

---

### The Culture of Plant Tissues

Literature pertinent to plant tissue culture dates back for about a century, with the major progress having been made since 1930. The interest in this field has developed to the point that a methods book on the subject is needed. This has appeared in the form of "A Handbook of Plant Tissue Culture." A skilled technician in this field and one who has played a leading part in the development of this branch of plant science, Dr. Philip R. White, has prepared a guide which meets the needs felt by many students of experimental morphology and physiology. The philosophical and historical background is covered in the first two chapters. The third chapter deals with materials which may be successfully cultured. In a succeeding chapter detailed description is given of a suitable laboratory for such work. Equipment is discussed with suggestions for successful manipulation. Other chapters deal with the preparation of cultures, point out merits and demerits of various techniques. The preparation of appropriate synthetic nutrient media is clearly presented. Suggestions for growth measurements and their interpretation are presented in Chapter VIII. The last two chapters, IX and X, deal with the significance of plant tissue culture in relation to general physiology and to morphogenesis in plants. These two chapters are likely to encourage new students in the field.

An excellent bibliography containing 457 citations will be valued by all interested persons. A detailed index of subject matter is included. This book will serve as an efficient guide for all who are interested in the subject.—*G. W. B.*

**A Handbook of Plant Tissue Culture**, by Philip R. White. Pp. xiv+277; 71 illustrations. The Jaques Cattell Press, Lancaster, Pa. 1943. \$3.75.

---

### Biochemistry and Morphogenesis

New scientific books are continually being produced. Only rarely, however, does one of the calibre of Needham's *Biochemistry and Morphogenesis* make its appearance. It is a veritable encyclopedia of present day knowledge concerning biochemistry in relation to embryology. Some idea of the scope of the book may be gained from the observation that the bibliography covers 70 pages, and that data from over 600 scientific periodicals are cited. The book is composed of three parts. Part I, *The Morphogenetic Substratum*, is concerned with the chemical raw material of development, and the information gleaned from embryology relative to nutritional problems. Part II, *The Morphogenetic Stimuli*, discusses the roles of evocators and primary and second grade organizers in various animal groups. Sixty-five pages are devoted to genes and organizer phenomena. Part III, *The Morphogenetic Mechanisms*, gives comprehensive discussions of dissociability, heteraupesis, respiration, metabolism and polarity. Indices of plants, animals and genes mentioned are included. This book should prove to be an indispensable reference for up-to-date biologists.—*D. C. Rife.*

**Biochemistry and Morphogenesis**, by Joseph Needham. 800 pages, 328 illustrations, including 35 full page plates (4 in color). The Macmillan Company, Cambridge University Press Department, New York. 1942. \$12.50.