

Rigging 65 VA hospitals to monitor quake strains

Some 65 persons died in the San Fernando earthquake of February 1971. Most of them were killed when a Veterans Administration hospital collapsed (SN: 2/20/71, p. 127). The VA has apparently learned a lesson. The National Oceanic and Atmospheric Administration announced this week that VA has contracted with the agency to install strong-motion accelerographs at some 65 VA hospitals in areas of high seismic risk in 30 states. The instruments are intended to provide a record of how the buildings perform during earthquakes. NOAA will also measure the vibrational characteristics of the hospitals and study the response of some of the structures to man-induced vibrations. The results of the studies will be used to revise the building standards for VA facilities.

Selection of facilities to be instrumented was based on a seismic risk map developed several years ago by NOAA scientists. NOAA's Seismological Field Survey had already begun installing instruments in California hospitals. Tests in the Pacific Northwest will begin later this year, and buildings in the Central and Eastern states will probably be instrumented during 1973. □

IMP H and Cygnus X-3

The ninth Interplanetary Monitoring Platform (IMP H) was launched successfully by NASA last week. Now called Explorer 47, the satellite is in a circular orbit around earth that extends almost halfway to the moon.

This week controllers began turning on a few of the 13 experiments on board. They include detectors for cosmic rays, energetic particles, charged particles, electrons and isotopes, ions and electrons, solar electrons, low-energy particles, magnetic fields, plasma waves, solar wind and ion compositions.

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Cygnus X-3, that puzzling radio source (SN: 9/23/72, p. 197), blew up again last week, according to Robert Hjellming of the National Radio Astronomy Observatory. The source became a prime astronomical target Sept. 2 when its outbursts reached 22 flux units. But by Sept. 11, it had died down to its former level of 0.1 flux units. Then on Sept. 19, it began a complex cycle that reached a peak at 12 flux units. There were three events last week, says Hjellming, one a very prolonged one. "It gets more puzzling all the time." Instead of the previously neat pattern of an outburst and gradual decline, the astronomers are now seeing one outburst followed by another before the decline of the first. □

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ACCUMULATION OF NITRATE—Committee on Nitrate Accumulation, Agric. Bd., NRC; Martin Alexander, Chmn.—NAS, 1972, 106 p., tables, paper, \$4.25. A study of nitrogen in the biosphere, sources of nitrogen, the problems arising from large amounts of fertilizer, eutrophication, and the hazards of nitrate and nitrite to man and livestock.

BABYLON—James Wellard—Saturday Review Press, 1972, 223 p., \$6.95. Describes the archeological rediscovery of the biblical metropolis which flourished between 2225 B.C. and 331 B.C., was lost to sight for almost 2000 years, and then rediscovered by the newly emerging field of Assyriology which combined the deciphering of cuneiform script with excavations on the site.

BIOLOGY OF BONE—N. M. Hancox—Cambridge U. Press, 1972, 199 p., electron micrographs by Brian Boothroyd, \$21. Monograph written by histologist, concerned primarily with structures and happenings in bone at the cellular and subcellular level, concludes with an examination of various agents and accidents which seem to trigger off osteogenesis.

CONSERVATION IN THE SOVIET UNION—Philip R. Pryde—Cambridge U. Press, 1972, 316 p., illus., maps, \$12.50. First systematic and comprehensive survey in English of resource management in the Soviet Union, analyzing attitudes and accomplishments. Examines approaches toward the use of natural resources and the consequent problems, and attempts to define the meaning of "conservation" in the U.S.S.R.

ECOLOGY AND PALAEOECOLOGY OF MARINE ENVIRONMENTS—Wilhelm Schafer, transl. by Irmgard Oertel; G. Y. Craig, Ed.—U. of Chicago Press, 1972, 568 p., 39 plates, drawings, \$25. Important German study (1962), describes the ecology of the complete range of organisms in the North Sea, their functional morphology, mode of life and death, formation and preservation of trace fossils, and ecological communities.

EPIDEMIOLOGY OF DDT—John E. Davies and Walter F. Edmundson, Eds.—Futura Pub. Co., 1972, 157 p., diagrams, tables, \$14.95. Collection of papers presents laboratory findings in a continuing study applying the disciplines of both pharmacology and epidemiology to further the understanding of the pesticide DDT and its metabolites in humans.

A NATION OF STRANGERS—Vance Packard—McKay, 1972, 368 p., \$7.95. Social commentary based on studies of the high mobility rate of the U.S. population. Discusses patterns of mobility, the problems of adjusting to fragmentation of established relationships and loose roots, impact on children, and new approaches to reestablishing a sense of community.

TEXTBOOKS

THE ANALYSIS OF BIOLOGICAL POPULATIONS—Mark Williamson—Crane, Russak, 1972, 180 p., diagrams, \$14. Advanced text divides study into four sections dealing systematically with single species populations, genetic variability in populations, interactions between two species, and the analysis of communities in general.

ATMOSPHERES—Richard M. Goody and James C. G. Walker—Prentice-Hall, 1972, 150 p., illus., \$7.75; paper, \$2.95. Concise text offers deductive treatment of the properties and behavior of planetary atmospheres, shows how these phenomena are results of the fundamental laws of physics and chemistry, illustrated with examples from recent discoveries.

BASIC CONCEPTS IN RELATIVITY AND EARLY QUANTUM THEORY—Robert Resnick—Wiley, 1972, 244 p., \$8.95; paper, \$4.95. A new treatment of quantum concepts, provides a logical and modern ending to a physics course and a foundation for subsequent extensions of quantum physics.

BIOCHEMISTRY AND METHODOLOGY OF LIPIDS—A. R. Johnson and J. B. Davenport, Eds.—Wiley-Interscience, 1971, 578 p., illus., \$29.50. Text and reference work, provides the necessary background for exploring lipids experimentally, and attempts to summarize the present knowledge concerning the biosynthesis and breakdown of most lipids and their roles in living cells.

BIOLOGY: A Functional Approach—M. B. V. Roberts, foreword by Norman S. Kerr—Ronald, 1972, 628 p., photographs, drawings, \$10.75. Introductory text, reassesses traditional topics in the light of recent advances and attempts to combine both into a modern functional framework.

AN INTRODUCTION TO CRYSTALLOGRAPHY—F. C. Phillips—Wiley, 1972, 4th ed., 351 p., illus., \$12.50. Clear and updated exposition of the elements of the science of crystallography.

INTRODUCTION TO MATERIALS SCIENCE—Arthur L. Ruoff—Prentice-Hall, 1972, 697 p., illus., \$15.50. Text aimed at teaching what properties materials have and why they have these properties. Includes semi-programmed review sections that reinforce the learning of basic concepts.

AN INTRODUCTION TO THE IONOSPHERE AND MAGNETOSPHERE—J. A. Ratcliffe—Cambridge U. Press, 1972, 256 p., diagrams, \$14.50. Graduate-level text serves as an introductory guide to the numerous and complex physical processes operating in the highest parts of the earth's atmosphere. Throughout, emphasis is on the physical principles involved.

ORIGIN OF SEDIMENTARY ROCKS—Harvey Blatt, Gerard Middleton and Raymond Murray—Prentice-Hall, 1972, 634 p., illus., \$16. Beginning graduate-level text, brings together the major theories of sedimentation developed during the past 20 years, with emphasis on formation processes rather than areal distribution.

REPRODUCTION IN MAMMALS, Book 1: Germ Cells and Fertilization. Book 2: Embryonic and Fetal Development. Book 3: Hormones in Reproduction—C. R. Austin and R. V. Short, Eds.—Cambridge U. Press, 1972, 136 p., 158 p., 148 p., illus., \$11.95 each; paper, \$3.95 each. Designed as a basic text for undergraduates and as a companion work to clinical textbooks of obstetrics and gynecology.

THE STUDY OF URBAN GEOGRAPHY—Harold Carter—Crane, Russak, 1972, 346 p., illus., \$14.50. Written specifically for the university student with emphasis on methodology and theory, the author covers all aspects of urban geography, especially processes of urbanization, the relation between form and function, town plan, central place theory and urban land-use theories.

SYSTEMATIC INTRODUCTION TO THE PSYCHOLOGY OF THINKING—Donald M. Johnson—Harper, 1972, 498 p., diagrams, \$10.95. Broad presentation aims at pulling the significant trends together in treating cognition and concepts, solution of problems, deductive reasoning as problem solving, productive thinking, and judgment.

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