
Insect Embryology

Much has been written concerning the development of individual insects, but few have been the attempts to summarize the data available. The present volume does not attempt to present all the available data but out of many years experience Professor Johannsen has been able to select judiciously that material which contributes to a clear picture of the field. The able assistance of Dr. Butt is demonstrated in the quality of the illustrations.

The arrangement of materials is unique. Part I is devoted to a summary of insect embryology. Types of cleavage in eggs; a type of embryonic development; fertilization, maturation and cleavage; early development; embryonic envelopes; gastrulation and germ layer formation; the alimentary canal; ectodermal derivatives; mesodermal derivatives; polyembryony; microorganisms in the egg; experimental embryology. These general topics are carefully treated, controversial points are recognized and various views presented. Numerous references to specific papers are appended to each chapter. Part II is devoted to discussion of the embryology of specific insects as representatives of groups. In this portion the whole of Class Hexapoda is surveyed. A discussion of the embryology of Myriapods conclude Part II.

This book is an invaluable contribution to the study and particularly the teaching of Insect Embryology. Both authors and the publishers are to be congratulated upon this notable volume.—*Paul E. Schaefer.*

Embryology of Insects and Myriapods, by Oskar A. Johannsen and Ferdinand H. Butt. 462 pages. New York, McGraw-Hill Book Company, Inc., 1941. \$5.00.