employment level was caused by a system instability inherent in the relationship between the purchasing practice of the firm's customers and the firm's own inventory, production, and employment practices. Suggestions for improving the situation were made on the basis of further model runs, but no evidence of their efficacy is presented.

In view of the very exciting beginning presented in *Industrial Dynamics*, one looks forward to further development of the techniques described and particularly to more evidence confirming the ability of the models to accurately point the way to improved managerial performance.

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## Three-Dimensional World

**IGY**. The year of the new moon. J. Tuzo Wilson. Knopf, New York, 1961. xxi + 350 pp. Illus. $5.95.

As president of the International Union of Geodesy and Geophysics, J. Tuzo Wilson was intimately involved both in the preparations for the IGY and in carrying out its program. He traveled some 100,000 miles, visiting installations in such far-away places as Antarctica, China, Greenland, and Taiwan, as well as many others. His account of the IGY is, therefore, a sort of personal narrative which lends great charm to the recital of the tremendous accomplishments of this greatest cooperative scientific enterprise in man's history.

Here we see how the IGY opened up new horizons on the earth, above the earth, beneath the earth, and even beneath the sea. Verily, Wilson introduces us to the new three-dimensional IGY world, and he manages somehow to place things in their proper perspective. For instance, the most publicized aspects of the IGY program—namely, the satellites—fall into proper proportion as he recites the accomplishments of the Soviets versus the Americans.

Wilson's interesting comments on cosmic rays, aurora, and other atmospheric phenomena are especially clear and give new dimensions to our understanding of these phenomena. Being a trained geologist, Wilson gives much attention to the solid earth and the fabulous discoveries made concerning it, discoveries such as the greatest mountain chain in the world. This chain, which stretches along the bottom of the ocean from the north Pacific into the Atlantic and then south around Africa into the Pacific again, is a single chain, 40,000 miles long and with branches of up to perhaps 60,000 miles. The highest mountains in the world, the Hawaiian Islands, are a part of it.

Wilson does not neglect the importance of the human or the sociological aspects of the IGY. Indeed, he ends with the pertinent comment that the IGY demonstrated scientists are also good humanists.

One puts this book down with a realization that the prophetic statement made by Hugh Odishaw, executive director of the United States National Program of the IGY, was soundly true: "The IGY is the single most significant peaceful activity of mankind since the Renaissance and the Copernican Revolution."

Wilson's book is not only a mine of information for the scientist who wants to learn more about the overall achievements of the IGY, but it is written in such lively, clear style that it will intrigue any intelligent reader who wants to extend his knowledge about the manner in which the planet earth fits into the universe.

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## Population Control

**The Giant African Snail**. A problem in economic malacology. Albert R. Mead. University of Chicago Press, Chicago, Ill., 1961. vii + 257 pp. Illus. $7.50.

Economic malacology is a discipline so new that few if any college courses are offered in the subject—this despite the facts that mollusks (both clams and snails) have been used as food by man for centuries, that public health officials must deal with an increasing number of diseases in which mollusks act as vectors, and that horticulturists have long been plagued by snails (usually introduced forms) with an appetite for choice plants. It was not until the Giant African Snail came on the scene, irresponsibly transported throughout the Orient by human agents, that the need for effective means of snail control became urgent. Entomologists, having met and solved similar problems with insect pests, were among the first specialists to be called upon to find a way of checking the burgeoning snail populations. Snail control, however, proved to involve factors more complex than one would suspect, and the control devices all too often set up unanticipated chain reactions.

Mead has the advantage of being a trained malacologist. Although he does not pretend to have found at once the answer to the large problem presented by this number one snail pest, which has been his special study for several years, in both the field and the laboratory, he can make very clear what steps must be taken if a solution is to be reached. In this book he assembles the basic data on what is known about the present dispersal of the Giant African Snail and its habits and on the various control measures that have been tried, with an evaluation of their advantages and disadvantages. He suggests some methods that merit further investigation and reports a population decline (perhaps through disease) in some areas, which may prove significant; otherwise the picture is bleak.

The 41-page bibliography reveals how many facets must be taken into account in the study of such an organism. A graphic summary chart showing the immensely complex relationships of this snail to associated organisms in the field should be required study for anyone contemplating the addition of a fresh predator to the web: a stern warning against further irresponsibility.

As a handbook on methods for a new field, this book sets a high standard. Layman and specialist alike can profit from it, and its interesting style makes it easy reading. The illustrations are clear and well chosen, adding to the general attractiveness of the book.

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## Sunlight and Health Hazards

**Photochemistry of Air Pollution**. Philip A. Leighton. Academic Press, New York, 1961. ix + 300 pp. Illus. $11.

This book brings together the available material in the important but complicated field of air pollution. Sunlight causes photochemical reactions that convert relatively innocuous pollutants into health hazards and major nuisances. In an introductory chapter,