

Book Reviews

Outline of Genetics

The Foundations of Genetics. By F. A. E. Crew, F.R.S. (Pp. 202+xiii; illustrated. 21s.) Oxford, London, Edinburgh, New York, Toronto, Paris, and Frankfurt: Pergamon. 1966.

In 1946 Crew's aim was to persuade the medical student that children yet unconceived are as much the patients of the physician as are the moribund senescents on whom he is preparing to lavish his care (see *Genetics in relation to Clinical Medicine*). The seed did not fall on stony ground, and it must be very satisfying to him to see how rich has been the harvest. The present book, written for a different audience, is intended to give a general outline of genetics to those senior students in schools who are heading towards careers in the biological sciences. The great merit of it is that Crew has grown up with his subject and because of this he is able to make much more interesting the large part of the book devoted to the history of the science. It is interesting to recall that by 1900 Darwinism with its belief in blending inheritance had become orthodox, and when Mendel was rediscovered the single gene difference between some characters seemed to argue against the theory of evolution by natural selection acting on small differences. This historic controversy is traced through

the personalities (and emotions) behind it to the solution by Fisher, who showed that both mechanisms were in operation and that the war need never have been declared.

Crew's book gives a straight account of the basic discoveries, taking us through Mendel's demonstration of the laws of segregation and independent assortment, and then the rediscovery of his work by de Vries, Correns, and Tschermak after their own experiments had shown the same results; work on maize; Johannsen's experiments on "pure lines" in the bean; factor interaction in Bateson's, Punnett's, and Davenport's experiments on the domestic fowl; and the great advances brought about by the work on *Drosophila*. Here the discoveries by Morgan of linkage and crossing-over and later work by Bridges showed beyond doubt that the chromosomes are the carriers of the genes.

The proof provided by Müller in *Drosophila* that mutation can be caused artificially by irradiation ("nothing cleverer or neater in the whole history of the science"), brings

us nearer to the present time with a consideration of the mode of gene action and the method of replication. This involves the building by a gene of a duplicate of itself out of materials that are obtainable from the surrounding medium, and the book leads us on to the discovery by Crick and his colleagues of the way in which the basic unit of D.N.A. "codes" one of the amino-acids by a sequence of three of the four purine and pyrimidine bases of which D.N.A. is formed.

The last section, on the ramifications of the subject, takes a rapid glance at advances in many fields of genetics—in animals and plants, in radiation, in evolution theory (but with the serious omission of the very basic concept of polymorphism), in cytogenetics (but the Lyon hypothesis receives no mention), in biochemistry, eugenics, and in human and medical genetics.

The title describes the book well, the English is a delight (transatlantic pundits should read it if only for this), and Crew's economy of words, together with the Latin and Greek derivations, show us how possible it is to combine "the two cultures." Strongly recommended.

C. A. CLARKE.

Gynaecologist Extraordinary

The Life of an Egyptian Doctor. By Naguib Mahfouz, M.Ch., F.R.C.O.G.(Hon.), F.R.C.P., F.R.C.S.(Hon.). (Pp. 191+xii; illustrated. 40s.) Edinburgh and London: E. & S. Livingstone. 1966.

Here is a biography to interest a wide range of readers. Naguib Mahfouz has long been the doyen of gynaecologists in the Middle East and his name and kindly influence are almost as well known in this country as in Egypt. Now he has written an account of his life, primarily, he tells us, at the insistence of his family but in the present English version made available to a much wider circle.

Almost every page presents some event of interest and many remarkable happenings are described. Some are of general concern, others throw an interesting sidelight on recent world events, and a few deal with quite extraordinary adventures. There is, for example, the author's escape when, only hours before the terrible disaster, he had climbed Mount Vesuvius, and, struggling for the very summit, had peered into the Devil's cauldron itself, which, unsuspected, was even then about to explode and destroy with fire and ash all life for miles around. There was also his escape from British bullets when, during the night hours of curfew, he had responded to a desperate obstetrical emergency; and, a little later, his escape from drowning when, again in the blackout, his car had left the

roadway, but, hitting an unexpected boulder, had been halted within inches of plunging into the Nile.

But this is to anticipate the story. From the moment of his birth—unorthodox by any measure, and unthinkable for one destined to be an obstetrician—we are given fascinating sketches of Egyptian life as seen by the schoolboy, the medical student, and the young doctor already struggling to fulfil his ambition to serve the cause of women in labour. Perhaps the real measure of his resource and perseverance was first revealed when, yet unqualified, he volunteered to serve in the cholera outbreak which was then decimating certain Egyptian villages. With his facility in dialect speech and his friendly yet fearless approach he achieved what all the forces of officialdom had failed to do: a systematic search and the following of many clues led to the uncovering of a hitherto hidden well. Its waters were examined. They teemed with the vibrio of cholera, introduced, it seemed, by pilgrims returning from Mecca who had brought bottles of holy water with them to bless their own wells. And in Mecca cholera raged.

And so we pass from scene to scene. There is the never-ending fight against nepotism, corruption, and inertia; the founding of the first out-patient gynaecological service; the advent of Dr. (later Professor) Roy Dobbin, and the "David and Jonathan" partnership which resulted in the creation of a department that was soon to become famous throughout the world's capitals. Not least,

there is the formation of the Mahfouz Museum with its incomparable collection of material peculiar to the East and particularly rich in examples of childbirth injury—ruptured uteri, vesico-vaginal fistulae, and the like. The name of this museum is known to every student; but how many also know the story behind the war-time publication of three volumes describing this vast collection? How the manuscript reached this country in the diplomatic bag; how it was lost; how recovered; and how it was again all but destroyed by the mad printer who severed the five-language legends from each of its 713 plates?

But to make random extracts does an ill service, for they explain the story before the scene is set. Far better is it that the reader should examine and judge for himself. He will not willingly lay down this book until every page is read.

J. CHASSAR MOIR.

Clinical and Practical Dermatology

Basic Dermatology. By P. J. Hare, M.D., F.R.C.P. (Pp. 198+x; illustrated. £2 2s.) London: H. K. Lewis. 1966.

While the larger textbooks of dermatology have gone out of fashion except as works of reference, there is a call for the smaller volumes that have been appearing in recent years.