

# TALLGRASS

O N T A R I O

Ontario Tallgrass Prairie and Savanna Association

## PRINCIPLE #6

FOR THE MANAGEMENT OF TALLGRASS PRAIRIE AND SAVANNAH FRAGMENTS IN SOUTHERN ONTARIO

Tallgrass Ontario (TGO) has created a series of six principles to offer support to the landowner in southern Ontario who wishes to maintain and enhance their tallgrass habitat, and are derived from the experiences of tallgrass habitat managers from across the eastern portion of North America. These principles apply to all the various tallgrass habitats in southern Ontario including prairies, savannahs, woodlands, and most types of alvars. More information on what, exactly, constitutes tallgrass habitats is provided on the TGO website. In addition, please refer to the Further Readings section appended to these principles.

Landowners are excellent caretakers and stewards of our natural environments. The day-to-day observations of landowners are one of the most important ways that our knowledge of how to successfully manage habitats will increase.

**Tallgrass Ontario**  
[www.tallgrassontario.org](http://www.tallgrassontario.org)  
[info@tallgrassontario.org](mailto:info@tallgrassontario.org)



© 1986 Panda Symbol WWF  
© WWF Registered Trademark



Environment  
Canada

Environnement  
Canada

*all line drawings by Judie Shore*

## KNOW YOUR HABITAT AND KEEP RECORDS



south of the border, and virtually all the principles presented here have their roots in that work. What is an issue, however, is that our tallgrass is quite probably different than the tallgrass found further south because of ecology. The tallgrass habitats here are at the extreme northern edge of the natural range, and we know from ecological studies that this position produces marked changes in habitats and species. So, we need to be careful in how we apply the lessons learned further south. In an attempt to produce reliable information, the principles here were created after a two year study of all the remaining tallgrass habitat in Ontario, which, among other issues, evaluated the health of these remaining fragments as a function of the type of management (or lack thereof) that they have received.

Yet, we need to keep gathering information and keep track of the impacts of our work. Too often, we find well meaning people applying active management to their tallgrass fragments without keeping track of the impacts of these actions. What makes this an issue is that some of the impacts of these management actions won't surface for years, but then will have ramification for decades. So, our first, over-riding and most important principle is to visit your habitat often, take the time to learn the plants and animals, keep track of the abiotic processes like precipitation and erosion, and keep notes.

There has been very little detailed, long-term, or rigorous work done on the management of tallgrass habitats in Ontario or, indeed, anywhere in Canada. Fortunately for us, tallgrass enthusiasts and the various levels of government in the United States have been conducting studies and experiments for several decades now, and they have made their information freely available. On the one hand, this American work helps us: Most of what we know about tallgrass comes from

# FURTHER READING



- ALISON, R. M. (1976).** The History of the Wild Turkey in Ontario. *The Canadian Field Naturalist*, 90, 481-85.
- ANDERSEN, O. B., CROW, T. R., LIETZ, S. M., & STEARNS, F. (1996).** Transformation of a landscape in the upper mid-west, USA: The history of the lower St. Croix River valley, 1830 to present. *Landscape and Urban Planning*, 35, 247-67.
- BALL, P. W. (1981).** Hill's Oak (*Quercus ellipsoidalis*) in Southern Ontario. *The Canadian Field Naturalist*, 95(3), 281-86.
- BOLLINGER, E. K., BOLLINGER, P. B., & GAVIN, T. A. (1990).** Effects of Hay Cropping on the Eastern Populations of the Bobolink. *Wilderness Society Bulletin*, 18(2), 142-50.
- BRAY, J. R. (1960).** The Composition of Savanna Vegetation in Wisconsin. *Ecology*, 41(4), 721-32.
- CARPENTER, J. R. (1940).** The Grassland Biome. *Ecological Monographs*, 10(4), 617-84.
- CATLING, P. M., & CATLING, V. R. (1993).** Floristic Composition, Phytogeography and Relationships of Prairies, Savannas, and Sand Barrens Along the Trent River, Eastern Ontario. 1-53.
- CATLING, P. M., CATLING, V. R., & MCKAY-KUJA, S. M. (1986).** The Extent, Floristic Composition and Maintenance of the Rice Lake Plains, Ontario, Based on Historical Records. *The Canadian Field Naturalist*, 106(1), 73-86.
- COLLINS, S. L. (1987).** Interaction of Disturbances in Tallgrass Prairie: A Field Experiment. *Ecology*, 68(5), 1243-50.
- COLLINS, S. L., & ADAMS, D. E. (1983).** Succession in Grasslands: Thirty Two Years of Change in a Central Oklahoma Tallgrass Prairie. *Vegetation*, 51(12), 181-90.
- COUPLAND, R. T. (1950).** Ecology of Mixed Prairie in Canada. *Ecological Monographs*, 20, 271-315.
- DELANY, K., RODGER, L., WOODLIFFE, P. A., RHYNARD, G., & MORRIS, P. (2000).** Planting the Seed.
- DEPAUL, L., & KOPITZKE, D. (1998).** Incentives for Savanna Protection on Private Lands: Past Present and Future. *Transactions*, 87, 47-56.
- DYKSTERHUIS, E. J. (1957).** The Savannah Concept and Its Use. *Ecology*, 83(3), 435-42.
- FABER-LANGENDOEND, D., & MAYCOCK, P. F. (1983).** A Vegetation Analysis of Tallgrass Prairie in Southern Ontario. Thirteenth North American Prairie Conference, 17-32.
- FABER-LANGENDOEND, D., & MAYCOCK, P. F. (1987).** Composition and Soil - Environment Analysis of Prairies on Walpole Island, Southwestern Ontario. *Canadian Journal of Botany*, 65, 2410-19.
- GIBSON, D. J. (1988).** Regeneration and Fluctuation of Tallgrass Prairie Vegetation in Response to Burning Frequency. *Bulletin of Torrey Botanical Club*, 18(1), 1-12.
- GOODBAN, A. G., BAKOWSKY, W. D., & BRICKER, B. D. (1988).** The Historical and Present Extent and Floristic Composition of Prairie and Savanna Vegetation in the Vicinity of Hamilton, Ontario. Fifteenth North American Prairie Conference, 87-103.
- HANNON, S. J., COTTERILL, S. E., & SCHMIEGELOW, F. K. A. (2004).** Identifying Rare Species of Songbirds in Managed Forests: Application of an Ecoregional Template to a Boreal Mixed Wood System. *Forest Ecology and Management*, 191, 157-70.
- HERKERT, J. R. (1997).** Bobolink *Dolichonyx oryzivorus* Population Decline in Agricultural Landscapes in the Midwestern USA. *Biological Conservation*, 80, 107-12.
- HIGGINS, K. F. (1984).** Lightning Fires in North Dakota Grasslands and in Pine Savanna Lands of South Dakota and Montana. *Journal of Range Management*, 32(2), 100-03.
- HOWE, H. F. (1994).** Managing Species Diversity in Tallgrass Prairie: Assumptions and Implications. *Conservation Biology*, 8(3), 691-704.
- JACKSON, M., & COWELL, C. M. (2002).** Vegetation Change in a Rainforest Remnant at the Eastern Presettlement Prairie Margin, U.S.A. *Natural Areas Journal*, 22(1), 53-60.
- LEACH, M. K., & GIVNIGH, T. J. (1999).** Gradients in the Composition, Structure, and Diversity of Remnant Oak Savannas in South Wisconsin. *Ecological Monographs*, 69(3), 353-74.
- LEE, J. T., WOODY, S. J., & THOMPSON, S. (2001).** Targeting Sites for Conservation: Using a Patch-Based Ranking Scheme to Assess Conservation Potential. *Journal of Environmental Management*, 61, 367-80.
- LOOMIS, R. S. (1984).** Traditional Agriculture in America. *Annual Review of Ecology and Systematics*, 15, 449-78.
- LUMSDEN, H. G. (1966).** The Prairie Chicken in Southern Ontario. *The Canadian Field-Naturalist*, 80, 33-45.
- MACDOUGALL, A. S., BECKWITH, B. R., & MASLOVAT, C. Y. (2004).** Defending Conservation Strategies with Historical Perspectives: A Case Study From a Degraded Oak Grassland System. *Conservation Biology*, 18(2), 455-65.
- MAYCOCK, P. F. (1963).** The Phytosociology of the Deciduous Forest of Extreme Southern Ontario. *Canadian Journal of Botany*, 41, 379-438.
- MCCUNE, B., & COTTAM, G. (1985).** The Successional Status of a Southern Wisconsin Oak Woods. *Ecology*, 66(4), 1270-78.
- MORSINK, W. A. G. (1984).** Deciduous Forest Mapping Units and Major Tree Lists for the Essex, Kent, and Lambton Tri-County Area of Southwestern Ontario. *Ontario Field Biology*, 38, 17-29.
- PACKARD, S. (1988).** Just a Few Oddball Species: Restoration and the Rediscovery of the Tallgrass Savanna. *Restoration and Management*, 6, 13-22.
- PLUMB, G. E., DODD, JERROLD L. (1993).** Foraging Ecology of Bison and Cattle on a Mixed Prairie: Implications for Natural Area Management. *Ecological Applications*, 3(4), 631-43.
- PYNE, S. J. (1983).** Indian Fires. *Natural History*, 2(83), 6-11.
- REZNICEK, A. A. (1983).** Association of Relict Prairie Flora with Indian Trails in Central Ontario. Eighth North American Prairie Conference, 33-39.
- REZNICEK, A. A., & MAYCOCK, P. F. (1983).** Composition of an Isolated Prairie in Central Ontario. *Canadian Journal of Botany*, 61, 3107-16.
- ROBERTS, T. M., ROBSON, T., & CATLING, P. M. (1977).** Factors Maintaining a Disjunct Community of *Lairis specata* and Other Prairie Species in Ontario, Canada. *Canadian Journal of Botany*, 55, 593-605.
- ROBERTSON, H. (1993).** Between the Banks and the Blue Sky. *Equinox*, 47-57. Robertson, K. R., Anderson, R. C., & Schwartz, M. W. (1997). The Tallgrass Prairie Mosaic (pp. xvi, 436 p). New York: Chapman & Hall.
- ROGERS, C. M. (1966).** A Wet Prairie Community from Windsor, Ontario. *Canadian Field Naturalist*, 80, 195-99.
- SKARPE, C. (1991).** Spatial Patterns and Dynamics of Woody Vegetation in an Arid Savanna. *Journal of Vegetation Science*, 2, 565-72.
- GOVERNMENT OF ONTARIO. (1998).** Prescribed Burns For Tallgrass Prairie and Savannas in Southern Ontario. Ontario Ministry of Natural Resources
- TESTER, J. R., MARSHALL, WILLIAM H. (1961).** A Study of Certain Plant and Animal Interrelations on a Native Prairie in Northwestern Minnesota. *Occasional Papers*, 8, 1-51.
- TRANSEAU, E. N. (1935).** The Prairie Peninsula. *Ecology*, 16(3), 423-37.
- VAN DER HEIJDEN, M. G. A. (2004).** Arbuscular mycorrhizal Fungi as Support Systems for Seedling Establishment in Grasslands. *Ecology Letters*, 7, 293-303.
- VINTON, M. A., HARTNETT, D. C., FINCK, E. J., & BRIGGS, J. M. (1993).** Interactive Effects of Fire, Bison (*Bison bison*) Grazing and Plant Community Composition in Tallgrass Prairie. *The American Midland Naturalist*, 129, 10-18.
- VOGL, R. J. (1964).** Vegetational History of Crex Meadows, A Prairie Savanna in Northwestern Wisconsin. *American Midland Naturalist*, 72(1), 157-75.
- WALK, J., & WARNER, R. E. (2000).** Grassland Management for the Conservation of Songbirds in the Midwestern USA. *Biological Conservation*, 94, 165-72.
- WALLACH, B. (1985).** The Return of the Prairie. *Landscape*, 28(3), 1-5.
- WARMAN, L., SINCLAIR, ANTHONY. (2000).** A Systematic Method for Identifying Priority Conservation Areas Using Wildlife Habitat Relationships and Observed Locations of Rare Species. *Proceedings*, 141-44.
- WOOD, J. D. (1961).** The Woodland-Oak Plains Transition Zone in the Settlement of Western Upper Canada. *Canadian Geographer*, 1, 43-47.