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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 far 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.*

Transportation Service to Small Rural Communities: Effects of Deregulation. John F. Due, Benjamin J. Allen, Mary R. Kihl, and Michael R. Crumm. Ames, IA: Iowa State University Press, 1990. viii + 223 pp. Tables and references. \$29.95 cloth (ISBN 0-8138-0315-3).

This excellent book deals with transportation service interaction between carriers (providers of rail, truck, bus, and airplane service) and the users of those services in low traffic density markets. The book educates the reader rather than attempting to persuade the reader to a point of view. It deals largely with changes occurring in transport regulation and technology in the decade of the 1980s and their impacts on services to smaller communities.

Following the introduction the authors devote a chapter to each of the four indicated transport systems. In each chapter, a historical perspective of the role of the particular mode of transportation is presented, followed by discussion of government activity (regulation or promotion) designed to improve its function, availability, and economic visibility. The concluding chapter deals with strategies for adequate transportation service to small communities. The discussion deals with policies affecting carrier supply of services of various types.

The impacts of policies concerning public investment in transportation infrastructure are generally not dealt with directly. For example, the impact of the 42,500-mile interstate highway system is recognized as having reduced the cost (presumably to the shipper) of the abandonment of rail branch lines, but is not evaluated in any detail.

Substantial rail branch line abandonment occurred in the decade of the 1980s. The authors consider at some length the conditions leading to abandonment, the procedures for review of abandonment proposals, and options that shippers may consider following branch line abandonment. Trucks, busses, and private automobiles now provide many of the services once provided by railroads. However, communities that depend upon inbound our outbound shipments of grain, minerals, or lumber may be