Other topics include radiation-induced chromosome damage and the assessment of genetic risk (Searle), hepatic phenotypes in somatic cell hybrids (Darlington and Ruddle), mutation rates in man (Conneally), genetic studies of isolates (Roberts), and artificial insemination (Richardson).

A recurring theme in this volume is the extent of our ignorance, despite recent advances, and this must provide the challenge to further work. It will be referred to regularly by most workers, not simply for the review itself, but also for the key references supplied, and, were it not for the price, £13.00, bought by them.

A. W. JOHNSTON

Handbook of Genetics.

Edited by Robert C. King. Volume 4; Vertebrates of Genetic Interest. (Pp. xiv + 624; Figures + Tables \$59.40.) New York: Plenum. 1975.

The *Handbook of Genetics* is an encyclopaedia. Volumes 1 to 3 cover respectively bacteria, phages, and fungi; plants, plant viruses, and protista; and invertebrates. Volume 5 will deal with molecular genetics. The volume under review is concerned with 'vertebrates of genetic interest'. It contains 31 chapters, 20 of them reviewing genetical knowledge of species or groups used or useful for geneticists; 6 describing particular aspects of human inheritance (amounting to 95 pages); the rest summarizing such topics as blood groups in domesticated animals, coat colour gene homologies, and somatic cell genetics. Most chapters are written by recognized authorities in their particular fields. The specifically human topics include mitotic chromosomes by K. E. Buckton, immunoglobulins by J. A. Gally and G. A. Gutman, biochemical genetics by D. W. Hollister and D. L. Rimoin, and the editor on linkages and 'A bibliography of reference works bearing on human genetics: 1962-74'.

Inevitably the contributions are uneven. The best pack large amounts of information into a few pages, much of it in the form of tables: Margaret Green on the house mouse is particularly good. Other chapters are disenchantingly verbose.

The main question one asks of expensive collation data like the *Handbook* is 'Is it useful enough to buy?' Leaving aside the impertinent question of whether one has enough money, the answer probably is 'yes', for all but the overdedicated specialist. Unfortunately most clinicians fall into this category—even though for wholly proper and necessary reasons. It would be refreshing and perhaps beneficial to find more medical geneticists getting ideas from work on non-humans. There is good precedent for this: E. A. Cockayne and C. A. Clarke catching butterflies, Fraser Roberts chasing sheep. The editor has managed to dragoon most of his contributors to present their material in roughly similar ways, so it is relatively easy to compare concepts.

It is difficult to be constructively critical of a book of this sort without nit-picking. For example, King's *Bibliography* lists most of the obvious books, but omits Carter's *Pelican Human Heredity* (1962), and Carter and Fairbanks' *Genetics of Locomotor Disorders* (1973) (though listing two other books by Carter), as well as Wynne-Davies' *Heritable Disorders in Orthopaedic Practice* (1973). Perhaps the computer had an aversion to anatomy? Again Kojima's *Mathematical Topics in Population Genetics* (1970) is in; Wallace's *Topics in Population Genetics* (1968)—surely as relevant—is not. Four of McKusick's books are recorded, but not *On the X Chromosome* (1964). Several collections of papers are listed, but not the nice *Human Populations, Genetic Variation and Evolution* (edited by Morris, 1972). There are similar aberrations in the list of human biochemical variants. For example, neither glutamic pyruvic transaminase nor esterase-D is listed as polymorphic, despite the fact that both had been described by 1973. None of these omissions are terribly serious in themselves, but together they undermine one's confidence in other data that may be missing.

Any allegedly complete compilation of data in a subject as expansive as human genetics has to be treated with caution. Notwithstanding, the fourth volume of King's *Handbook* can be thoroughly recommended to intelligent (i.e. cynically selective) users.

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