

This line of comment leads me to conservation which, as I implied in the beginning, is at least as complex as ecology. One of the purposes of this symposium is to discuss whether conservation is compliance to ecological principles and consists of working in conformity to constructive ecological processes. I believe that this is so as long as we do not assume that it implies a return to nature by turning our backs on what can be gained by management techniques based on scientific facts.

It is commonly said that conservation is the wise use of natural resources. This is all right, too, if wisdom means the use of all pertinent knowledge.

I know that this audience is familiar with the population explosion, with hunger and unrest in the world, and with the rate at which man is changing the face of the world and not practicing conservation. Not all is bad and none of us would return to the innocent stability of certain primitive societies which, in fine ecological adjustment, survived for many centuries as did many Indian tribes of North and South America. Yet neither can we ignore that early civilizations ended up by destroying the fertility of the eastern Mediterranean crescent and that Rome's breadbasket was once northern Africa. But not many of us really realize how close catastrophe is for many nations and hundreds of millions of people.

In writing a paper for the April Alma College American Assembly on the Population Dilemma, which I entitled "Population Ecology," I said:

"It is implicit in the reproductive potential of our species, as it is of all other species, that growth and reproduction will continue until the population has reached a size at which resistances begin to check growth. We are back to the sigmoid growth curve. It is inescapable. Man, however, has abilities that no other species shares. We do not have to endure the Apocalyptic reduction by the Four Horsemen: War, Conquest, Famine, and Death."

I went on to say that after two decades of technical and other assistance "the statistics show a worsened, not an improved condition for the vast majority of the two billion people of the poor countries. To make the situation even more dismal, I look for a reversal in several countries of the recent history of falling death rates."

It was in unhappy confirmation of that prediction that I read in the *New York Times* for April 19, 1967, that "The Bihar state government said . . . that two districts and several regions affected by drought had become famine areas . . . Bihar's government thus became the first in India to declare famine conditions since the country became independent 20 years ago. The famine areas cover more than 23,400 square miles involving 12,730,000 people." (Incidentally, these figures average the population density at 544 persons per square mile." There are, of course, other parts of India in difficulty, such as the eastern part of Uttar Pradesh, and the headline of the *Times* article read: "Drought, Disease and Famine Sweep Bihar State in India, Affecting 40 Million."

I would like to turn now to another paper on the American Assembly program, given by Lester R. Brown, Administrator, International Agricultural Development Service. He subtitled his paper, "Chronology of a Crisis." Here are some highlights.

In country after country throughout the less developed world, the fertility of the people is outrunning the fertility of the soil.

A few years ago the world was plagued with burdensome surpluses of wheat, rice, and feedgrains. Today there are no surpluses of any major food commodity in the United States or anywhere else in the world.

The three largest countries of the world—China, India, and the Soviet Union—are now net food importers.

Sharply higher prices for rice even in the last few months are reducing the levels of intake, particularly in the low income countries where income and diets were already pitifully low.

The per capita availability of grain in India has dropped nearly 5 percent over the past two years as contrasted with the early 60's, and this has occurred even though the United States is now shipping the equivalent of nearly one-fourth its wheat crop to India each year.

This movement of wheat from the U.S. to India in 1966 required 600 ships. India needs an additional 10 million tons of wheat in 1967, but even this vast movement of food is not achieving any improvement in diets. It is not even maintaining consumption levels of the early 1960's. Sunday *New York Times* business section, July 16, 1967, says Suez closing will require 18 months to ship one year's food supplies to India.