Although the style is exceedingly informal ("This is OK for large x"), much care has gone into the writing and into checking the equations. The printing is unusually good, and the figures are very clear.

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Bacterial and Phage Genetics

The Genetics of Bacteria and Their Viruses. Studies in basic genetics and molecular biology. William Hayes. Wiley, New York, 1964. xii + 740 pp. Illus. $13.75.

There are several qualities that one looks for in a new book in one's own area of scientific interest. One hopes for a complete and well-balanced scope of subject matter, a logical organization, a lucid style of writing, carefully chosen illustrations that really help one to understand the written text, and a thorough bibliography. More often than not one is disappointed, but in Hayes's book all of these qualities are present to a degree that is nothing short of miraculous.

The book is a truly complete account of bacterial and phage genetics, and no pains have been spared to insure a logical development of the subject. The first 20 pages review the general principles of inheritance and Mendel's laws; following these Hayes provides clear explanations of recombination analysis and biochemical genetics. Next, he goes carefully into fine structure analysis: the concept of the allele is developed historically, and the new tools of analysis are dealt with—complementation tests, deletion mapping, and three factor crosses. Each method is discussed from the theoretical and from the practical point of view. In a set of background chapters, Hayes takes up the subject of mutation in bacteria and the current concepts of gene action: the genetic code, protein synthesis, the nature of spontaneous and induced mutation, and the nature of recombination.

The second half of the book is devoted to bacterial and bacteriophage genetics. Discussion of lysogeny and phage chromosome structure precedes detailed accounts of transformation, transduction, and conjugation. The last two chapters deal with two highly active fields—genetic regulation and episomes. In every chapter the author gives both the historical development of the subject and the most recent experimental results.

A very attractive feature of the book is the use of two-color diagrams whenever the complexity of the material warrants it. Finally, the bibliography of almost 1000 references covers the literature through 1962 and, for some areas, into 1963. The bibliography, which is alphabetical by author, gives full titles as well as references to the pages in the text where the work is cited.

All in all, this book constitutes a milestone in the genetics literature, and it will certainly be the standard teaching and reference work for some years to come.

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Soil Fauna of South America

Biologie de l'Amérique Australe. *Études sur la Faune du Sol.* vols. 1 and 2. Delamare Deboutteville and Eduardo Rapoport, Eds. Éditions du Centre National de la Recherche Scientifique, Paris. vol. 1, 657 pp., 1962; vol. 2, 399 pp., 1963. Illus. $16.60.

These volumes on the soil fauna of South America are two of a three-volume treatise sponsored by the Centre National de la Recherche Scientifique of France and the Consejo Nacional de Investigaciones Cientificas y Tecnicas of Argentina. The national research centers of the two countries are collaborating in publishing what is designed to be an ecological and biogeographic monographic study, but the first two volumes are appropriately systematic. In addition to the contributions of the editors, one from France and one from Argentina, there are 31 articles, mostly by French authorities, which consist primarily of descriptions of species and identifications mainly of Argentine and Chilean faunas. Much of the fieldwork was performed during the period February to April 1959 by six scientists. A special effort has been made to explore the fine national parks of Argentina, and it is hoped that this survey will be completed before their faunas have been modified by civilization.

A five-page introduction, which points out the uniqueness of southern South America and its interest to the world, precedes 32 pages of descriptions of the areas studied in these volumes. Five maps of the entire continent show its hydrography and meteorologic conditions. Other maps deal with that part which is south of the Tropic of Capricorn and with collecting areas in Argentina. The famous pampas and the Patagonian steppe make up much of this region, but between them there is a large area of "monte," or xerophilous bush, that has carried some tropical elements of the fauna far south to the Atlantic coast in the 41° to 44°S latitude area. Then there is the great Andean spine, with its special biota, which runs down into Tierra del Fuego and the Islas Malvinas (Falkland Islands).

The third volume is expected to summarize the data and provide more factual materials bearing on the prevailing hypotheses, such as Wegenerian continental drift and Antarctic pathways or extensions from the north, which will account for the derivation of the fauna and its relationships to others.

The first six articles are on Thecamoebae, Pauropoda, Symphyla, Acarina, and Pseudoscorpionidea, illustrating the ambitious nature of the project in dealing with all types of invertebrates. Copepods, palpigrades, nematodes, isopods, and syncarids are later described, but the bulk of the two volumes deals with Insecta and especially Coleoptera. It is remarkable that a major part of the animal species of any region of the world always seems to be beetles, and an explanation would be welcome. One Coleoptera study (by R. Jeannel) considers a relationship between South American and Australian members by way of Antarctica when the latter had a more favorable climate or even closer physical relations. It will be interesting to see in the later volume if there are similar relationships suggested which involve the Collembola that are now becoming well known in Antarctica. A handsome colored plate by the French editor shows some of the Collembola.

In view of the numbers of specialists who have contributed to the project, the editors have chosen to publish the articles together and in a common format, and this seems a wise choice. An alternative was to have them scattered in