can't deny they won't. Turn our best minds loose on the technological challenges of Island Civilization (rather than repairing the old, dead-end paths) and miracles will happen. It is not necessary to go back to the Pleistocene to live with a low ecological impact. Technology is essentially neutral; it's what we do with it that is the problem. So why not expand our ethics, end mind pollution and take the high tech road to minimal impact. And start right now protecting what we want to coexist with for the long

haul. The result could be the conservation biology dream. The frontier reappears, and this time it is permanent. Rivers are full of salmon and the deer and antelope play on the plains, but we don't need to hunt them anymore. The big predators are back too and, without human interference, perhaps evolving into some of the Pleistocene megafauna we never got to know. As we were before herding and agriculture, humans in the year 4000 are once again good neighbors in the ecological community. *Homo sapiens* is healthy and enjoying its version of liberty and the pursuit of happiness; and so are all the other components of the natural world.

- 22 But what, the question frequently arises, are your options if you don't want to live on densely-populated islands in a matrix of wilderness? The short response is that if you wanted to live a technological lifestyle in 4000 you wouldn't have a choice. According to the terms of a new, ecological contract, we'd surrender some freedoms like herding cows on the open range or living in a sprawling ski resort. (If you wanted to ski you'd chose to live on the island built into, say, part of the Alps.) But you could leave the islands to enjoy minimum-impact vacations in high-quality wilderness. You could even live out there for a while or forever. The condition is that you'd have to do it in wilderness conditions. That means a resumption of the old nomadic, pre-pastoral ways. No settling down, no towns and walls, not even cottages in the woods. We would have finally learned what the 1964 Wilderness Act meant about people being "visitors" who do not remain in someone else's home. Perhaps humans of the distant future could choose on a seasonal basis between ways of life centered on computers or campfires. And young people of that society might be required to take a two-year mission into the wild. Completely out of contact with the civilized islands, they would learn the old hunting/gathering ways and the old land ethics. Here is where we do go back to the Pleistocene! Is it possible people could support themselves out there for that long, living off the land? The answer is of course they could, considering that the healthy land and sea that nourished their ancestors was back again.
- 23 Island Civilization is a response to the history of humans on Earth. For some five million years the planet was self-willed. Humans were just another hunter and gatherer and population remained small and stable. It was a successful lifestyle that weathered just as severe climate changes as the one that scares us now. About 10,000 years before the present our species began to experiment with controlling nature and reshaping our habitat. It contributed to several major cultural leaps forward. Parts of the experiment resulted in impressive pinnacles of evolutionary achievement. But over time irony kicked in. Human success, especially the idea that bigger was better, carried the seeds of its own destruction as well as that of many other life forms. From the standpoint of the rest of life, the growth of our civilization amounts to a cancer on the ecosystem. We no longer belong to the natural community; we've checked off the ark! Isn't this exactly what biologist Edward O. Wilson meant in saying "Darwin's dice have rolled badly for Earth"? Island Civilization makes the needed the correction. It permits human beings to realize their cultural and technological potential while safeguarding the same right of self-realization for all the other beings.
- 24 I have long been a supporter of the wilderness preservation movement and, more recently, of conservation biology and the rewilding idea. But it seems increasingly evident that the admirable scientists, philosophers and public servants involved in these efforts shy away from the full implications of their own ideas. Worrying about fragmentation of wildlife habitat, they neglect the option of fragmenting us! Trying to create connections between wild islands, they pass up the possibility of making

civilization an island on a wild Earth. It is hard for me to see the important goals of conservation biologists for the self-willed components of this planet being realized without a major restructuring of human lifestyles and expectations. Island Civilization may not be the only answer to the big questions hanging over our species, but you can't deny it is an answer.

- 25 Biologists warn us that evolution has discarded thousands of promising starts such as ours, and that we should be worried about the future of our present lifestyle. The upward-trending curves cannot be sustained. There will be major changes. The rub is whether they will be made deliberately or desperately. In his context it is well to remember Winston Churchill's observation that if you play for more than you can afford to lose, you will learn the game. Well the stakes have gotten pretty high; nothing less than the future of life on Earth—and that includes ours too.
- 26 So we stand at a crossroads not merely of human history but of the entire evolutionary process. Life evolved from stardust, water and fire over billions of years until one clever species developed the capacity to bring down the whole biological miracle. But amidst the fear associated with this reality of a sinking ark, there is one comfort. Earth is not threatened as in the age of the dinosaurs by an errant asteroid, a death star. Now, we are the death star, but we could change its course.
- 27 Imagine, in conclusion, this planet, in the desperate frame of mind contemporary conditions warrant, sending a "personals" advertisement out into interstellar space:
- TEMPERATE BUT ENDANGERED PLANET
ENJOYS WEATHER, PHOTOSYNTHESIS, EVOLUTION, CONTINENTAL DRIFT
SEEKS CARING LONG-TERM RELATIONSHIP WITH COMPASSIONATE LIFEFORM
- 28 Well, maybe it could still be us! Maybe biocentric ethics and reverence for self-willed nature (along with a healthy dose of fear for our future!) could turn us from cancerous to caring. So let's be really sapient apes and respond to this plea. Earth might just be ready to receive a proposal for Island Civilization.