Flora of Missouri. Julian A. Steyermark. 1725 pp. illus. Iowa State University Press, Ames, 1963. $18.50.

Reminiscent in format and size of Deam's *Flora of Indiana,* this 1725-page book is the *opus maximum* of one of the New World's most active and prolific botanists. The *Flora* is the result of 30 years of field and herbarium work on the Missouri flora and is witness to the uncommon devotion and dedication of Steyermark to his subject. The plants of Missouri must now rank as among the best known and documented of any state in the union. Yet, as the author points out, the need for floristic work in the state is by no means at an end (indeed, a "Supplement" in the work lists a number of species new to the state that were collected while the book was in press!). Future workers on the plants of Missouri will have a superlative guide indeed. Although floristic study has been carried out in the state for at least 15 decades, Steyermark's book is the state's first published flora. However, Missouri has not been without identification aids for its plants. These are included in the ranges of *Gray's Manual* (since the 6th edition) and of the Britton and Brown *Illustrated Flora.* Steyermark's publications on Missouri plants are many. Special mention should be made of his *An Annotated Catalogue of the Flowering Plants of Missouri* (1935), co-authored with E. J. Palmer, and his *Spring Flora of Missouri* (1940). He has explored intensively every county of the state and has to his credit about 60,000 numbered collections of Missouri plants. Certainly no book was ever written by an author more qualified to write it.

The introduction includes a historical sketch of floristic work in Missouri and a discussion of variation and subdivision of species. Then follow a summary of Missouri vegetation, an impressive list of species "whose known distribution approaches reasonably close to the borders of Missouri, and thereby suggests a possible clue to their further extension into Missouri," a "Finding County Map of Missouri," a general key (mainly to families), which occupies 50 pages, and a list of "champion trees" of Missouri. Keys are given, in the main part of the work, to genera, species, and sub-specific taxa; all the keys clearly reflect Steyermark's intimate knowledge of his plants and appear to be thoroughly workable. Habitat and other ecological notes, information on the cultivation of the various species (the author's wildflower preserve in Illinois is one of the finest botanical collections in the mid-west), remarks on uses, discussions of taxonomic problems—these and other pertinent data are liberally presented. The known range of specific and sub-specific taxa in Missouri is given on county distribution maps. No descriptions of any taxa are given (although the various key leads are in many instances so detailed as to constitute a passable substitute for descriptions). In 390 plates, many species are adequately illustrated by line drawings. Steyermark has apparently not taken anyone else's word as final on any taxonomic problem (after all, he *is* from Missouri!) but has made his own decisions on these problems. The taxa that he recognizes —or does not recognize—are those that *he* feels are worthy of recognition—or are not worthy thereof. As a result, many parts of the *Flora* differ from—and are on surer ground than—the corresponding parts of other floristic works usable in Missouri. The *Flora* concludes with a glossary, a tabular list of families, and an index to common and scientific names. The book is printed on quality paper and is sturdily and attractively bound. Latin names are in boldface type, a helpful feature.

A reviewer can, of course, always find fault with a book if he is so inclined; there *are* faults in Steyermark's book. But to mention these seems picayune in the face of such an achievement as the *Flora of Missouri.* Few botanists could have written such a book; many botanists—now and later, and not only in Missouri—will profit from it. Julian Steyermark is to be congratulated and thanked for his *Flora,* a high point in North American botany.

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Poisonous Plants of the United States and Canada. John M. Kingsbury. 626 pp. Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1964. $13.00.

There has been increasing interest in and concern over the poisonous components of

our floras, especially those of the heavily populated areas of the world. This is true not only in respect to those plants poisonous to man but to an even greater extent to those that may cause costly loss to the livestock industry. We have had available several books on the poisonous plants of North America or parts of it, but the two best known (Pammel and Muenscher) have been oriented almost completely from the taxonomic viewpoint. Their rapid and easy use has, consequently, often been limited. Kingsbury's book is entirely new in concept and presentation. Although as Associate Professor of Botany, New York State College of Agriculture, and Lecturer in Poisonous Plants, New York State Veterinary College, he has, in a way, taken the place of the late Professor W. C. Muenscher, his book is by no means a revision of Muenscher's *Poisonous Plants of Eastern North America*. In fact, Kingsbury's book, while retaining an easy utility to the botanically oriented investigator, is organized primarily from the physiological point of view, as indeed one might expect a treatise of such physiologically active plants to be organized. We may, therefore, say that it purposely is aimed at a larger audience than is often the case. Both man and his domestic animals are given equal attention in discussing the poisoning of specific plants; this alone is something of an innovation in books of this type.

A rapid scanning of the book will show that it is tailor-made for teaching. Consequently, the contents are closely circumscribed. The book could easily be much more extensive and inclusive (and reviews probably will criticize it for this presumed shortcoming), but its purpose was not to be all-inclusive. Nonetheless, I believe that the publisher's flyer described it properly in saying: "Right at your fingertips—a one-volume built-in encyclopedic reference to the toxicity of over 700 species . . ."

The contents include botanical descriptions habitats and distribution of the plants, poisonous principles, toxicity, symptoms, lesions, and conditions of poisoning. An introduction traces the history of the subject in the United States and Canada. This is followed by an especially useful chapter on "Poisonous Principles in Plants." The 700-odd species are then discussed in systematic order, from the Algae through the Angiospermae. A special chapter treats grass tetany. In many real ways, the most valuable part of the book to specialists and students alike may be the extraordinary bibliography of 1715 items, each one carefully culled for its appropriateness and pertinency. Most of the illustrations are simple and clear line drawings of the plants, but there are a few interesting and superbly reproduced color plates.

Prentice-Hall is to be congratulated on the format, paper, and binding. The editorial work has been carried out with great care, and it is gratifying to find so few typographical errors in such a technically complex and large volume. The price is most certainly modest for the type and quality of book represented. "Kingsbury" will become a by-word for poisonous plants of North America north of Mexico just as we have long understood what was meant when a colleague referred to "Muenscher." It is a book that is here to stay for a long while, and, further, it will undoubtedly greatly enhance teaching and research in this field of economic botany for many a year.

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The Practice of Silviculture. David Martyn Smith. 7th ed. 578 pp. illus. John Wiley and Sons, Inc., New York, 1962. $10.95.

Anything that has proved its continuing usefulness so convincingly as a book in its seventh edition needs little endorsement from a reviewer, however percipient. But it may be of interest to prospective readers to learn some of the reasons for the "long run" this book has enjoyed. Simply put, this is the best available book on the growing and tending of forest trees in North America. True, there are others that are more specific in their coverage and more profound in their treatment, and even some that are more readable, but there are few better. Any book that sets out to "describe all known techniques that seem applicable in any significant forest area of North America within the foreseeable future" has to be worth reading for the heroism and intellectual daring of the undertaking if for nothing else.