We Came. We Saw. We Messed it up.
Category : July/August 2000
Published by Anonymous on Jul. 01, 2000

SPECIAL FEATURE

We Came. We Saw. We Messed it up.

Earth's sixth period of mass extinction is underway now, scientists warn, as wildlife species are extinguished at a rate not seen since the dinosaurs disappeared

The diversity and relative instability of life on Earth is remarkable, and its history holds some stunning surprises. Since the first microorganisms appeared to the present plethora of creatures, billions of species have existed on Earth. However, 99 percent of them have come and gone, and the one percent that remains consists, by the most generous estimates, of 100 million species. Of these, just 1.7 million scientifically are codified.

Life on Earth evolved for approximately four billion years from its origin to the present. Five times during this period, mass extinctions of species occurred. In a "mass extinction," at least 17% of families disappear from the Earth, and a family can consist of mere dozens or thousands of species. The Ordovician-Silurian Extinction was the first, 438 million years ago--when 85% of species were lost. The Devonian, 360 million years ago, lost 85% of species. The Permian, 245 million years ago, lost more than 90% of species, the most dramatic extinction in Earth's history. The Triassic, 208 million years ago, lost 76% of species. In the Cretaceous, 65 million years

ago, the "great" one we all know of as the end of the dinosaurs, 85% of all species became extinct.

This time, "It's not just species on islands or in rain forests or just birds or big charismatic mammals," explains conservation biologist Stuart Pimm in National Geographic's February, 1999, issue on Biodiversity, "It's everything and it's everywhere. It is a worldwide epidemic of extinctions." In a special report for Hinduism Today, Dr. Rashmi Mayur, Director of the International Institute for Sustainable Future, examines the issues, causes and implications of this sixth great extinction.

By Dr. Rashmi Mayur, Mumbai

The Dutch landed in 1598, as the doors to the oceans opened to humanity a century before, on the island of Mauritius, located to the east of the African continent. They found it to be the land of ultimate beauty, grandeur, and, of course, bountiful resources. It was the resources that had impelled them to come here, and they were proliferate. The island ecology was rich in all forms of life. Filling a niche here, for many, many millennia, lived a flightless majestic, tall pigeon known as Dodo (Rophus cucullatus). It was one of the friendliest creatures ever created by nature, serving many ecological purposes. The Dutch dubbed the bird "Dodo" because it was commonly considered stupid, dull, even moronic. The innocuous Dodo became the butt of jokes, ridicule, harassment and hunters' knives. They mocked it, but relished its meat. It was the easiest bird to kill.

Many plants, insects, even bacteria and viruses, were harmonized with the Dodo. In fact, seeds of a fruit the Dodo ate used to be fertilized in its stomach, and when discharged, grow into plants. Such was the nexus of relationships among various forms of life in Mauritius.

The number of Dodos then were finite (as are all species), but there is no limit to human desire if left unharnessed, and as the Dutch onslaught of the island's habitats intensified, total annihilation became a reality. The last Dodo died in 1680, after less than 100 years of exploitation. With its disappearance, a large number of dependent plants died. This was human-induced extinction, the permanent end of a species, forever.

Since then, the Earth has become a stage for a pandemic of extinctions both dramatic and invisible. This plague of mass extinction that has been occurring for more than 500 years is not unique. Not at all. Five times before, this planet was nearly stripped of its life. What, then, is so special about the present vanishing act? Will it be the last? Is our nemesis upon us? Maybe. Whereas the other extinctions were caused by natural disasters (meteorite impact and climactic transformation are the leading suspects), this is the first time a creature of the Earth is responsible. As far as we know, this is the first time an individual species has dominated and controlled the destiny of the Earth and is destroying entire ecosystems. At the Rio Plus 5 meeting at the UN in 1997, a report estimated that approximately 50,000 species of flora and fauna were disappearing annually--that is 6 every hour--and despite the Convention on Biological Diversity approved by a majority of nations at the Earth Summit in 1992, the trend towards

annihilation continues unabated.

There is a major trauma afflicting the Earth. A profound transformation is under way. Changes are stupendous and time is on a runaway path, as if the complete web of life is caught in a countdown. Most of the evolutionists are in agreement that nothing is escaping the axe of the human presence. Of the hundred thousand species of trees, about 9,000 are threatened, 10% of which are projected to be extinct before 2005 ce. More than 11% of 10,000 birds are at the edge of the precipice. If the trends continue to escalate as they have during the last century, it is estimated that almost 70% of flora and fauna will be extinguished by the end of the next century.

There are many profound questions about the biological oblivion. Is evolution ending? If so, will it start a new episode? Will humans share the same fate as the other species, due to nature's own backlash? We must also raise deeper metaphysical questions. Why at this time? What has happened to human consciousness? Our divinity? Our spirits? And where is the Hindu and Jain ethic of ahimsa, reverence for life? In Vedic philosophy, Taittiriya Aranyaka says, "Dharma is the foundation of the whole universe," and, prophetically, Manu Smriti states, "Dharma, when violated, verily destroys. Dharma, when preserved, preserves. Therefore, dharma should not be violated, lest the violated dharma destroys us."

The practice of good living, in harmony internally and externally, was at the essence of Vedic philosophy. Good implies, as the Vedas admonish, self control, nonviolence and the Realization of the Self by means of yoga. This ancient

wisdom of India is lost in the present cataclysmic turmoil.

As the curtain of the new millennium rises, the drama of life and humans seems tragic. More than six billion people are on a march of materialism, which means that acquisition, accumulation, possessions and consumption of material goods is the ultimate "good" of life. This philosophy assumes that the material resources are unlimited. Further, it advocates this through all its marketing and advertising. The world spends approximately 250 billion dollars in advertisement, according to the Human Development Report 2000, of the UNDP.

Human beings are proliferating at the rate of 80 million a year and 90% of the growth is in the developing world. There, almost four out of ten people live at the edge of survival. In India alone, 320 million out of one billion are living marginally. It is not until 2100, according to the United Nations Fund for Population Activities (UNFPA), that the Earth's population may stabilize at 10.5 to 11 billion people.

The Human Development Report says that three billionaires (Gates, Buffett and Allen, together worth US$156 billion) have wealth equal to the total GNP of all least developed countries and their 600 million people. The essence of the globalized world of technology--which has been converted into a marketplace where you buy and sell goods and services in order to gratify humans at whatever cost--is to put man at the center of the universe. Everything exists for man--a few men, actually, who, in the economic struggle, accumulate the most.

The distribution of life on the planet is similarly unbalanced. According to Audubon, "More than half the Earth's species are found in 'hot spots' covering only two percent of land. These areas also claim two-thirds to three-quarters of the world's most endangered plants and animals." A significant population of Hindus reside in seven out of 18 hot spots identified [see p. 24]. Among the many who are trying to make a difference, one Hindu, Mr. A. Saravanapavan, a recently retired World Bank Senior Sanitary Engineer, hopes to improve conditions in developing countries and at the same time cut greenhouse gas production. "I seek to construct a system for harnessing solar-electric power, wind energy and bio-gas generated energy from human and vegetable wastes," he said. Whereas most solar, wind or bio-gas systems are independent, Saravanapavan plans to link the three "green" energy sources through computers and optimize their output and efficiency. "As far as I am aware, this has not been done in the developing world," he told Hinduism Today.

The world will need many more Saravanapavan's before the tables begin turning. For the last 300

years, but most blatantly during the last 100, the Earth has been put under siege by a human technological juggernaut. All the biological and human systems are under monumental stress: the climate change, threatening almost 35% of people on the coastlines of the world due to sea level rise, is real. More than seven percent of the ozone is already thinned, and every year a nine-million-square kilometer ozone hole above Antarctica threatens creatures, including humans, with cancer and immune deficiency and brings death to microorganisms.

More than 16 million hectares of forest, of which 11 million are biologically diverse tropical forests, will be cleared for human needs this year. Despite the Forest Convention of 1992, trees must go to make room for agriculture, human settlements, factories, highways and much more. The forests are incubators for all forms of life and the storehouse of the vast majority of species on the Earth [see chart, page 24]. It is here that the drama of evolution was enacted. And when the forests go, the biodiversity must part along with the trees. The idiocy of the technological civilization is that most of the materials we need

for food, for medicines, for the conversion of CO_2 [a greenhouse gas] for generation of O_2, for construction, are all in these forests. Do we know the mystery of our intricate web of life, that our existence, is interconnected with an innumerable number of species inhabiting the Earth--not to speak of microorganisms, which are at the root of our survival?

Forests are homes of indigenous people. There are only 250 million indigenous people left in the world, and they are disappearing so fast that at a Geneva UN conference on Indigenous People it was forecasted that at the present rate of demise, most of them will be gone by 2025.

The Earth is endangered, according to a warning from the Union of Concerned Scientists in December 1992. A declared

report states that: "Most biological systems, which have sustained life on the planet for millions of years, will collapse some time during the early part of the next century."

Everywhere, the human spirit is in revolt. Extinction cannot be the future of this beautiful Earth. The perversion of technological systems must be challenged--a society on the march towards doom must accept the wisdom of the ancients that all life is sacred and its existence rests on the harmony established by evolution in the total scheme of life. Buddhism's Suta Nipata expresses it eloquently: "All living beings whatever, without exception, weak or strong, whether long or high, middling or small, subtle or gross, seen or unseen, dwelling afar or near, born or yet unborn:

may all beings gain inner joy." And the ancient Tamil scripture, Tirukural, advises in verse 324, "What is the good way? It is the path that reflects on how it may avoid killing any living creature;" and in verse 327, "Refrain from taking precious life from any living being, even to save your own life."

Although Indian philosophers believed that the world goes through a cycle of evolution and decline, it always admonished reverence for life--respect for all forms of life and preservation of biodiversity--that is, continuation of evolution. The new philosophy of life challenges the arrogance of humans. The Earth is not for humans only. It is for all life--life in its various forms and structures. While individuals have a short and transient existence, evolution

continues inexorably. The consciousness and spirits are beyond material existence, beyond time and space. They are eternal, an integral part of Brahman.

Once we understand this philosophy, our life changes fundamentally. Our living becomes simple, we consume minimally, controlling our growth. We honor nature. We submit to it, along with all other species, to become part of evolution, moving with it towards a higher stage of consciousness, united in nonmaterial existence. Then humans will not be a scourge on the planet, nor would their lethal technologies be a threat to life. They will accept the Earth as a garden in which all the elements--wind, fire, space, soil and water--dance to celebrate life with children of the parrots, whales, deers, elephants and humans. Then,

when the sun will rise again in the morning of tomorrow, there will be eternal joy in the carnival of life.

Extinctions statistics: Since the beginning of the century, about three-quarters of the world's crop plant varieties have been lost; around 50,000 varieties disappear every year. The world's population obtains about 90% of its calories from 20 crop species. Some 40% of the world's market economy is based on biological products and processes. At least 7,000 medical compounds in Western pharmacies, from aspirin to birth control pills, are drawn from plants, mostly from third world countries. If transnational corporations (TNC) paid developing countries and indigenous people royalties for plants and local knowledge the TNC's use, royalties would reach US$5.4 billion

a year.

World: Of 9,600 species of birds on Earth, more than 1,000 are officially threatened with extinction. Of 4,400 species of mammals 1,100 are threatened; another 14% are at risk. Of 24,000 fish species in oceans and freshwater lakes and rivers, one-third are now threatened with extinction. About 20% of bird species in the world have become extinct in the last 2,000 years, mainly after human colonization of islands. Four to five percent of plant species in the US may be extinct by the end of this century. As many as 34% of the invertebrates in Germany may have become extinct. In the past 60 years, as many as 50% of the fungi species in Europe may have become extinct.

India is one of the world's 18 mega-biodiversity centers. Of 45,000 plant species, around 15,000 are considered vulnerable and endangered.

Of 81,000 animal species, approximately 20 are categorized as "possibly extinct." Of larger animals, 173 species are endangered, along with 101 of birds, 15 of reptiles, 3 of amphibians and 2 of fish.

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Websites: www.earthwatch.org;

www.worldwatch.org; www.worldwildlife.org; www.nationalgeographic.com; www.tnc.org; www.audubon.org; www.wcmc.org.uk/cites; www.rainforest-alliance.org; www.arborday.org; www.gorillafund.org; www.cccturtle.org; www.epa.gov; www.green-e.org; www.earthforce.org; www.naaee.org/html/vine.html