

one another. They deal, at varying levels of specialization, with a wide variety of topics. The core of the book is formed by five chapters which together form a fairly coherent account of the general biochemistry of the foetus, of the biochemical changes which accompany its development, and of the dramatic biochemical readjustments which take place when it is born. The treatment is rather uneven. The lipid chapter, for example, includes a higher proportion of elementary and general material than the others. The chapter on urea biosynthesis, at the other extreme, seems to be based largely on the author's own experimental results. Dr Benson's own chapter starts with a review of the regulation of genetic expression but incorporates a quite detailed account (with numerous figures) of his own experiments. The remaining chapters deal with mere isolated topics: the regulation of foetal liver development; the intrauterine diagnosis of inherited disease; foetal haemoglobin; the autacoids; and polymorphism in human proteins.

Considered as a collection of biochemical essays the book has substantial merits. The topics with which it deals are intrinsically interesting and not perhaps sufficiently well known to biochemists. Though the contributors vary so much in their approach, the quality of their contributions is generally high. Their variety itself is an advantage to the casual reader. It is perhaps too strictly biochemical in its approach and too full of biochemical technicalities to be readily intelligible to most of the paediatricians and obstetricians to whom it is apparently addressed. But almost any intelligent student of biochemistry is likely to read at least some of the chapters with interest and enjoyment. For a work addressed to a fairly specialized audience and therefore with limited circulation, its price is surprisingly reasonable.

R. Y. THOMSON

## Soviet Rocketry

*Soviet Rocketry: The First Decade of Achievement.* By Michael Stoiko. Pp. xi+272. (David and Charles: Newton Abbot, August 1971.) £3.25.

It would, perhaps, be better to call this book something like "A Kremlinologist's Notes and Thoughts on Soviet Rocketry". The first chapter (pages 1-16) gives a sketchy outline of the early history of rocketry in the world, but contains several factual inaccuracies. The second chapter (pages 17-24) is called "Tsiolkovsky's Legacy", but no analysis of his historic contributions appears. On page 18 we meet the old acquaintances: "he mastered mathematics *first* and *then* physics", and "in

1881 he began his first serious scientific research in *three areas*—all-metal dirigibles, airplanes and rockets".

Tsiolkovsky wrote his famous letter not to the Central Committee of the Communist Party (page 24), which is a post-cult-of-personality formulation, but to the great teacher and leader I. V. Stalin, whose address was the Central Committee.

On page 26 we read that "Tsiolkovsky's chief contribution lay in his conclusion that the only possible means of flight in space must be based on the reaction principle. . . ." I think that this is a somewhat untidy formulation since (1) the reaction principle was known to and had been used by man centuries before Tsiolkovsky was born; (2) Tsiolkovsky's collected works, especially his *Album of Space Travel*, show that the range of his contributions to rocketry and space travel was very much wider than the reaction principle; permanent orbital stations, regeneration of biological waste in space, energy problems in free space, space walk, space plants—all these and many other subjects were studied by him quite rigorously.

Chart 1 on page 32 ("Evolution of Soviet Rocket Societies") contains factual mistakes (the positions of Tsander, Korolyev and Kostikov, GIRDs throughout the USSR). The statement that after the formation of the Zhukovsky Academy "at least fifteen comparable academies of astronautics have been built" (page 30) is wrong; one can guess that the author intended to say "fifteen *military* academies", which is a different thing. Statements such as "during the years 1928-30 *numerous* rocket conferences were held" in the USSR, "GIRD became *national* in scale with branches in *major cities*" (page 47) and a "Rocket Research and Development Centre" (page 47) was established in 1932 at 19 Sadovo-Spasskaya Street are obvious exaggerations conflicting with facts. And certain remarks about M. K. Tikhonravov and V. P. Glushko (page 62) do not hold water.

Chapter 6 ("Prelude to Sputnik") describes rocket work in Germany and the Soviet Union up to August 1957. The rest of the book deals with the now well known Soviet space achievements and attempts to outline their organizational skeleton; the principal facts are described accurately, the illustrations are good, but up to thirty inaccuracies and mistakes of varying importance have been noticed.

The gloomy warnings by Richard Nixon (then Vice-President) on October 16, 1957 (that Sputnik 1 was "a grim and timely reminder" to the United States) and by Vice-Admiral Hyman G. Rickover in 1961 (that "the United States and Russia are not engaged in a popularity contest but in a grim techno-

logical race") seem to be irrelevant and unnecessary. The somewhat *à vol d'oiseau* foreword by Patrick Moore confuses Russia with USSR and vice versa.

No sources of information are given anywhere, but a bibliography is available at the end of the book.

G. A. TOKATY

## Eastern Libraries

*Libraries in the East: An International Comparative Study.* By George Chandler. Pp. 214. (Seminar: London and New York, 1971.) £2.50.

INFORMATION about the development of libraries and librarianship in the East is scattered throughout Unesco and other report literature, or appears in short articles in the periodicals of the countries concerned. Thus it is difficult to obtain a complete picture and especially to study progress on anything like comparable terms. The present book aims to survey the recommendations which have been made at Unesco seminars on the development of library services in the East and to compare the advances in eight Eastern countries (the Lebanon, Egypt, Iran, Pakistan, India, Thailand, Hong Kong, and Japan) as seen at first hand during a tour by the author as president of the International Association of Metropolitan City Librarians (INTAMEL). The countries are taken in turn and considered under such headings as the structure of the library services, library associations, schools of librarianship, national libraries, documentation centres, and, where appropriate, public, special and academic libraries.

Inevitably coverage is variable because it is limited almost entirely to institutions visited on the tour made in 1970. It is admitted that, where certain libraries are selected for detailed consideration, though the intention was to reflect general problems for the East as a whole, choice in the last analysis was personal or even accidental, depending on the information provided by the librarians of the libraries visited. Nevertheless, we are appreciably further forward in knowledge of Eastern libraries and indebted to Dr Chandler for presenting the information gained on his tour in the constructive framework of a comparative study. Many readers will wish that personal impressions of each country's library development were given much more space and prominence. These "conclusions", which are limited to six or seven lines of text, do not appear for every country. An appendix provides a select bibliography of Eastern libraries, covering the period 1950-1970, and a second appendix reprints a survey of library service in Asia prepared for Unesco in 1967.

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