Book Reviews

Crust of the Earth. A symposium. Arie Poldervaart, Ed. (Geological Society of America Special Paper 62) Geological Soc. of America, New York, 1955. viii + 762 pp. Illus. $6.50.

In October 1954 the department of geology of Columbia University had a symposium on "The crust of the earth" to mark Columbia's bicentenary. The Geological Society of America published the symposium this July just in time for the Geophysical Year. There are 44 papers dealing with the crust of the earth, and these papers are put into four parts: "Nature of the earth's crust," with 12 papers; "Recent deformation and sedimentation," with 9 papers; "Structural synthesis and petrogeneses," with 13 papers; and "Historical development of the earth's crust," with 10 papers. The authors were selected by a committee from geologists "still actively engaged in research on the particular subject allotted to them . . . who would be readily available." The selection has brought papers from widely scattered students, both in the United States and abroad, and from university, government, and industrial geologists.

Just what limits the crust of the earth is left to the authors. However, V. Meinesz suggests the Mohorovicic discontinuity be abbreviated to *M discontinuity,* and this abbreviation is used throughout. Walter Bucher would limit the term *crust* to a chemical-petrologic meaning and suggests the term *sterosphere* for that which lies above the *asthenosphere.*

In part I Ewing and Press lead off with the geophysical contrasts between continents and ocean basins and their paper is followed by other papers that consider the geology, seismism, physics, and chemistry. Part I closes with Ahrens' "Oldest rocks exposed." Part II considers deformation and sedimentation and necessarily deals with various geographic areas. The first four papers consider very large areas such as the Pacific Ocean; others discuss smaller areas such as the Tonga Trench. In part III a good many readers will be interested in H. H. Read's "Granite series in mobile belts"; as Read says, there are granites and granites. Part IV, dealing with the historical development, starts with R. C. Moore's consideration of invertebrates and the geologic time scale. Two other papers cover plants and vertebrates, and one deals with isotropic dating. Two discuss aspects of atmosphere and hydrosphere, and the last four consider the development from a nonlife angle.

This is a stimulating book. The various papers do not attempt to give the final answer to the material discussed; their purpose is to arouse interest and to show the extent of our current knowledge on the crust of the earth.

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Adrenal Cortex. Transactions of the fifth and final conference. Elaine P. Ralli, Ed. Josiah Macy, Jr., Foundation, New York, 1954. 187 pp. Illus. $3.75.

This volume records the transactions of the fifth and final Josiah Macy conference on the adrenal cortex. The subjects reported are "The salt and water factor of the adrenal cortex," by H. L. Mason; "The metabolism of adrenal steroids," by R. I. Dorfman, and "ACTH—a single substance or a mixture of hormones," by F. G. Young.

Mason outlines some aspects of his studies that contributed to the isolation of the adrenal steroid that has since been identified by Reichstein and his associates as 11β,21-dihydroxy-3,20-diketo-4-pregnene-18-al, and has been termed *aldosterone.* The ability of aldosterone to promote sodium retention is approximately 100 times that of desoxycorticosterone.

Dorfman points out that the steroid hormones possessing biological activity contain in ring A, an α, β-unsaturated ketone. A characteristic feature in the metabolism of these steroids is the reduction of the ketone group to a secondary alcohol and the saturation of the 4,5 double bond. He presents evidence indicating that the stereoisomeric form that results from the reduction of the double bond is influenced by the substituent groups at carbon atoms 11 and 17.

Young opens his remarks with a brief summary of the data published by contemporary workers that suggest that ACTH may be two or more substances. Experimental results obtained in his own laboratory indicate that one adrenocorticotrophic substance is effective in reducing the ascorbic acid content of the adrenal glands, while another is predominantly active in increasing the weights of these organs. The presentation and discussion advance our knowledge of this interesting problem, but the central question remains unanswered. The physiological response to exogenous ACTH is modified by the rate at which it is absorbed from the injection site. C. H. Li points out that ACTH administered in saline may have little effect on adrenal gland weights but that the same material administered in beeswax-peanut oil produces a marked increase in the weights of adrenals. In view of these findings the possibility remains that the procedures to which ACTH is subjected do not fractionate it but change its physical characteristics and thus alter its rate of absorption and the physiological response.

This volume contains very little material that is of direct interest to the clinician. The speculations and suggestions arising during the discussions are provocative and should prove stimulating to those who are interested in the fundamental aspects of the biochemistry and physiology of the adrenal gland.

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Industrial Inorganic Analysis. Roland S. Young. Wiley, New York; Chapman and Hall, London, 1953. vi + 368 pp. 36s.

The author, who is employed by International Nickel Company of Canada, Ltd., New York, has collected a series of his notes on industrial analytic procedures related to 43 elements, many of them the so-called "less familiar" elements, such as beryllium, fluorine, molybdenum, niobium, tantalum, platinum metals, selenium, tellurium, thorium, titanium, tungsten, uranium, vanadium, and zirconium. In addition to these and some of the common elements, he has also included methods of analyzing for oxygen, nitrogen, and water. A section on gas analysis is placed in the last chapter on "Miscellaneous analyses and data." The book is concluded with a good list of reference books. There are adequate author and subject indexes.

The methods reported have been taken mostly from readily available journals and standard treatises. Some use has been made of company brochures like those of the Burrell Technical Supply