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Book Reviews

The Apocalyptics: Cancer and the Big Lie, by Edith Efron, Simon and Schuster, New York, July 1984, 590 pages, $ 19.95.

The author of this book, who is a research associate in the Center for Research in Government Policy and Business of the Graduate School of Management at the University of Rochester, admits in the preface she has written an "intellectual detective story". She feels that science has been corrupted, and that much of what has been developed in reports, the print and electronic media, and public awareness regarding chemicals as a source of carcinogenic injury to humans, is either not true or incompletely understood.

The book begins by discussing the disgreement as to how much of a threat environmental substances (including industrial and domestic chemicals) have posed to our race. Figures have been quoted that prove or disprove nearly every degree of concern one might have. Starting with the Great Reptiles 200,000,000 years ago, an overview of carcinogens and their effects is given, including radiation sources, the crust of the earth, preconditions for life (oxygen has been questioned as a source or at least a role player in carcinogenic chemistry), lightning, soil, elements of the planet (several of which definitely are reported carcinogens), viruses, bacteria, fungi, plants, and trees, carcinogenic plant foods, the effect of cooking, the myth of "pure air", and carcinogens in the ocean and drinking water, fire (a relatively unexplored territory), and carcinogenic chemicals produced by the human body. This one section (pages 135—176) is the most interesting part of the book, and is documented. From this point, much of the volume is political, and the facts, risk assessments, and remedial actions become highly questionable if judged by purely scientific criteria. However, cancer is not a rational process; it produces very serious emotional and sociological effects, and the volume tries a little too hard, in this reviewer's opinion, to kill the messenger who brings the king bad news. Much is yet to be known; this volume will doubtless be quoted and mis-quoted for many years.

H.H. FAWCETT

A Killing Rain: The Global Threat of Acid Precipitation, by Thomas Pawlick, Sierra Club Books, 2034 Fillmore St., San Francisco, CA 94115, October 19, 1984, 216 pages, cloth, $ 14.95.

This volume is an addition to the debate which continues over what exactly is the source of "acid precipitation", and who should do what at what cost. As P.J. Wingate pointed out in the *Wall Street Journal* of October 29,

even the autumn leaves contain substances which eventually become acidic in their biodegradation process. For some reasons not completely understood, the Northeastern United States and Southeastern Canada have experienced definite effects of some acidic nature. At this point, science and politics differ from opinion as to what should be done. Mr. Pawlick, an American residing in Canada, has treated the subject as an investigative journalist, giving considerable data to back his highly readable text. For example, he notes that the pH of precipitation in parts of New York State, Pennsylvania and Ontario was 4.1; in New England in 1979, 4.4 (annual mean average). Fish and forests are not the only questions; the role of aluminum (previously considered a relatively harmless metal ion) in causing bone damage and in "dialysis dementia", as related to "senile dementia" or Alzheimer's disease, is possibly related to ingestion of aluminum from water where lower pH results in higher solubility.

Six pages of general references on acid precipitation and who is interested make up one appendix; another lists 1979, 1980 and 1981 ratings of the top SO_2 emissions from North America's five coal-fired power plants (one each in Kentucky, Tennessee, Indiana, Michigan, and Illinois), while the third appendix lists the top ten sources of SO_2 emissions for 1980 (two each in Canada and Ohio, one each in Kentucky, Tennessee, Indiana, Illinois and Michigan). One plant in Manitoba, Canada was also in the top ten.

There is little doubt that more public awareness, plus a great deal more specific knowledge (including the airborne experiments now underway) will be necessary before the question of "killer rain" is resolved. Certainly this book will increase public awareness.

H.H. FAWCETT

Toxic Hazards of Rubber Chemicals, by A.R. Nutt, Applied Science Publishers Ltd., Barking, Essex, England, April 1984, 194 pages, cloth, $ 45.00.

The author, who is with the Health and Safety Department, Technology Division of Dunlop, Ltd., Birmingham, U.K., points out in the preface that the rubber manufacture is essentially a chemical industry, but that many of the several hundreds of "chemicals" used in the industry are inadequately documented from a health and safety concern. Mr. Nutt has attempted to supply some of the missing data by first discussing the knowns (epidemiological studies of the rubber industry in the U.K., the U.S.A., Finland, Switzerland and Sweden). Next he discusses the status of current knowledge on bladder cancer in the rubber industry, and the hazards from aromatic amines, polycyclic aromatic hydrocarbons and nitrosamines, each section of which is well referenced. The major part of the volume deals with the toxicity of rubber chemicals, discussing monomer and polymers, reinforcing