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Review of *Fire in North American Tallgrass Prairies*, Scott L. Collins and Linda L. Wallace, editors

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Fire in North American Tallgrass Prairies. Scott L. Collins and Linda L. Wallace, editors. Norman: University of Oklahoma Press, 1990. Bibliography and references. xii + 175 pp. $14.95 paperback (ISBN 0-8061-2281-1).

This book summarizes many of the modern studies on fire in the North American Great Plains, with special emphasis on the tallgrass areas. Grasslands, along with pine forests, have been the foci for much of the fire research on the North American continent. This volume summarizes a great deal of what is known about fire in tallgrass prairie and adjacent areas. It should be of interest to ecologists, systematists, agronomists, anthropologists, historians, and others whose research and teaching interests center on the prairie. There are ten chapters written by 22 authors. The book is well edited; transitions among chapters are smooth, and errors, inconsequential. The 16 page bibliography at the conclusion of the book is important to scholars. Although the title suggests the book deals only with tallgrass, references contain information about many other grasslands as well.

The first two chapters serve as an introduction to prairie fires. S. L. Collins reviews fire work in the region and defines fire as a natural disturbance. R. C. Anderson briefly discusses the origin and geologic history of the Great Plains. He enumerates the biotic and abiotic factors that were most important to the development of the regional flora including climate, topography, periodic drought, grazing, and fire. T. J. Svejcar discusses the fire responses of the dominant plant species of the tallgrass prairie, big bluestem (*Andropogon gerardii*: *Poaceae*). D. C. Glenn-Lewin and five co-authors describe the features of sexual and asexual reproduction in tallgrass plants, and document how reproductive patterns in different species vary in response to fire. This chapter alone made the book's purchase essential to me.

D. W. Kaufman and his co-authors summarize studies of fire responses in small mammals. These studies, carried out at Kansas State University's Konza Prairie, are the most thorough extant. The effects of fire on plant community structure are treated by S. L. Collins and D. J. Gibson. Patchiness in what appears at first glance to be a uniform environment is enhanced through the direct effects of fire and its interaction with other small and large scale environmental disturbances in grasslands. T. R. Seastadt and R. A. Ramundo show that our ignorance below ground ecological processes is diminishing through experimental studies on relictual, preserved, and restored prairies. The power of small and large scale modelling for grassland structure and function is discussed well by D. S. Ojima et al. and P. G. Risser. In her epilogue, L. L. Wallace shows how hare we have come in the short history of research in fire

ecology and, probably more importantly, how far we need to go.

These authors, most of whom live and work on the prairie, have produced a book that is both easy to read and useful. It summarizes a large body of knowledge about fire in the Great Plains for the first time. For these reasons and the economical price, I recommend that all students of grasslands purchase this book. **Jane H. Bock,** *Department of E.P.O. Biology, University of Colorado, Boulder.*