

First Glances at New Books

THE STARS—Harlow Shapley—*Amer. Library Assn.* (\$.35). The distinguished director of the Harvard College Observatory is the author of this latest pamphlet in the American Library Association's "Reading with a Purpose" series. Like the others it is aimed to guide the layman in reading up on the subject, astronomy in this case. "If the reader," he says, ". . . . hopes to become proficient in the black arts that deal with astral influences and the rest of the astrological flubdub, he should sadly withdraw; any good compendium of hocus-pocus will give him the more important tricks of horoscope casting."

Science News-Letter, August 6, 1927

THE LIFE OF DARWIN—Leonard Huxley—*Greenberg* (\$1.75). As the son of Darwin's close friend and chiefest champion, Leonard Huxley is in an especially advantageous position. In these troubled days of renewed controversy, every student of biology should have access to such a well-written, compact biography as this.

Science News-Letter, August 6, 1927

THE HISTORY OF THE INCANDESCENT LAMP—John W. Howell and Henry Schroeder—*Maqua*. The fascinating story of how electricity was tamed to light our homes. Starting with the earliest attempts, the authors take us through Edison's work and finally to the researches of Coolidge and Langmuir that made possible the high power, high efficiency lamps of today.

Science News-Letter, August 6, 1927

THE HUMAN BODY—Trevor Heaton—*Dutton* (\$3). A non-technical readable physiology. One of those books that belong beside the family medicine chest.

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EVOLUTION OF PREVENTIVE MEDICINE—Sir Arthur Newsholme—*Williams and Wilkins* (\$3). A much needed account of the development of preventive medicine up to the time of Pasteur.

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MATHEMATICS AND THE BIOLOGICAL SCIENCES—H. B. Williams—*Nat. Res. Council* (\$.25). A reprint of the Josiah Willard Gibbs Lecture for 1926.

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ARCHÆOLOGY

Magic in Roman Life

By R. D. V. MAGOFFIN

Prof. Magoffin is president of the Archaeological Institute of America.

An investigation by a Washington University professor, Dr. Eugene Lavenner, has gathered together a great deal of material of interest on magic in early Roman religion.

The early Roman fathers of households had to go through a night ceremony at certain times, not of walking the floor with crying babies, but of walking against the intrusion of their dead ancestors. At midnight the Roman pater familias walked around in the house barefooted, snapping his fingers so that no spirit might surprise him while silent. Then after washing his hands, he put nine black beans in his mouth one at a time and threw them behind him repeating a certain formula as he threw each bean. Then he washed his hands again, struck a copper gong and repeated nine times, "Spirits of my ancestors, get you gone!" This is certainly all magic. So is the belief that a Vestal Virgin by saying a certain formula could make a runaway slave stop dead in his tracks—if he were still within the city limits—like a running rabbit at a whistle.

The sacrifice of red puppies to the spirit Robigus to avert red rust is certainly sympathetic magic. Clearly when an ancient Roman by using the exact formula could compel a god to do something, he was using magical powers. As the professor says, "this particular form of magic became the basis of Roman religion," that is to say, there grew the idea of a contractual relationship between man and the gods that assumed a vast importance in the development of Roman religion.

The ancient Roman endowed nearly everything about him with a numen or spirit. The priests used to drag a certain stone into Rome in case of a severe drought, and if the entire ceremony was carried out exactly and in due form, rain came, Numa, the second king of Rome, was nonplussed because of an excess of thunderstorms and lightning. He was instructed by the prophetic nymph Egeria to ask two gods to put a spell on Jupiter that would compel him to come down from heaven and show Numa how to control lightning. They chanted certain magic words and down Jupiter came. That was positive magic.

Taboo, on the other hand, was negative. The priest of Jupiter for example could not wear an unbroken ring; he could not have a knot in any article of his clothing; he could not have his hair cut or his hands manicured except by a free man; he could not touch a corpse or even mention raw meat, a she-goat, beans, or yeast bread. The ceremonial used to prevent Mars Silvanus from entering a birth chamber is a relic of early magic. After a child was born, three men representing gods went around the house during the night, striking the threshold with an ax, then a pestle, and then sweeping it with brooms. By using these instruments of civilization supposedly hateful to the old god of the woods, Silvanus was kept from entering the house.

The spirits of fertility and growth were the ones about whom the early Romans gave themselves the most concern. The many ways of avoiding the evil eye, the scores of ways to promote fertility, even the rite to avert mildew, all show that magic was a great element in early religion.

Science News-Letter, August 6, 1927

PHYSIOLOGICAL CHEMISTRY

Why Cod-liver Vitamins?

Chemists are trying to find out where codfish get the vitamins that made cod-liver oil famous.

Exposure to ultra-violet rays, which has been shown in the case of cows to increase the vitamin content in dairy products, does not work with fish, declares Charles E. Bills, research chemist, of Evansville, Ind., in a report in the *Journal of Biological Chemistry*. Fish subjected to five-minute exposures of ultra-violet irradiation every other day for six weeks produced oil that displayed more potency than that made from fish which had not been so treated.

During the period in which the Newfoundland codfish fattens, it gorges itself on small fish known as caplin which contain only a small amount of vitamin D. To account for the unusually high potency of cod-liver oil the cod would have to consume, within a period of four weeks, about 26 times its weight of caplin, a most unlikely quantity.

The presence of vitamin D in the liver of fish consequently is judged to be the result of chemical reactions in the body of the fish at present not clearly understood.

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