Books of the Week

ARCHAEOLOGY OF ALKALI RIDGE, SOUTHEASTERN UTAH: With a Review of the Prehistory of the Mesa Verde Division of the San Juan and Some Observations on Archaeological Systematics — John O. Brew — *Peabody Museum,* 346 p., illus., $4.25, paper; $10, cloth. Vol. XXI.

THE BIRDS OF NORTH AND MIDDLE AMERICA: A Descriptive Catalog—Robert Ridgway and Herbert Friedmann — *Govt. Printing Office,* 484 p., illus., paper, $1.25. Smithsonian Institution, U. S. Natl. Museum Bul. 50.

CHEMISTRY FOR THE EXECUTIVE: A Layman's Guide to Chemistry — Ralph K. Strong—*Reinhold,* 445 p., illus., $6. An informal presentation of the study of chemistry by means of a series of interviews between the executive and the author.

COMMERCIAL BROADCASTING PIONEER: The WEAF Experiment 1922-1926—William P. Banning — *Harvard Univ. Press,* 308 p., illus., $3.50. The story of the pioneering effort which proved how nation-wide broadcasting as a public service could be financially supported.

FUNDAMENTALS OF SEMI-MICRO QUALITATIVE ANALYSIS—Carl J. Engelder—*Wiley,* 385 p., $3.50. A textbook that places emphasis throughout on integration of theory, laboratory work and problems.

HOW TO TAKE PHYSICAL INVENTORY — Richard F. Neuschel and Harry T. Johnson—*McGraw-Hill,* 159 p., $2. A practical guide presenting the principles and techniques for planning and taking a physical inventory.

THE NEW FIBERS—Joseph V. Sherman and Signe L. Sherman—*Van Nostrand,* 537 p., illus. $5. Information about new fibers, together with supplementary data on applications.

PHYSICS TELL WHY: Atomic Energy Edition — Overton Luhr—*Cattell,* 387 p., illus., $3.75. An explanation of some common physical phenomena such as radar, atomic energy, jet-propelled planes, etc.

SPEEDLIGHTS: Construction and Use—Arthur Palme — *American Photographic Publ. Co.,* 128 p., illus., $2.50. All the necessary information for those who wish to home-assemble a useful speedlight with all of its individual parts readily available.

TAKE A NUMBER: Mathematics for the Two Billion—Lillian and Hugh Lieber—*Cattell,* 221 p., illus., $2.75. Written in an engaging style with drawings to describe the fundamentals and practical use of mathematics.

TEXTBOOK FOR PSYCHIATRIC ATTENDANTS —Laura Fitzsimmons—*Macmillan,* 332 p,. $3.50. A textbook for use in training attendants in mental hospitals.

VITAMINS AND HORMONES: Advances in Research and Applications, Vol. IV—Edited by Robert Harris and Kenneth Thimann—*Academic Press,* 406 p., illus., $6.80. The latest volume in this series indicates in three of the review articles the present trend toward increasing interrelationship between vitamin and hormone research.

Science News Letter, January 25, 1947

DENTISTRY

Caries Agents in Water

➤ DRINKING WATER may contain substances that make teeth more vulnerable to decay.

Evidence for this was discovered by Dr. Henry Klein, U. S. Public Health Service dental researcher, in examinations of the teeth of more than 3,000 New Jersey school children. These were made with the cooperation of Dr. J. M. Wisan, New Jersey health department's dental chief, and Dr. John F. Cody of the U. S. Public Health Service.

The children lived in five communities of southern New Jersey. In three of these communities the water supplies contained enough fluorine to favor resistance to tooth decay. In the other two, the water was considered fluorine-free.

Of the 3,000 children, 1,307 had been born outside the five communities and moved into them at various ages. Of those moving into the fluorine communities, the younger the child was at the time he arrived there and the longer he lived there, the less his teeth were attacked by decay. This showed the now generally recognized effect of fluorine in drinking water in favoring resistance to tooth decay.

By contrast, among the children moving into the fluorine-free areas, the most recent arrivals had the best teeth while those who had lived in the area the longest had the worst teeth so far as decay was concerned.

Scientists are now actively searching for the substances in the water of the communities that make teeth more vulnerable to decay. Superficial examination shows that the nonfluoride waters in the communities are acid enough to need treatment with alkali and that they contain so much excess iron that it is necessary to aerate the water to remove it. An unusually high content of nitrates has also been found in these waters.

Details of the study are reported by Dr. Klein, who is now at the Kellogg Institute, Ann Arbor, Mich., in *Science,* (Jan. 17).

Science News Letter, January 25, 1947

INDUSTRY

New Mechanical Invention Shoots Grains From Guns

➤ THE "GRAINS shot from guns" familiar through breakfast-food ads have been put on an automatic, continuous-production basis by a machine on which U. S. patent 2,414,185 has been issued to Edward D. Andrews of Akron, Ohio.

A battery of eight of the steam guns are arranged, breech to breech, around a hollow rotating shaft which is also the steam duct. As they turn like the spokes of a slow wheel, each muzzle receives a charge of the food to be processed, through an automatic hopper. Then a closing device is clamped on and the steam pressure built up. As the muzzle comes around almost to the starting-point, the action of a cam suddenly releases the muzzle-stopper and the gun discharges its now well-steamed contents into a funnel-bottomed receiving chamber, from which it flows to the packing room.

Rights in the patent have been assigned to the Quaker Oats Company.

Science News Letter, January 25, 1947