fossils have been referred by geologists to such severally remote times as the Ordovician and Tertiary, for example, it would have been appropriate to add that such a view of fossil records would be paralleled, and not in the least exaggerated, by the thesis that George Washington, Queen Elizabeth of England, Charlemagne, Cleopatra and the Pharaoh Tut-Ankh-Amen were contemporaries in the sense in which that word is used in human affairs.

Perhaps I may be permitted space to comment on Dr. Keyser's strictures on the scientific method as opposed to authority by asking, in all seriousness, how we are to arrive at a satisfactory conclusion as to the claims for credibility of different systems of religion except by the employment of the scientific method.

EDWIN LINTON

ZOOLOGICAL LABORATORY,
UNIVERSITY OF PENNSYLVANIA

SCIENTIFIC BOOKS

Pathologische Pflanzenanatomie in ihren Grundzügen, Dargestellt von DR. ERNST KÜSTER, Professor der Botanik an der Universität Giessen. Dritte, neu bearbeitete Auflage. Mit 285 Abbildungen im Text, darunter 2 farbigen. Verlag von Gustav Fisher in Jena, 1925. Pages, XII, 558. Price: paper cover, 24 gold marks; bound, 26 marks.

PUBLISHER and author have both done their best to make the third edition of Dr. Küster's "Pathological Plant Anatomy" an attractive and useful book. It is one that should be in the hands of every professional plant pathologist and of every student who can read German. In 570 well-illustrated compact pages the author deals with all the more important phases of the morbid anatomy of plants, summarizing what is best known. The book is divided into two parts of about equal size. The special part deals with: (1) Panaschierung; (2) etiolation; (3) hyperhydric tissue, and under this, with overgrowth of lenticels and bark, and with intumescences; (4) wound tissue and regeneration, callus, thyloses, wound wood, wound bark, wound cork, gum and resin formation and regeneration; (5) galls. The second general part deals with: (1) Histogenesis of pathological tissues with eleven subdivisions; (2) developmental mechanics of pathological tissue with five subdivisions; (3) ecology of pathological tissue. The book also has a brief supplement and a good index. It is the best book there is on this subject and is likely to remain so for a considerable time. Most of the references are to German literature. Judging by the number of original figures (82 out of 175) the subjects most familiar to Dr. Küster are variegation, wound reactions and the anatomy of insect galls. Most of the illustrations in the other chapters (91 out of 109) are borrowed. There is a commendable abundance of literature references and the figures are good.

ERWIN F. SMITH

Bones of the Ethmoid Region of the Fish Skull. By EDWIN CHAPIN STARKS, (Stanford University, California, Biological Sciences, Vol. IV, No. 1).

THE osteology of the bony fishes, an immense and highly varied group of animals, has been relatively neglected of late years. For while these creatures date back to the separation of the land-breathing animals from primitive fishes, they are out of the line of descent which leads towards mammals and men. This memoir of Professor Starks's comprises a very thorough study of the bones of the roof of the mouth in fishes, and their evolution from the one end of the long series to the other. No study of vertebrate morphology can safely lose sight of the osteology of fishes, to which the present paper is one of the most notable contributions. An earlier paper by the same author (Vol. III, No. 3) deals with the Osteology and Relationships of the Uranoscopoid Fishes (Star-gazers), a large group in which the systematic position of many of the families is still in doubt. The true place in Taxonomy and in Evolution (which should be the same thing) can rarely be determined until the bony structure, which underlies superficial traits, is well understood.

DAVID STARR JORDAN

SCIENTIFIC APPARATUS AND LABORATORY METHODS

A CONVENIENT METHOD FOR FEEDING PLANARIANS

THERE are many biological problems for which planarians and rhabdocoeles may serve as very suitable material and in many laboratories these animals are kept for some length of time for this purpose. With a proper care as in Professor Child's laboratory, University of Chicago, they live well on beef liver. In Manila we found that beef liver can not be used to our entire satisfaction. On account of a warm climate the liver soon putrefies and after a few hours the water becomes very polluted and injurious to the animals. Besides this, the fresh beef liver is not always obtainable when it is needed. This led me to search for other food materials which could be used in place of beef liver.

After some investigation, it was found out that the yolk of egg is a very convenient food material. The duck's egg on account of its denser yolk is better than the hen's egg, but the latter is quite satisfactory. The method of feeding which I adopted is very simple. A wide-mouthed pipette (with 3 to 4 mm opening) is inserted in a freshly opened egg so as to get directly