are introduced at first just for the convenience of their language; topological spaces provide a supply of illustrative examples. The book is further enriched by historical notes, interpretative remarks, and numerous exercises. Again and again the specific precedes the general, concepts being encountered in action and used before they are formalized; then general results are carried on to precise computational results. There is a corresponding emphasis on content in preference to form.

Homology can and will be used as a textbook which, for the student with adequate background, will provide a firm grounding in homology in the algebraic setting. Experienced topologists or algebraists will find here new tools and a road to the frontiers of research, as well as a ready reference for the basic "facts of life" in the subject. The book's most important function will be to facilitate communication between mathematicians, for an algebraist may roam at ease here and experience a new viewpoint on a familiar landscape, while the topologist may venture into a new world, reassured by the haunting familiarity of the basic machinery—homology.

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Plant Pathology

Biochemistry and Physiology of Plant Immunity. B. A. Rubin and Ye. V. Artsikhovskya. Translated from the Russian edition (Moscow, 1960) by Helen Wareing. Pergamon, London; Macmillan, New York, 1963. x + 358 pp. Illus. $14.

Most plants are resistant to most pathogens, but knowledge of the relatively few cases where given pathogens damage given crops makes up most of the literature on plant pathology. For 60 years much effort has been devoted to trying to detect chemical differences that would explain why some varieties of plants are susceptible but other varieties are resistant to the same pathogen. With perhaps two exceptions, these efforts have been unsuccessful. The futility of this approach may have been first indicated by Bernard about 1910. Acquired immunity in plants was not put on a firm basis till about 1959, with the work on phytoalexins started by Müller about 1939. As little as 10 years ago acquired immunity was considered of doubtful significance in plant pathology. It now appears that chemicals toxic to the pathogen and formed in host cells in response to preliminary invasion by the pathogen are a major cause of specific resistance, while much of the nonspecific resistance is due to phytoncides, antibiotic chemicals universally present in healthy plants.

Much of the literature leading to this conception is reviewed in this first book on the biochemistry and physiology of plant immunity by Rubin and Artsikhovskya, Russian leaders in work on phenols in relation to plant disease. The book consists of four chapters—24 pages on the evolution of parasitism, 59 pages on the biochemistry and physiology of heterotrophic organisms, 55 pages on the biochemistry and physiology of the diseased plant, and 140 pages on plant immunity. The first three chapters do not deal closely with immunity, and might almost as well be part of a book on the principles of plant pathology. The last chapter deals with the meat of the subject. Work on fungus diseases is emphasized, and the extensive studies of acquired immunity to viruses is largely omitted. Much is made of the differences in the biochemistry of resistance to obligate and to facultative parasites. Sources of information are thoroughly documented, but the validity and significance is not always adequately appraised. The 1086 references (796 non-Russian) adequately cover work in Russia, the United States, Japan, and England up to 1959. Of the 68 figures, mostly graphs, some (for example, Figs. 51 and 55) are not easily interpreted. The paper, printing, and binding are good, and errors are rare. This book emphasizes the fact that immunity is a problem of biochemical processes rather than chemical composition, and it is a credit to all concerned.

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Note

A Stone Age Society Today

In the fastness of highland New Guinea survive some of the last truly Stone Age societies of our time. The Kapauku speakers of Kamu Valley in West New Guinea (formerly Dutch New Guinea) are one of these survivals—at least, they were when Leopold Pospisil first studied them in 1954. *The Kapauku Papuans of West New Guinea* (Holt, Rinehart, and Winston, New York, 1963. 114 pp. $1.50), by Pospisil, is a condensation of data that he has published in articles and two longer monographs. In this book the author deals with the Kapauku's economy, social and political organizations, law, warfare, and ceremonial life as it was just before the Dutch colonial government first extended their control over the valley.

The field work on which this study is based is a tour de force that will probably not be equalled in a New Guinea society of this sort. To the analysis Pospisil also brings a rare—among anthropologists, that is—sophistication in legal theory and a welcome penchant for documenting statements, wherever possible, with quantified data. For example, if anyone wishes to know what the gross national product and the balance of trade of this branch of the Kapauku are, it is here—in shells, the standard currency of the region. The author has also used precious space to explain many of the concepts he uses in his lucid analysis. All in all this is a salutary addition to the Case Studies in Cultural Anthropology Series, which is being published to provide aids for teaching cultural and social anthropology, for not only does it present a capital example of a stateless society in its unfettered state, but it is also a model of descriptive research.

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New Books

Biological and Medical Sciences

Acoustic Behaviour of Animals. R.-G. Busnel, Ed. Elsevier, New York, 1963. 953 pp. Illus. $45.

Advances in Acarology. vol. 1. John A. Naegele, Ed. Cornell Univ. Press, Ithaca, N.Y., 1963. 492 pp. Illus. $9.75.

Advances in Biochemistry. Proceedings of the Summer School in Biochemistry, 1962. P. S. Sarma, Ed. Indian Inst. of Science, Bangalore, 1963. 459 pp. Illus. $5. More than 40 papers based on the lectures presented by participants at the school, which was sponsored by the Ministry of Scientific Research and Cultural Affairs.

Advances in Biological Waste Treat-

(Continued on page 450)