a century would permit. We are entering a period in which the experimental investigations of geneticists, cytologists, and biochemists are coming to have more and more bearing upon classification, and it will soon be impossible for one botanist to have critical firsthand knowledge of so large a flora as Fernald had. His book will be a lasting landmark in the botanical history of our region, and it is a source of deep satisfaction to his devoted botanical following that he lived to see it in print.

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Biological Actions of Sex Hormones. Rev. 2nd ed. Harold Burrows. New York: Cambridge Univ. Press, 1949. 615 pp. $8.50.

The rapid and continuous progress made by investigators in endocrinology has caused many books in this field to become out-of-date shortly after publication. Consequently, prompt revision is not only an ideal goal but a definite necessity. The second edition of *Biological Actions of Sex Hormones* has been revised and enlarged by approximately 100 pages since it first appeared in 1945. Thus, within a matter of four years the advances in our knowledge of sex hormones has led Burrows to expand his book by approximately 20 per cent.

As with the first edition, this volume includes an excellent bibliography, which has been enlarged to 3,000 references. This alone would make the book a "must" for students of the sex hormones. Dr. Burrows has retained the general form and organization of the first volume. The book is divided into six parts, each part containing one to ten chapters. In Part I the author discusses the gonadotrophins, their action, factors influencing their release, etc. In Part II a general consideration of the gonadal hormones is given as an introduction to the main portion of the text. The remaining sections are devoted to consideration of the sex steroids and their actions. The book is well written, reads smoothly, and the text is generously interspersed with tables, which add greatly to its value. There is, however, little attempt at interpretation and correlation of the facts, and a critical evaluation of the reported data would greatly enhance the book's value.

Reference to relaxin is included for the first time, but it is to be regretted that its role as a possible hormone of pregnancy (at least in some species, such as the guinea pig and mouse) was not stressed. Nomenclature is always a sensitive item with scientists, and the coining of new words is to be lamented when others are in universal usage. The use of FRH for FSH merely clutters up the field. A number of minor errors of commission and omission are to be found, but they are amazingly few. For example, the author fails to point out that adrenal hypertrophy does not always occur after estrogen treatment but seems to be dependent on the age of the animal. More space could be given to vitamin-hormone relationship, especially the role of folic acid.

A major criticism of this volume is the failure of the author to summarize the available data into working hypotheses for such phenomena as menstruation, estrous cycle, ovulation, pregnancy, lactation, etc. Thus, the subject of the interaction of all the hormones in the physiology of reproduction is not treated as such. In spite of this major criticism the second edition of *Biological Actions of Sex Hormones* is well on its way to becoming a standard reference book for students and investigators of the physiology of the sex hormones. It contains a wealth of well-annotated experimental data and it should be of great value to all students beginning their investigations on the sex steroids. It is to be hoped that the author will see fit to revise his book often. Failure to revise Allen's *Sex and Internal Secretions* since 1939 has made Burrows' book one of the major up-to-date works in this field.

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