Previously, there has been more interest in the adenohypophysis, whose principles produce a variety of dramatic effects and whose deficiency syndrome leads to disability and even death. By contrast, the principles of the neurohypophysis have been considered of more pharmacological than physiological interest, with their deficiency resulting in little more than an inconvenient polyuria. It is becoming more and more apparent, however, that the neurohypophysis, by itself, plays a vital role in fluid and electrolyte balance and in certain aspects of reproductive physiology, and that, by exerting important controls over the adenohypophysis, it is intimately concerned with many of the latter's functions as well. In the introduction to this symposium, by Henry Dale, we are reminded that, recent as much of the interest in the neurohypophysis may seem, historically it was one of the first structures that was ever demonstrated to contain a potent hormone, and that among the very first successful applications of hormone replacement therapy was the use of posterior pituitary powder in the treatment of diabetes insipidus.

The participants in the symposium constitute a distinguished group of investigators—anatomists, biochemists, physiologists, and pharmacologists—gathered together from widespread portions of the globe. The subjects covered at the meetings included the phenomenon of neurosecretion (Bargmann, Hanström); chemistry of the hormones and related substances (Acher and Fromageot, Croxatto); the problems of hormone storage, liberation, destruction, and urinary excretion (van Dyke, Adamsons, and Engel; Heller; Noble); physiological control over hormone release (Ginsburg and Brown, Andersson); pharmacological stimulation (Walker); and, finally, the action of the hormones on such target organs as the kidney (Brooks and Pickford; Sawyer; Wirz), mammary gland (Cowie and Folley), uterus (Fitzpatrick), and adrenals (Gaunt, Lloyd, and Chart; Jones). Every paper is followed by a transcript of the discussion, and many of the participants in the symposium who did not actually deliver papers are heard from in this manner.

As can be seen, these contributions are no miscellaneous collection but comprise an orderly and thorough coverage of the subject, ranging from the most recent theories on the site of formation of the posterior pituitary hormones to observations concerning their ultimate action on various target organs. Each paper includes a pertinent review of the subject, followed by the more recent work of the investigator, so that, in its entirety, this book offers a complete view of research on the neurohypophysis at a rather advanced level. References are well documented, both in papers and discussion. The material has been carefully edited by H. Heller, and the resulting volume has been attractively published and bound. It furnishes a great deal of useful information, much of it new, and at the same time leaves the reader with a keen appreciation of the considerable gaps in present knowledge and the formidable difficulties still to be overcome in this field.

Although the book is quite comprehensive, one might have wished for some coverage of the histochemistry and electron microscopy of the neurohypophysis and for more attention to its possible hormones other than vasopressin and oxytocin, such as that which induces the anterior pituitary to release adrenocorticotropic hormone. In general, this book can be strongly recommended to research workers in physiology or endocrinology, where it will serve as an important reference work for some time to come.

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Technique of Organic Chemistry. vol. X, *Fundamentals of Chromatography.* Harold G. Cassidy. Interscience, New York, 1957. xvii + 447 pp. Illus. $9.75.

The staggering amount of published literature in the field of chromatography makes it unlikely that a single author could do justice to all the various aspects of the subject in a 447-page volume. Cassidy has therefore wisely restricted himself to the principles of the method. This book is not a revision of the author's earlier work, *Adsorption and Chromatography* (volume V in the same series), but a new book.

Starting with a definition of chromatography, the author gives a few examples of chromatographic methods and then discusses the molecular interactions on which the separations are based. This discussion is very brief and should be supplemented by readings from chapters I to V of *Adsorption and Chromatography*. The general theory is then very lucidly explained by the author, who uses the approach from cascade-type distribution, which in my experience is most readily understood by beginning students. This is followed by some details of gas-liquid and liquid-liquid (column and paper) partition chromatography, adsorption and ion-exchange chromatography, and some technical suggestions. The book contains a number of valuable tables of adsorbents, filter papers, and ion exchangers and 1042 references. There is also an appendix of (almost exclusively) American and British supply houses.

The author will undoubtedly succeed in giving the novice an introduction to the principles of chromatography. However, compared with other available books on this subject, the book will be of little value to either the uninitiated who is looking for a definite solution to a separation problem or to the specialist who needs a good bibliography. The illustrations of apparatus are outmoded and inadequate, and the choice of sample techniques and references is inept. Thus, no mention is made, for example, of the English translation of Cramer's book on *Paper Chromatography* or of Trapnell's treatise on *Chemisorption,* and we find only five references to general quantitative methods, one of which is to the *Manual of Paper Chromatography and Paper Electrophoresis* by Block, Durrum, and Zweig, and two to unpublished work of Shapiro and Dowmont. The author devotes a whole chapter to his own work on redox resins, although they have not yet been shown to be applicable to chromatographic separations, but chelating resins are omitted from the text.

Cassidy defines chromatography as "a separation process applicable to essentially molecular mixtures, which relies on distribution of the mixture between an essentially two-dimensional, or thin, phase and one or more bulk phases, which are brought into contact in a differential countercurrent manner." This definition, contrary to that of Strain, includes the relatively uninteresting foam and emulsion fractionation, to which he devotes an entire chapter, but excludes electrochromatography, which is of great importance to biological chemists. The author apparently realizes the dilemma created by his definition when he puts quotation marks on the "surface" of ion exchangers (page 15). The adsorption chromatography of gases is not discussed at all. Chromatostrip and chromatobar are classed with column or paper partition, although they depend on adsorption.

In spite of the limitations of this book, I feel that it will be a valuable aid in the orientation of newcomers to chromatographic methods.

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Man into Space. New projects for rocket and space travel. Hermann Oberth. Translated from the German by G. P. H. De Freville. Harper, New York, 1957. xiv + 232 pp. Illus. $4.50.

Hermann Oberth may be considered the Charles Darwin of rocketry. His first book, in 1923, clearly forecast many of our modern developments, and *Man into Space* starts from today and goes into