

Member, USNC for IBP; Chairman, Subcommittee on Human Adaptability, NAS
 Member, Biometerology Panel, USNC (IBP) and Committee on Atmospheric
 Science, NAS
 Member, Committee on Environmental Physiology, Div. of Med. Sci., NAS
 Chairman, Committee on Human Ecology, Ecological Society of America
 Member, Air Pollution Training Committee, NCAPC/USPHS (1963-1967)
 Member, Committee on Bioclimatology, American Meteorological Society

**STATEMENT OF DR. LA MONT C. COLE (CORNELL UNIVERSITY),
 PRESIDENT OF THE ECOLOGICAL SOCIETY OF AMERICA; ACCOMPANIED BY DR. JOHN E. CANTLON (MICHIGAN STATE UNIVERSITY), PRESIDENT-ELECT OF THE ECOLOGICAL SOCIETY; AND DR. FREDERICK SARGENT II (UNIVERSITY OF WISCONSIN, GREEN BAY), CHAIRMAN OF THE COMMITTEE ON HUMAN ECOLOGY**

Dr. COLE. Thank you, Mr. Chairman. I am happy to be here. I have prepared a short statement, or rather short statement and then I would like to touch on a couple of other points.*

Ecology is the most interdisciplinary of the sciences. Properly, it should provide the scientific basis for, among others, such diverse fields as agriculture, wildlife management, fisheries, forestry, some areas of public health, exploitation and utilization of mineral resources, city planning, and the impact of man on the environment.

In actuality, agriculture, mining, and industry have grown to their present state virtually without consideration of ecological principles. The impact on the environment is becoming intolerable. Soils, bodies of water, and the atmosphere are polluted with a great variety of materials. Areas of originally usable land have been destroyed as have potentially valuable bodies of water.

The lack of consideration of ecological principles has created problems with pest species, and attempts at correction have been singularly little influenced by ecological knowledge. At the same time other actually or potentially valuable species of plants and animals have been exterminated.

Many ecological relationships are very subtle. Had ecologists been consulted they might have anticipated the disastrous effect of the Welland Canal on Great Lakes fisheries. Ecologists did predict the demise of Lake Erie. Ecological studies now could be used to forecast the consequences of cutting or defoliating tropical rain forests whether in Africa, Asia, or Latin America.

Tropical ecosystems (plant and animal communities together with their nonliving environments) are often very fragile and can be permanently destroyed by unwise attempts to manage them. Again the ecological factors are very subtle and involve the nature of the community itself, the types of soils, the microorganisms in the soil, the climate, and the ways in which the climate will change as a result of altering the plant community. These complexly interacting factors are all too often not considered when man sets out to alter a region, and ecology is not a traditional factor in the planning.

Today we are polluting the environment more rapidly and with more materials than ever before, and the rate is increasing. We are generating more inert wastes such as plastics and glass than ever before, and vastly more highly reactive wastes such as radioisotopes. Before

*See also app. B, p. 551, for additional information furnished by Dr. Cole.