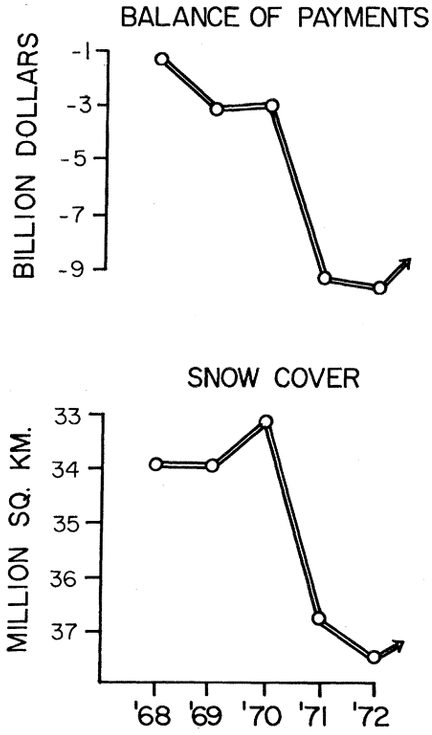
Health and Behavior

27 February

To Feed the World: What to Do with Changing Climate

Changes in the earth's climate and its effect on food production will be discussed in a symposium prepared by George J. Kukla [Lamont-Doherty Geological Observatory, Columbia University; Climate Long-Range Investigation Mapping and Prediction (CLIMAP)].

Only since man's agricultural ability has reached its limit to meet the growing demands of the world population, has the economy become so sensitive to weather fluctuations. An attempt will be made to find out just how much of the trouble in the last 2 years was real, and how much was orchestrated by big business and, in turn, how similar situations can be prevented in the future.



(Top) U.S. balance of payments (inflow and outflow of money for all reasons). [*Newsweek*, 8 October 1973] (Bottom) Annual mean extent of snow and ice cover in the Northern Hemisphere, one of the most important parameters in the earth's heat balance, as determined from satellite observations. [Kukla, original]

World food production dropped drastically in 1972 and 1973—wheat sales to Russia, flooding in the Mid west, droughts in West Africa, famine in Pakistan, India, Bangladesh, West Africa, and the Philippines. The sensitivity of agriculture to weather fluctuation and the growing dependence of large population groups on local weather anomalies affecting key regions and, in turn, adequate food supplies, will be discussed by W. L. Decker, University of Missouri; R. A. Bryson, University of Wisconsin; T. D. Malone, University of Connecticut; and L. M. Thompson, Iowa State University. J. D. McQuigg, University of Missouri, and R. A. Bryson will also show how much the energy supply in general and, in particular, the fuel crisis of 1973 is affected by climate.

While the past two years have had their extremes, sooner or later the normal circulation patterns can be expected to return. Details on this topic will be given by D. L. Gillman, National Oceanic and Atmospheric Administration (NOAA). The cause of the 1940's reversal from warming into the global cooling trend is not yet known, but comparable oscillations occurred repeatedly within the past few millennia. More data will be presented on this subject by J. E. Kutzbach, University of Wisconsin, and J. M. Mitchell, NOAA, while J. Imbrie, CLIMAP, Brown University, and J. Hays, CLIMAP, Columbia University, will review the geologic evidence of climate changes on a longer time scale.

The carbon dioxide released by fuel combustion tends to warm the earth's surface but the simultaneous dumping of fine ash into the atmosphere has a cooling effect. These two elements, together with the waste heat of power plants could perhaps serve, among other things, as tools for modifying or stabilizing the future climate.

W. W. Kellogg and S. H. Schneider, National Center for Atmospheric Research, Colorado, concentrate on this topic and ask: Should we only passively adjust the land use to expected changes in weather patterns, or should we try to stabilize the status quo? Does the world morally qualify for such a complicated task, bringing possible unwanted side effects to entire nations? But we are still far from a real understanding of climate change, a necessary prerequisite for any such action that will be analyzed by J. O. Fletcher, W. E. Benson, and J. E. Bierly, National Science Foundation, and T. D. Malone. Computers and satellites have brought, in recent years, a breakthrough in observational and analyzing techniques. Large amounts of weather data are gathered daily enabling us to reach our major objective: the complete understanding of ultimate causes and mechanisms of climate changes and their accurate forecast.

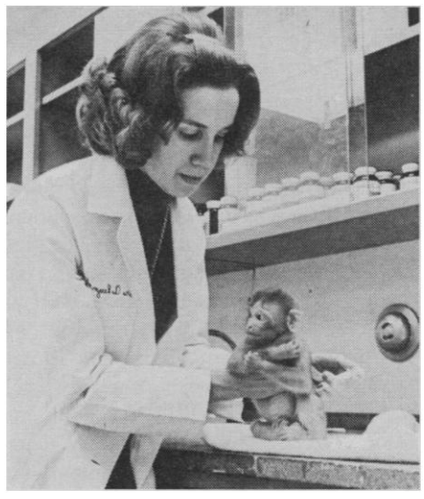
25 February

Food Additives: Beneficial or Deleterious?

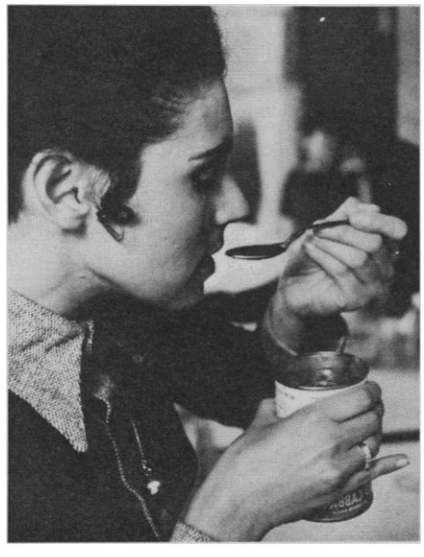
The risks and benefits, safety levels, and current testing system for food additives, as well as the Delaney amendment, will be covered in a symposium entitled, "Food Additives: Beneficial or Deleterious?" arranged by W. Ann Reynolds, Department of Anatomy, University of Illinois and L. J. Filer, Jr., University of Iowa Hospitals.

Food additives may be supportive of adequate nutrition such as in fortified flours, vitamin-enriched milk and iron-supplemented cereals. The nutritional benefits of such additives in infant, childhood, and adult diets, and the evidence that food additives have or could improve the quality of the American diet will be considered.

By preventing spoilage and increasing the shelf-life of products, food additives are important economic factors in everyday nutrition. Americans have become accustomed to certain textures,



Injecting a baby monkey whose mother received methyl mercury.



Ensuring that the food you eat is safe begins on your shopping trips. Carefully examine each item to detect possible spoilage, a torn package, an imperfect seal, or a bulged can. Very often a food's odor or appearance can indicate that something is wrong. [Food and Drug Administration]

flavors, and colors, and the influence of food additives upon flavor perception and acceptance of foods will be examined by Morley R. Kare, director of Monell Chemical Senses Center. In addition William J. Darby, president of the Nutrition Foundation, will give a presentation on food additives and their economic benefits.

Recent concern over possible deleterious effects of these additives has led to a reexamination of substances on the "generally regarded as safe list" of the Food and Drug Administration. A. M. Schmidt, FDA commissioner, will examine the role of the FDA in the regulation of food additives. James S. Turner, co-chairman of the Consumer Action Group for Improved Food and Drugs, will discuss consumer concerns in the regulation of food additives. Testing systems for food additives will be covered by Leon Golberg, scientific director, Institute of Experimental Pathology and Toxicology, Albany Medical College.

25 February

Food Supply and the Organic Food Myth

(arranged by Thomas H. Jukes, University of California, Berkeley)

Speakers at the symposium will present topics related to various aspects of the food supply, its safety, and the serious nature of the "organic food myth."

Alexander Schmidt (Commissioner, Food and Drug Administration) *"The role of the FDA in food safety."*

Earl C. Butz (Secretary of Agriculture, Counselor of Natural Resources) *"Scientific agriculture and feeding the consumer."*

Emil M. Mrak (Chancellor Emeritus, University of California, Davis; Chairman, HEW Secretary's Commission on Pesticides and Their Relationship to Environmental Health) *"Food additives and chemical residues."*

Hardin B. Jones (Assistant Director, Donner Laboratory, University of California, Berkeley) *"The evaluation of carcinogenic risks of chemical residues in foods."*

Stephen J. Barrett (Chairman, Lehigh Valley Committee Against Health Fraud, Allentown, Pa.; Chairman, Quackery Committee, Lehigh County, Pennsylvania Medical Society) *"Organic foods and health frauds."*

Daniel I. Arnon (Chairman, Department of Cell Physiology, University of California, Berkeley) *"Chemical fertilizers and plant nutrition."*

Living World

1 March

Galápagos Symposium

A symposium on the Galápagos archipelago has been arranged by Robert T. Orr, associate director of the California Academy of Sciences (that houses the largest Galápagos collections in the world) and Robert I. Bowman, a fellow and research associate of the Academy and member of the division of biology at San Francisco State University.

The recent establishment of a Galápagos National Park indicates the growing awareness of the importance of this region. Conservation programs, in turn, become increasily important for the natural preservation of the region—especially so as tourism to the islands has been mounting steadily.

Many aspects of the Galápagos archipelago will be covered, including the geological setting, recent and contemporary volcanism, older geology and geophysics, marine geology, and meteorological and oceanographical setting. In addition, phytogeography, species number and endemism in the biota, ecology of tortoises, appearances and behavior in *Tropidurus* lizards, physiological adaptations in vertebrates, biology of flightless birds, morphological variation and ecology of finches, evolution of song in finches, conservation programs, and endangered species —a world review, will all be discussed.

Flora, Galápagos Island.