

Today it is becoming very evident that we all must respect the land. More and more experts are warning us of the consequences of disrespecting the land.



Read the following essay by David T. Suzuki who many call Canada's environmental advocate.

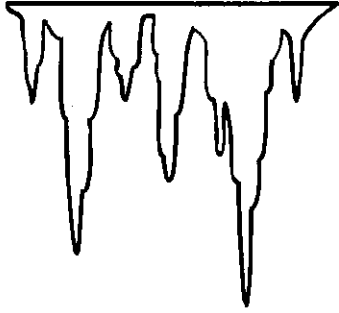
This essay was written for *Maclean's* in June, 1999 as a part of the series "Essays on the Millennium." Suzuki delivers a passionate warning to Canadians that the earth cannot sustain their consumption-driven lifestyles.

### **Saving the Earth**

David Suzuki

In recent years, if you've been able to look beyond the media obsession with celebrity, violence and sex, you may have begun to realize that the planet is undergoing cataclysmic and unprecedented change. Ironically, in 1992, the year the largest gathering of heads of state in human history met at the Earth Summit in Rio de Janeiro to take concrete steps towards a sustainable future, the Canadian government was forced to acknowledge the unthinkable: the vast shoals of northern cod that had supported people for hundreds of years has all but disappeared. Since then, record

floods have hit Quebec and Manitoba, flash fires spread across Alberta, and an ice storm ravaged parts of Ontario and Quebec, knocking out electricity for weeks. Rates of breast and testicular cancer, asthma and lymphoma have reached epidemic levels and continue to rise. Hurricane Mitch wiped out thousands of people in Central America while heat waves killed 700 people in Chicago and thousands in India. Insurance companies have paid in the 1990s close to four times the weather-related claims in the entire decade of the 1980s. Can we continue to believe these are all just random, isolated events?



But the media have been mesmerized by the spectacular rise in Dow Jones averages, megamergers and record profits, as well as the catastrophic disintegration of economies from Japan to Brazil. Rachel Carson's seminal 1962 book *Silent Spring* created an enormous wave of awareness and concern about the environment that grew to a peak in Rio in 1992. But since then, the economy has become our dominant preoccupation. We are bludgeoned by the relentless mantra of buzzwords like globalization and free trade, debt and deficit, competitiveness, profitability, inflation and interest rates. So where are we heading? As we approach the end of the millenium, the only way we can gain an intimation of where we are going is by reflecting on where we have come from.

I was born in 1936, when the human population of the entire planet was around 2 billion. In my lifetime, the number of human beings has tripled. In the year of my birth, the population of Vancouver was 253,000, of Calgary 83,000, and Toronto 645,000. Back then, more than 95 per cent of the world's forests were still intact and pristine while vast areas of Africa, the Amazon and Papua New Guinea were yet to be penetrated by people from the industrialized worlds. As a child in British Columbia, I hiked through virgin forests, drank from any creek without a second thought and ate raw food pulled directly from the soil or off a tree.

My family moved to London, Ont., in 1949 when the city had a population of 70,000. We had been impoverished by the war and I spent a lot of time fishing in the Thames River to help feed the family. For me, it wasn't work. Walking the banks of the Thames, I had some of my most

memorable experiences with nature. My grandparents owned a farm just outside the city where I spent many happy days hunting freshwater clams or turtles in their creek or watching foxes and pheasants in the fields. Often, I would stop off at a nearby swamp where I would find salamander eggs, catch frogs or collect insects. Those were magical times, imprinting an indelible love of nature that led to a career in biology.

Today, I return to a very different London, a rapidly growing, vibrant city that boasts more than 300,000 inhabitants. But the Thames River is so polluted, people recoil in horror at the notion of eating a fish from it. The only things my grandparents' farm now grows are highrise apartments, while the creek runs invisibly through underground culverts. The magical swamp that captivated me as a boy is covered over with an enormous shopping centre and large parking lot. So where do London's youth find their inspiration today? From grazing through malls filled with consumer items, playing Nintendo games or surfing the Net? The world of young people now is a human-created one that celebrates the inventiveness and productivity of human beings. But there is no way that human



ingenuity can match the incredible wonder, magnificence and inspiration of the natural world four billion years in the making. That is not a put-down of our species; it is simply a recognition of the complexity and interconnectedness in nature that we barely comprehend.

Human beings are a remarkable species. We emerged along the Rift Valley in Africa a mere quarter of a million years ago. In evolutionary terms, we are an infant species gifted with a complex brain that is our major survival attribute. That brain conferred curiosity, memory and inventiveness, which more than compensated for our lack of speed, strength or sensory acuity. Today, we have become

the most numerous and ubiquitous mammal on the planet.

In this century, our species has undergone explosive change. Not only are we adding a quarter of a million people to our numbers every day, we have vastly amplified our technological muscle power. When I was born, there were no computers, televisions, jet planes, oral contraceptives, transoceanic phone calls, satellites, transistors or xerography, just to mention a few. Children today look at typewriters, vinyl records and black-and-white televisions as ancient curiosities. Taken together, this technology has dramatically increased the impact of each human being on the earth.



In the second part of this century, one of the great insights from biology resulted from the application of molecular techniques to examine specific genes within individuals. To our amazement, when a creature such as a fruit fly was studied, genes were found to exist in many different forms. Even though such species were highly evolved to occupy specific environmental niches, they did not become homogeneous; instead, they maintained a wide array of gene forms. The phenomenon is known as genetic polymorphism, and we now understand that this is the key to a species' resilience. Over the broad sweep of evolutionary time, the environment is constantly changing. A genetic combination that might be well-suited for one environment might not do as well when conditions change, while other, less favourable gene forms might flourish under the altered conditions. So long as the species as a whole carries diverse genes, combinations better suited to the new circumstances can be selected out when conditions change.

In the same way, it is thought that species diversity within ecosystems, and ecosystem diversity around the world, help to explain life's incredible tenacity under

different conditions and volatile surroundings. Planetary conditions have changed tremendously over the four billion years that life has existed—the sun is 25 per cent hotter, poles have reversed and then changed back, continents have moved and smashed together, ice ages have come and gone—yet species have not only survived, they have flourished, and much of that is due to diversity. The converse of genetic polymorphism is monoculture; that is, the spreading of a single genetic stock or species over a broad area. We have learned expensively in fisheries, forestry and agriculture that monoculture creates vulnerability to new infections, disease or altered environment conditions.

Human beings have added another level of diversity, namely culture, to the equation of adaptability. It is diverse cultures that have enabled our species to survive in so many ecosystems, from the Arctic to the equator. In this wonderful array of cultures, there were many different notions of wealth, purpose in life and cosmic meaning. Today, that has changed dramatically: one kind of economics has become the dominant preoccupation of societies around the world and globalization of that economy is hailed as the source of all wealth and material well-being. This notion is based on perceiving the entire planet as the source of resources while all people in the world form a potential market. But if we live in a finite world, then all resources have limits and prudence demands that we recognize the existence and extent of those limits.

No one person, company or government sets out to deliberately trash our surroundings, yet the collective effect of human numbers, technology and consumption is corroding the life-support systems of the planet. That pronouncement is not the rant of an eco-catastrophist; it is the conclusion reached by leading members of the scientific profession. In November, 1992, more than half of all living Nobel Prize winners signed a document called "World Scientists' Warning to Humanity" that began with this stark statement.

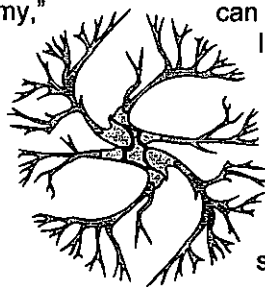
"Human beings and the natural world are on a collision course. Human activities inflict harsh and often irreversible damage on the environment and on critical resources. If not checked, many of our

current practices put at serious risk the future we wish for human society."

Scientists are extremely cautious when making pronouncements to the general public, so this was a most unusual alarm call. The warning went on to list the areas where the crises exist and the measures needed to avoid catastrophe. The document then grew more ominous and urgent: "No more than one or a few decades remain before the chance to avert the threats we now confront will be lost and the prospects for humanity immeasurably diminished." It is puzzling to me that we seem frantic to know the most intimate details about O.J. Simpson, Diana, Princess of Wales, or Monica Lewinsky and consume pronouncements by Bill Gates, Larry King or Oprah Winfrey as if they are gospel. But when more than half of all Nobel laureates warn of an impending but avoidable disaster, we are too busy to take notice.

Humanity has repeatedly demonstrated a capacity to respond heroically and immediately to a crisis. Hurricanes, floods, fire or earthquakes elicit remarkable responses. After Pearl Harbor, there was only one choice in North America, to respond and win. There was no debate about whether we could afford an all-out war effort or what the results of not responding might be. In biological terms, the globe is experiencing an eco-holocaust, as more than 50,000 species vanish annually and air, water and soil are poisoned with civilizations' effluents. The great challenge of the millennium is recognizing the reality of impending ecological collapse, and the urgent need to get on with taking the steps to avoid it.

But our obsession with economics has become an impediment to taking appropriate action. I have often been told, "Listen, Suzuki, we have to pay for all those parks and environmental cleanups. We can't afford to protect the environment if we don't have a strong, growing economy," or words to that effect. That sentiment flows from a belief that the economy provides us with all of our products, from food to oil to manufactured goods. This is nonsense, of course. Everything that we depend on, whether it is cars, popcorn or computers, comes



from the earth and will eventually end up going back to it. It is the biosphere, that thin layer of air, water and soil within which life exists, that creates the earth's productivity and abundance that, in turn, make economies and our lives possible.

But now, ignoring evolution's priceless lesson about the value of diversity, we are monoculturing the planet with a single notion of progress and development that is embodied in the globalized economy. As all nations rush to carve out a place in this construct, we tie our entire future to it. But what if, as many believe, it's based on mistaken notions or assumptions? What will we have to fall back on?

It is widely believed that trade enables humans beings to exceed the ability of a certain region to support its inhabitants. Thus, Canadians can acquire Panamanian bananas, Turkish rugs or Japanese electronic products by trading for them with resources or products that are plentiful in Canada. But the reality is that we still require the earth to generate our food, clothing and shelter and to absorb and detoxify our wastes. Trade enables us to co-opt someone else's land to provide goods for us. Adding up the total amount of land (and ocean) required to provide our annual needs, ecologist Bill Rees of the University of British Columbia has calculated that every Canadian (and inhabitant of an industrialized country) now requires the production from seven to eight hectares. If every human being on the planet aspired to a comparable level of prosperity, it would take between five and six more planets! Even if we ignored the entire developing world, we in the wealthy nations already consume more than the earth can provide sustainably. We are blinded from seeing the alternate ecological imperative that demands that we pull back and slow down.

I suggest the following thought exercise can help to get our priorities in order.

Imagine that you have lived a full and rich life and are now on your deathbed. As you reflect back on life, what memories fill you with happiness, pride and satisfaction? I suspect it will not be the latest designer clothing, a huge house, a sport utility vehicle or a Sony

entertainment centre. In fact, what makes life worthwhile and joyful is not "stuff" that can be bought with money. The most important things are family, friends, community and the sharing, caring and co-operating together that enhances the quality of all of our lives.

There are several reasons we are failing to see the urgency of what is happening. A few of them are:

1) Most people alive today were born after 1950 and thus have lived all their lives during a period of spectacular, unprecedented and unsustainable growth and change. But for most of us, this is all we've ever known and it seems normal. Rapid change also brings rapid collective forgetfulness, and memories of what the world once was quickly fade.

2) Most people now live in the human-created environment of big cities where it's easy to believe the illusion that we have escaped our biological dependence on the natural world.

3) The explosive increase in information shatters the world into fragments devoid of the history or context that might explain their relevance, importance or significance. In order to attract attention, stories or reports become shorter and increasingly shrill, sensational or violent.

4) Political "vision" is focused on re-election and fulfilling the special demands of campaign funders. Political promises are contradicted with little fear of reprisal amid the cacophony of immediate crises and short-term electoral memory.

5) In a global economy freed from the constraints of national boundaries or regulations, the search for maximal profit in minimal time has little allowance for long-term sustainability of local communities and local ecosystems.

6) The great public faith that "they"—scientists and technologists—will resolve our problems is simply unwarranted. While

technology can be impressive, our knowledge of the complexity and interconnectivity in the real world is so limited, our "solutions" have little hope of long-term success. For example, we have no idea how to replace or mitigate thousands of species now extinct, substitute for pollination once done by insects killed by pesticides, or repair the ozone layer.

We can't carry on with business as usual if we wish to avoid an increasingly uncertain and volatile world. The signs are everywhere. But if "experts" lack credibility, try talking to any elder about what fish, birds or woods were like when they were young. Then extrapolate ahead from the changes they have lived through to the kind of world our children and grandchildren will have if we continue along the same path.

What are our real basic needs in order to live rich and fulfilling lives? I believe there is no dichotomy between environmental and social needs. Hungry people will not care if their actions endanger an edible species or an important habitat. Unemployment, injustice or insecurity lead to desperation and the need to survive at all costs. To protect an environment for future generations, we have to build a society on a foundation of clean air, water, soil and energy and rich biodiversity to fulfil our biological needs; we have to ensure full employment, justice and security for all communities to serve our social needs; and we have to retain sacred places, a sense of belonging and connectedness with nature and a knowledge that there are cosmic forces beyond our comprehension or control, to satisfy our spiritual requirements. Then, we can work on the best kind of economy to construct from there. Right now, we seem to be trying to shoehorn everything into the constraints dictated by the economy without establishing the fundamental bottom line.

## About the author

As an award-winning scientist and broadcaster, David Suzuki has become a living symbol to Canadians of concern for the environment. Based in Vancouver, he has for almost thirty years explained life on earth as host of such programs as the long-running CBC-TV series *The Nature of Things*. He is the author of several books.