

**PRAIRIE PERSPECTIVES:
GEOGRAPHICAL ESSAYS**

Edited by
Bram F. Noble
Diane J.F. Martz
Alec E. Aitken

Department of Geography
University of Saskatchewan
Saskatoon, Saskatchewan
Canada

Volume 8, October 2005

©Copyright 2005, University of Saskatchewan
Department of Geography

Printed by
University of Winnipeg
Printing Services

ISBN 0-9694203-9-0

Table of Contents

Preface	v
Evaluation of photosynthesis rates of introduced and native species in a mixed grassland ecosystem S. Black, X. Guo, C. Zhang	1
Monitoring grassland health with remote sensing approaches X. Guo, C. Zhang, J. Wilmshurst, R. Sissons	11
The evaluation of broadband vegetation indices on monitoring northern mixed grassland C. Zhang	23
Bird populations and remote sensing X. Guo, C. Zhang, R. Sissons, J. Wilmshurst	37
Impact of climate change with enhanced UV-B radiation on China's agricultural NPP Y. He, X. Guo, Y. Zheng	50
Circuit-riding students and professors: higher education in the U.S. military T.A. Radenbaugh, S.J. Morse	61
An exploration of recreation and tourism in Brandon, Manitoba K.L. Mosset, J.C. Everitt, C.D. Malcolm	74
Healthy places? Service provision for seniors in small towns on the Prairies J.C. Everitt, M. Kolba, M. Rosenberg	93
The plebiscites of Regina's 1985 civic Election B.D. Thraves	108

Preface

The 28th annual meeting of the Prairie Division of the Canadian Association of Geographers was held October 1st to 3rd at St. Peter's College, Muenster. Hosted by the University of Saskatchewan's Department of Geography, the conference attracted more than 100 delegates representing a broad range of research interests in physical, environmental, and human geography. Thirty-six papers and 17 posters were presented by more than 80 authors from the Prairie Provinces, Ontario, British Columbia, Arizona, Massachusetts, North Dakota, and Nanjing. Amongst the attendees were Jamie Hogan, the 2004 RCGS award winner, and Dr. Evelyn Peters, Canada Research Chair in Aboriginal Identity and Diversity, the conference's keynote speaker. Member departments were well represented and, consistent with the friendly atmosphere of the Prairie meetings, many graduate students from the member Universities presented their research.

The 2004 PCAG Fieldtrip was organized by the Centre for Rural Studies and Enrichment at St. Peter's College. The fieldtrip started at St. Peter's Abbey, the Benedictine Monastery established more than 100 years ago as the spiritual centre of St. Peter's Colony. The Colony itself was settled by German Catholics who came from Minnesota, recruited by the Catholic Settlement Society and the German Land Company. The tour passed through several towns that were founded as the Colony grew, many of which are readily identifiable by their German names such as Humboldt and Muenster. The tour then headed west to St. Denis where participants met with Dr. Garth VanderKamp of the National Water Research Institute. Dr. VanderKamp led the group to a number of sites where researchers are examining carbon sequestration in small wetlands under various management options; tree invasion and its effect on slough water balance; nitrous oxide emissions from cultivated land; and the effects of land-use change on soil moisture and slough hydrology. Following the fieldtrip the group returned to St. Peter's College where conference came to a close with an excellent prairie fall supper and the obligatory PCAG slide competition.

Of the 53 conference presentations, eight papers are included in this year's volume of *Prairie Perspectives* - plus an additional paper that, due to an unfortunate oversight, was omitted from last year's volume. All papers submitted to *Prairie Perspectives* are subject to a double-blind peer review process. For each paper we were able to solicit reviews from

leading researchers at universities across Canada. We are pleased to present a collection of papers that demonstrate research of high quality.

The first grouping of papers focuses on Canada's Prairie grassland ecosystems. Black et al. address the relationship between photosynthesis rates, soil moisture, and local bio-geographic variables affecting grassland photosynthesis in Grasslands National Park. This is tied to Guo et al.'s analysis of remote sensing techniques for monitoring grassland health, and Zhang's assessment of broadband vegetation indices to monitor biophysical attributes of the northern mixed grassland. The focus on Canada's Prairie grassland ecosystem is concluded with a paper by Guo et al. that examines the feasibility of remote sensing techniques for predicting breeding bird populations using vegetation indices and spectral reflectance relationships.

The second group of papers takes us out of country to address issues in environmental and human geography. The paper by He et al. investigates the influence of climate change, namely UV-B radiation, on agricultural net primary productivity in China. The second paper examines the 'virtual university' and the quality and structure of higher education in the United States' military system.

The final group of papers reflects the work of human geographers on the Canadian Prairies. The first paper, by Mosset et al., presents the results of a study of the recreation and tourism behaviour of a sample of residents in Brandon, Manitoba, suggesting that recreational facilities and programmes need to take account of the spatial variations in recreational behaviour. Everitt et al. turn their attention to health care and the geographic effects of place and scale upon provision of health care services for seniors with hopes to help to explain how and why communities are aging differently. The final paper, by Thraves, discusses the unusual circumstances of three plebiscites of the 1985 and 1988 Regina civic elections, the voting patterns that characterized Regina's inner city and suburban areas, and the longer-term outcomes of the plebiscites.

We would like to thank all conference participants and the countless number of individuals who helped organize the 2004 meeting of the PCAG at Muenster, Saskatchewan. We would also like to thank the authors for their contribution to *Prairie Perspectives*, and the manuscript reviewers for their valuable service to the PCAG. Finally, we are grateful to Weldon Hiebert, University of Winnipeg, who once again managed the layout and production of the journal.

Bram F. Noble
Diane J.F. Martz
Alec E. Aitken

