terested in the anaerobes may consider it a deficiency that, with the exception of one paper, all of the research reported has involved work with bacterial spores of the genus *Bacillus*.

An editorial oversight diminishes the value of one paper from which all seven of the tables have been omitted in publication.

The book should find its greatest audience among those actively engaged in research, but its value to advanced students as a guide to areas of current research interest should not be overlooked.

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Microspores and Agents

The Story of Pollination. B. J. D. Meeuse. Ronald Press, New York, 1961. x + 243 pp. Illus. $7.50.

Many of the incompletely solved, yet fascinating, examples of quite precise pollinator-flower relationships and the associated biological time clocks receive interesting attention in this book, which is written in language suitably simple for "young persons between the ages of eight and eighty." To a notable degree, the author's enthusiasm for, and long association with, his subject is revealed in the carefully constructed text. One is led to share his excitement in viewing closely such moments as the hummingbird sipping nectar from the flower of *Lobelia cardinalis* and the beetles reacting remarkably to devices insuring pollination in *Calycanthus* and various aroids.

Meeuse covers, within the limits of 20 well-interlinked chapters, matters as diverse as the bee's perception of the light-polarization pattern of the sky to the pollination of *Kigelia* and other tropical plants by bats. Occasionally there are digressions of sufficient extent to make me wonder why the phrase, "and pollinators" was not appended to the title of the volume.

To a major extent, the highly selected bibliography refers to important works on bees and other pollinators. In view of the limited, and partially inaccurate, character of the two plates on pollen grains, interested readers would have been materially aided by citations directing them to such definitive works on pollen as those of Maurizio, Zander, Hodges, Hyde, Wodehouse, and Erdtman. The balance of the illustrations are of high caliber. Hilda Kern's color plates, which include an exquisitely executed one of *Iris siberica,* are choice and unusual additions to the book. One should note that, in Fig. 28, the legends for *E* and *F* have been reversed.

The text is admirably free of typographical error. It is almost a matter of quibbling to protest that 233,644 pollen tubes (page 214) do not represent "over a quarter of a million." The general format appears to be a satisfactory compromise for the intended audience. Meeuse has produced a distinctive contribution to a phase of biology which, since the days of Darwin, Kerner, and Knuth, has hardly received the attention it could well be given.

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Ecological Viewpoint

A Synthesis of Evolutionary Theory. Herbert H. Ross. Prentice-Hall, Englewood Cliffs, N.J., 1962. xii + 387 pp. Illus. Trade ed., $10; text ed., $7.50.

Herbert H. Ross, principal scientist of the Illinois Natural History Survey and professor of entomology at the University of Illinois, is well known for the breadth of his approach to taxonomic, ecological, and evolutionary problems in the study of insects. Those interests are here exemplified in a still broader way, both by the judicious use of entomological examples (among others) of evolutionary processes and by unusual and welcome emphasis on community, biome, and general ecological aspects of evolution.

Introductory chapters treat the history of evolutionary theory, the origin of the universe, the solar system, and the earth, and the nature and origin of life. Four chapters are then devoted to basic evolutionary processes in populations and to speciation. Another four discuss in considerable detail the evolution of communities and biomes and the geotectonic, environmental factors that are stressed throughout the book. A few final pages summarize the whole. Apart from interesting dissent on some minor points, the evolutionary theory expounded is that familiar through the works of Dobzhansky, Huxley, Mayr, and others.

The most valuable and to some extent the pioneering part of the book is its integration of evolutionary theory and ecology. This should be helpful to many students and practitioners of ecology, biogeography, and related subjects, whose approach has been less dynamic. The book is clearly not meant to be a general textbook of evolution and intentionally omits many subjects that would be expected in such a text. The first half of the book is less successful than the second half and unfortunately cannot be highly recommended, although it is somewhat refreshing to find viruses omitted from a discussion of the origin of life and the Hardy-Weinberg equilibrium from a treatment of population genetics.

The author's known talents have not produced a synthesis as broad and adequate as his name and the book's title seem to promise, but this disappointment is combined with gratitude for what, in fact, has been done.

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Excellent Reference Source

A Survey of Cardiac Glycosides and Genins. J. Hampton Hoch. University of South Carolina Press, Columbia, 1961. i + 93 pp. $3.50.

During the past decade a tremendous advance has occurred in the isolation and identification of many new cardiac glycosides and genins. To date approximately 400 such compounds have been isolated and characterized. This advance has been the result primarily of developments in chromatographic methods and the discovery of new botanical sources.

The author has compiled, from the multitudinous reports in the scientific literature, important botanical, chemical, and pharmacological data for most of the known cardiac glycosides and genins. These data are summarized and presented in tabular form in three tables that comprise most of the book. The first table lists some 380 compounds having cardiotonic activity together with information on the botanical origin, the family, and the part of the plant utilized, and references. Chemical informa-