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Book Notices

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Despite all we know about it, mitosis is still a problem. Schrader makes this completely clear. He also creates interest in what usually is a boring description of what we do know by writing it in the form of a debate.

There are new materials and data in this second edition. I found 38 literature citations for 1951 and later years in a quick glance through the extensive bibliography. We now know that there really are fibers in spindles and this debate is satisfyingly settled. However, we now question seriously the once accepted concept that a chiasma is always evidence of an exchange of segments between pairing chromosomes and a new debate is underway. There are 3 new sections on Prophase movements, Metaphase mechanics, and Chromosome chemistry. There are 49 more pages. About one-third of this increase is due to use of a larger type face. (More publishers should do this.) The excellent and unique review of some 10 hypotheses of the causes of mitosis is still included. In the 7 years that the first edition was used as a co-textbook in one of my cytogenetics courses, I found it more stimulative of student thinking than any textbook I use in any other course. I shall certainly use this second edition for some years to come.

ELTON F. PADDock.


This book has a "message." It is particularly appropriate to review it here because the message has been presented in the pages of this journal before as an Ohio Academy of Science Presidential Address (Lindsey, A. W., Vol. 48: 169-175, 1948). I happen to know that the message was also arrived at and appreciated even before 1948 in the minds of some other geneticists. But John Doe always shies away from application of genetics to human affairs. It is therefore, noteworthy that a non-geneticist has also arrived. What is the message?

Our biological constitutions are not equal despite the Declaration of Independence, therefore freedom up to the point of not jeopardizing the freedom of others is biologically necessary.

The facts and arguments leading to this conclusion are presented in most charming and interesting manner. But most readers will probably find the largest reward for their investment of reading time in the latter parts of the book where the implications for everyday living are fathomed. For example, the task of the educator becomes that of fitting, rather than molding children into the social order. The children must be encouraged to develop their outstanding abilities and taught to expect others to be different from themselves. There will always be a statistical norm which is actually like nobody. Everybody should try to be different from it in some respect that is acceptable to society.

A task that befalls each of us is that of trying to understand the other fellow. This is different from becoming angry with and hating him, or from snobbishly dismissing him as "dumb." If the understanding is gained, the parties will be mutually better off. Such understanding will never be gained so long as we persist in the idea that all are created equal and that differences are all environmentally induced and therefore eradicable by education alone. To understand does not mean to agree. But when the cause of disagreement is understood, the possibilities of pleasant living together are greatly enhanced whether or not the disagreement persists.

In the case of differences having a predominantly genetic basis, in which something other than education will be required, we will never find the "cure" until the genetic basis is understood. It takes the truth to make us free. Read this book and you'll see!

ELTON F. PADDock.