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Book Reviews

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BOOK REVIEWS

Chromosome Techniques, Theory and Practice. *Arun K. Sharma and Archana Sharma.* Butterworths, Washington, D.C., 1965. x+474 p., 41 plates. \$17.50.

This is a very complete and amazingly up-to-date compendium. It is not a recipe book, though in many instances the step-by-step details of a technique are presented. In the majority of instances a reader will have to consult the copiously cited original works to ferret out the intricate details of a technique. Emphasis is on the chemical principle underlying a technique, on the "why" rather than the "what" of what is done during a technique. Structural formulae of molecules are presented in profusion in Part II, which deals with the Chemical Nature of Chromosomes. Part I has 306 pages and covers the Physical Nature of Chromosomes. There is no treatment of human leucocyte cultures or clinical karyogram routines. A most unfortunate omission is that of an index to organisms. No hint as to the magnification of the plates is given, and only eight of them are of meiotic material.

ELTON F. PADDOCK

Understanding Evolution. *Herbert H. Ross.* Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1966. xiv+175 p. \$4.75.

Professor Ross has done an outstanding job of presenting the entire concept of organic evolution in this small volume. Contents range from theories on the formation of the universe, our solar system, and the fossil organic substances which accumulated in ancient seas, to the formation of living matter. The complexity of life is traced through the plant and animal kingdoms. The interplay of the causal factors of the environment with mutation and natural selection are modern in their treatment. Laymen will find in this book an excellent account of organic evolution. The book is well written and abundantly illustrated.

WILBUR M. TIDD

Introduction To Radio Astronomy. *R. C. Jennison.* Philosophical Library, Inc., New York, 1967. viii+160 p. Cloth, \$4.75.

It is perhaps appropriate that this little book should be reviewed by an optical astronomer who is not a radio expert, for it was written to ". . . bridge the gap between the too-popular treatment and the textbook." As the author goes on to say in his preface, it is an introduction ". . . for those who are not specialists but who hunger for a little more meat within the trimmings of a popular dish."

The descriptions of the techniques of radio reception and interferometry are confined to the second and the last chapters, the latter being essentially the technical appendix. In between is a well-written account of the discoveries that have made radio astronomy so exciting and important since 1932, when Karl Jansky was studying interference with transatlantic radio reception for the Bell Telephone Laboratories and realized that some of the static was coming into our atmosphere from the direction of the Milky Way. The story is continued with the first radio maps of the galaxy, made by Grote Reber about 1939 with his home-made dish antenna in the backyard of his home, and the wartime experiments with radar by J. S. Hey that led him to detect bursts of meter radiation from the sun.

The present-day picture of radio waves originating in the sun and planets; the radar beams reflected from the moon, Mercury, and Venus; and the radio exploration of the galaxy and extragalactic space is presented very well, when one keeps in mind the compactness of the book. There is even a one-page appendix on Fourier transforms, inspired by the author's book *Fourier Transforms and Convolution for the Experimentalist*, but this is just too short to be very clear.

The success of this little book in interesting the reader, as well as informing him, reflects not only Dr. Jennison's talent as a writer and a university lecturer, but also his experience with the radio interferometers at Manchester, where he was a member of the group that established the duplicity of the Cygnus radio source. The only serious regret of the reviewer is that no references to other books or journals are given. If even a two-page selective bibliography had been added, it would have been a great help to the reader whose appetite is whetted for still more meat.

P. C. KEENAN