

# CURRICULUM VITAE – OCTOBER 2019

## MARTIN E. ALEXANDER, PhD, RPF

Proprietor, Wild Rose Fire Behaviour

180 – 50434 Range Road 232, Leduc County, Alberta T4X 0L1

Home ph: 780-417-0244; Cell ph: 780-298-0952; E-mail: mea2@telus.net

[https://www.frames.gov/applied\\_fire\\_behavior](https://www.frames.gov/applied_fire_behavior)

## TABLE OF CONTENTS

PROFILE .....	2
SOME OUTSTANDING CAREER ACCOMPLISHMENTS TO DATE.....	3
UNIVERSITY EDUCATION.....	4
PROFESSIONAL TRAINING COURSES.....	4
AWARDS AND OTHER HONOURS.....	4
PROFESSIONAL SOCIETIES AND ORGANIZATIONS.....	5
PROFESSIONAL EMPLOYMENT RECORD.....	5
SEASONAL AND PART-TIME EMPLOYMENT RECORD.....	6
UNIVERSITY APPOINTMENTS .....	7
UNIVERSITY GRADUATE STUDENTS SUPERVISED.....	7
MAJOR GROUP AND COMMITTEE ACTIVITIES.....	8
OTHER PROFESSIONAL SERVICES.....	10
INVITED SPEAKER PRESENTATIONS AND CONFERENCE/WORKSHOP MODERATOR ASSIGNMENTS.....	10
TECHNOLOGY AND INFORMATION TRANSFER ACTIVITIES .....	22
LIST OF PUBLICATIONS.....	27
Peer-Reviewed Scientific Journal Articles and Conference Proceedings Papers.....	27
Invited Articles and Papers.....	33
Agency Reports and Publications.....	36
Special Publications.....	39
Books.....	44
Book Chapters.....	45
Symposium, Conference and Workshop Proceedings Papers.....	46
Technical and Popular Articles.....	57
Conference and Workshop Abstracts and Extended Abstracts.....	62
Miscellaneous Reports and Publications.....	72
Web-based Essays and Presentations.....	77
Software Programs.....	82
WEBSITES.....	83

## PROFILE

Dr. Alexander retired from Natural Resources Canada in November 2010 following a 34.5-year career in fire research with the Canadian Forest Service (CFS). At the time, he was a Senior Fire Behavior Research Officer stationed at the Northern Forestry Centre in Edmonton, Alberta. His work has taken him to many parts of the world, including the continental USA and Alaska, Australia, New Zealand, Portugal, Greece, Italy, Fiji, Sweden and Turkey, as well as every Canadian province and territory.

As a former member of the CFS Fire Danger Group (1981-1995), Dr. Alexander is considered an authority on the Canadian Forest Fire Danger Rating System (CFFDRS) and was one of the architects of the Canadian Forest Fire Behavior Prediction (FBP) System. He served as one of the research coordinators and the ignition boss for the International Crown Fire Modelling Experiment (ICFME) project that took place in the Northwest Territories from 1995-2001. Dr. Alexander has also been heavily involved in wildland fire behaviour training on a regional, national, and international basis (e.g., Alberta Forest Service course, CD-ROM based courses, national CIFFC sponsored courses, US S-590 Advanced Fire Behavior Interpretation course, ICFMR Fire Behavior Modelling short course).

In 2003, Dr. Alexander was the recipient of the International Wildland Fire Safety Award from the International Association of Wildland Fire for his research and efforts in fire behavior and firefighter safety. In 2005, he was identified in the book *Forest Fires: A Reference Handbook* as one of the 23 individuals that have influenced wildland fire policy and knowledge globally and one of only two Canadians. In 2010, Dr. Alexander received the Canadian Forestry Achievement Award from the Canadian Institute of Forestry (this award recognizes unique and outstanding achievements in forestry in Canada), in 2016 he received the James G. Wright Award for career achievement in forest fire research by the Canadian wildland fire community, and in 2018 he was the recipient of the Ember Award for Excellence in Wildland Fire Science from the International Association of Wildland Fire.

His primary research interests remain as wildland fire behaviour and forest/grassland fire danger rating, including the practical and scientific application of such knowledge to fire/fuel management and other disciplines, including public and firefighter safety. In semi-retirement Dr. Alexander continues to publish on these subjects. He contributed three chapters on fire behaviour comprising Part 4 of a book published by Wiley-Blackwell in January 2014 entitled *Fire on Earth: An Introduction*.<sup>1</sup>

Since retiring from the CFS, Dr. Alexander has continued his involvement with universities (e.g., Utah State University) and other forestry and wildland fire organizations (e.g., International Association of Wildland Fire). He was appointed as the inaugural section editor for fire science and management for *Current Forestry Reports* in 2014. Dr. Alexander continues to be sought out for expertise in wildland fire behavior (e.g. advice on assessing the fire behaviour potential of Gotska Sandön National Park, Sweden; the crowning pattern on the 2017 Pedrógão Grande Fire, Portugal; contributions

---

<sup>1</sup> <http://bcs.wiley.com/he-bcs/Books?action=index&bcsId=8578&itemId=1119953561>

to the *Encyclopedia of Wildfires and Wildland-Urban Interface (WUI) Fires* to be published in 2020; Australian National Fire Danger Rating System; CSRIO – Australia; Institute of Catastrophic Loss Reduction).

Prior to joining the CFS he worked for the USDA Forest Service for two seasons as a member of the Bighorn National Forest inter-regional hotshot crew (1972 and 1973), for two academic terms in National Fire Danger Rating Research Work Unit (1972-3 and 1973-4, and following university graduation in wilderness fuel inventory and slash burning on the Nezperce National Forest (1974).

Marty and wife Heather have been married (since November 1975) for nearly 43 years. They live on an acreage in Leduc County in central Alberta near Edmonton at the very southern extent of the boreal forest in western Canada. Marty and Heather have four grown children and two grand-daughters.

### **SOME OUTSTANDING CAREER ACCOMPLISHMENTS OF A PRACTICAL AND SCIENTIFIC NATURE TO DATE**

- Co-authored a prescribed burning fuels and fire behavior documentation manual that has come to be emulated by many other organizations in Canada.
- Popularized the wildfire behavior case study concept within Canada and elsewhere.
- Conceived the concept of the Canadian Forest Fire Danger Rating System (CFFDRS) Users' Guide which has come to be replicated by others (e.g., Southeast Asia Fire Danger Rating System Project).
- Contributed to the development of several fire management applications and interpretive aids related to the CFFDRS, nationally as well as globally.
- Co-editor of a major revision to the Canadian glossary of forest fire management terms.
- Initiated and coordinated a series of technical and scientific fire weather seminars in central and western Canada designed to enhance information and technology transfer of fire research results.
- Developed a 6-category fire intensity class or rank system for describing and communicating fire behavior information used operationally nation-wide (e.g., <http://bcwildfire.ca/FightingWildfire/firerank.htm>) and globally by fire managers, fire behavior analysts (FBAN), and other fire researchers.
- Co-authored the popular Canadian FBP System "Red Book" field guide which has come to be copied by others nationally and internationally.
- One of the co-founders of the two national CIFFC sponsored fire behavior training courses – *Advanced Wildland Fire Behavior* and *Wildland Fire Behavior Specialist* – and involved in the training of several generations of fire operations staff as FBANs.
- Charged with reinitiating the rural fire research programme in New Zealand, including the hiring and training of staff.
- Played a key role as part of the development teams associated with the national CD-ROM based training courses in fire behaviour, firefighter safety, and fire danger rating.

- Co-developer of a new generation of practical-oriented models and system software such as *Crown Fire Initiation and Spread (CFIS)* for predicting crown fire initiation and spread as well as other aspects of extreme fire behavior.
- Lead or co-lead of three national experimental burning projects in black spruce and jack pine-black spruce fuel types in western and northern Canada.
- Co-coordinated five special issues of *Fire Management Today* dealing with wildland fire behavior.

### **UNIVERSITY EDUCATION**

- B.Sc., Forest Management Science, Colorado State University, 1974.
- M.Sc., Forest Fire Science, Colorado State University, 1979. (Thesis title: Fuels Description in Lodgepole Pine Stands of the Colorado Front Range)
- Ph.D., Forestry, Australian National University, 1998. (Thesis title: Crown Fire Thresholds in Exotic Pine Plantations of Australasia)

### **PROFESSIONAL TRAINING COURSES**

- USDA Forest Service – Intermediate Fire Behavior (S-390), April 1975.
- USDA Forest Service – Fire Behavior Officer (S-590), December 1979.
- University of Alberta, Faculty of Extension – Be an Effective Expert Witness, November 1999.

### **AWARDS AND OTHER HONOURS**

- Colorado State University Undergraduate Scholarship Grant, 1971-74
- Society of American Foresters – Central Rocky Mountain Section Essay Scholarship, 1972
- Daniel Boone Conservation League Scholarship, 1973/74
- Minister of State for Forestry and Mines Letter of Commendation, for efforts related to the development of the Canadian Forest Fire Danger Rating System, 1988.
- Australian National University Ph.D. Scholarship, 1989-92
- Forestry Canada Certificate of Appreciation (for role in the Fire Danger Group), 1990
- Joseph William Gottstein Memorial Trust Fund Fellowship (Australian forest industry), 1991
- Associate Editor, *International Journal of Wildland Fire*, 1993-2002
- Forest and Rural Fire Association of New Zealand – first Honorary Life Member, 1993
- Canadian Forest Service Merit Award – Partnerships & Team Achievements for the International Crown Fire Modelling Experiment, 1997
- Natural Resources Canada Departmental Award for the International Crown Fire Modelling Experiment, 1997
- Consulting Editor (Fire Behavior), *Wildfire* magazine, 1997-2000

- VIDEOFUEGO “Golden Firefighter” International Award for Best Multimedia CD-ROM Program of Formation for *Wildland Fire – Safety on the Fireline*, 2001
- VIDEOFUEGO Special Mention (For Quality) Award for Best Multimedia CD-ROM Program of Formation for *Principles of Fire Behavior*, 2001
- International Wildland Fire Safety Award and Life Member – International Association of Wildland Fire, 2003  
[http://www.wildfirelessons.net/documents/Marty\\_Alexander\\_2003IntlWildlandFireSafetyAward.pdf](http://www.wildfirelessons.net/documents/Marty_Alexander_2003IntlWildlandFireSafetyAward.pdf)
- Recognized in *Forest Fires: A Reference Handbook* authored by Dr. P.N. Omi (2005) as one of the 23 individuals that have influenced wildland fire policy and knowledge globally and one of only two Canadians.
- Associate Editor (Wildland Fire Science and Management), *The Forestry Chronicle*, 2007-2016.
- Canadian Interagency Forest Fire Centre Award (recognizing contributions to national wildland fire behavior training dating back to 1982), 2008  
<http://pubs.cif-ifc.org/doi/abs/10.5558/tfc84432-3?journalCode=tfc>
- Canadian Forestry Achievement Award – Canadian Institute of Forestry, 2010  
<https://www.cif-ifc.org/2010-award-recipient/>  
<http://pubs.cif-ifc.org/doi/pdf/10.5558/tfc86682a-6>
- Section Editor (Fire Science and Management), *Current Forestry Reports*, 2014 to present
- James G. Wright Award for career achievement in forest fire research as recognized by the Canadian wildland fire community, 2016  
[\(http://www.wildlandfire2016.ca/awards/\)](http://www.wildlandfire2016.ca/awards/)
- Ember Award for Excellence in Wildland Fire Science from the International Association of Wildland Fire, 2018 (<https://www.iawfonline.org/article/iawf-awards-early-career-and-ember-honors/>)

## **PROFESSIONAL SOCIETIES AND ORGANIZATIONS**

- Canadian Institute of Forestry, 1976 – 2015
- Xi Sigma Pi Honorary (Forestry), 1975
- Association of Alberta Forest Management Professionals (Member No. 165), 1986 – Present
- International Association of Wildland Fire, 1991 – present (made Life Member in 2003)
- Forest and Rural Fire Association of New Zealand, 1991 – present (made Honorary Life Member in 1993)

## **PROFESSIONAL EMPLOYMENT RECORD**

**March 1998 – November 2010.** Senior Fire Behavior Research Officer (FO-3), Canadian Forest Service, Northern Forestry Centre, Edmonton, Alberta.

**April 1996 – October 2016:** Fire Guardian (part time), New Sarepta Rural Fire Response Area, County of Leduc Fire Services, Province of Alberta, Canada.

**January 2004 – January 2006:** Senior Researcher, Wildland Fire Operations Research Group, Forest Engineering Research Institute of Canada – Western Division, Hinton Alberta (on secondment from Canadian Forest Service).

**March 1981 – March 1998:** Fire Behavior Research Officer (FO-2), Canadian Forest Service, Northern Forestry Centre, Edmonton, Alberta (fire danger rating and fire behavior).

**April 1992 – April 1993:** Visiting Fire Research Scientist, New Zealand Forest Research Institute, Forest Technology Division, Rotorua, New Zealand (on secondment from Canadian Forest Service).

**August 1989 – April 1992:** Visiting Fire Researcher, Bushfire Research Unit, CSIRO Division of Forestry, and Ph.D. Scholar, Department of Forestry, Australian National University, Canberra, A.C.T., Australia (on career development/educational leave from Forestry Canada).

**May 1976 - March 1981:** Fire Research Officer (FO-1/-2), Canadian Forestry Service, Great Lakes Forest Research Centre, Sault Ste. Marie, Ontario (wildfire ecology/effects and fire behavior).

**January 1975 – May 1976:** Graduate Research Assistant, Fire Science Program, Department of Forest and Wood Sciences, Colorado State University, Fort Collins, Colorado (lightning fire report analysis and natural fuel estimation).

### **SEASONAL AND PART-TIME EMPLOYMENT RECORD**

**July-August 1971:** Student Forestry Worker, Domtar Woodlands Ltd., Lebel-sur-Quevillon, Quebec (pre-commercial thinning).

**September 1971 – June 1972:** Student Forestry Aid, Colorado State University, Department of Forest & Wood Sciences and Colorado State Forest Service, Fort Collins, Colorado (technical assistant to biometry/dendrology professors and fire protection staff forester).

**June – September 1972:** Fire Control Aid (GS-3), USDA Forest Service, Inter-regional Fire Suppression Crew, Bighorn National Forest, Greybull Ranger District, Greybull, Wyoming.

**September 1972 – June 1973:** Forestry Research Aid (GS-3), USDA Forest Service, National Fire-Danger Rating Research Work Unit, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.

**June – September 1973:** Forestry Technician (Fire Control) (GS-4), USDA Forest Service, Inter-regional Fire Suppression Crew, Bighorn National Forest, Greybull Ranger District, Greybull, Wyoming.

**September 1973 – June 1974:** Forestry Research Technician (GS-4), USDA Forest Service, National Fire Danger Rating Research Work Unit, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.

**June – November 1974:** Supervisory Forestry Technician (GS-5), USDA Forest Service, Nezperce National Forest, Grangeville, Idaho. (fuel sampling and slash burning)

### **UNIVERSITY APPOINTMENTS**

**July 1999 – June 2015:** Adjunct Professor (Wildland Fire Science and Management), Department of Renewable Resources, University of Alberta, Edmonton, Alberta.

**March 2002 – May 2019:** Honorary Research Associate (Wildland Fire Science and Management), Faculty of Forestry & Environmental Management, University of New Brunswick, Fredericton, New Brunswick.

**September 2011 – December 2015:** Adjunct Full Professor (Wildland Fire Science and Management), Department of Wildland Resources, Utah State University, Logan, Utah.

**January-April 2001 & January-February 2002:** Sessional Lecturer (Forest Fire Management Course, FOR 340), Department of Renewable Resources, University of Alberta, Edmonton, Alberta.

### **UNIVERSITY GRADUATE STUDENTS SUPERVISED**

- Mr. W.G. Page, PhD, Utah State University, Logan, 2011-2014. Thesis title: Bark Beetle-induced Changes to Crown Fuel Flammability and Crown Fire Potential.
- Mr. S.M. Frost, MSc, Utah State University, Logan, 2013-2015. Thesis title: Fire environment analysis of Army Garrison Camp Williams in relation to fire behavior potential for gauging fuel modification needs.
- Mr. J.R. Forsythe, MSc, University of New Brunswick, Fredericton, 2010-2014. Thesis project: Employing statistics to determine relative spatial accuracy of wildfire predictions. [forced to withdraw from program due to health problems.]
- Ms. A. Arndt, PhD, University of Natural Resources and Life Sciences, Vienna, Austria, 2008-2013. Thesis project: Development of a forest fire hazard model for Austria. [forced to withdraw from program due to financial reasons.]
- Ms. N. Lavoie, PhD, University of Alberta, Edmonton, 1997-2004. Thesis title: Variation in Flammability of Jack Pine/Black Spruce Forests With Time Since Fire.
- Mr. M.G. Cruz, MSc, University of Montana, Missoula, 1998-1999. Thesis title: Modeling the Initiation and Spread of Crown Fires.

- Ms. B. Wilmore, MSc, University of Alaska – Fairbanks, 1998-2000. Thesis title: Duff Moisture Dynamics in Black Spruce – Feathermoss Stands and Their Relation to the Canadian Forest Fire Danger Rating System.
- Mr. M.G. Cruz, PhD, University of Montana, Missoula, 2000-2004. Thesis title: Ignition of Crown Fuels Above a Spreading Surface Fire.
- Ms. S. Niven, MSc, University of Alberta, Edmonton, 2001-2005. Thesis project: heat transfer and wildland firefighter safety zones. [forced to withdraw from program due to personal reasons.]
- Mr. K. Abbott, MSc, University of New Brunswick, Fredericton, 2001-2005. Thesis title: Fire Danger Monitoring in a Northern Boreal Forest Region Using RADARSAT-1 Imagery.
- Mr. S.G. Otway, MSc, University of Alberta, Edmonton, 2003-2005. Thesis title: Aspen Forest Duff Moisture Depletion and Ground Fire Potential.

### MAJOR GROUP AND COMMITTEE ACTIVITIES

- Core Member, Canadian Forestry Service Fire Danger Group, 1981-1995
- Canadian Forestry Service Representative, Subcommittee on Glossary of Forest Fire Management Terms - Fourth Edition, Canadian Committee on Forest Fire Management, 1985-1987
- Member, Alberta Forest Service Task Force on the Pre-suppression Preparedness System 5-Year Review, 1987-1988
- Co-chair, Local Steering Committee for First Interior West Fire Council Annual Meeting and Workshop, 1987-1988
- Chair, Task Group on Glossary of Forest Fire Management Terms, Canadian Committee on Forest Fire Management, 1993-1997
- Course Chair, CIFFC sponsored National Advanced Wildland Fire Behavior Course, 1995-1998
- Course Chair, CIFFC sponsored National Wildland Fire Behavior Specialist Course, 1996-2004
- Canadian Forest Service Representative, National Content/Review Team, *Principles of Fire Behavior* and *Intermediate Fire Behavior, S-290* CD-ROM Training Courses, 1997-1998
- Member of Organizing and Advisory Committee, III International Conference on Forest Fire Research/14th Conference on Fire & Forest Meteorology, Luso, Portugal – 1998.
- Canadian Forest Service Representative, National Content/Review Team, *Wildland Fire – Safety on the Fireline* CD-ROM Training Course, 1998-1999
- Co-chair, Local Steering Committee, 13th Interior West Fire Council Annual Meeting & Workshop, 1999-2000
- Chair, Subcommittee on Spotting and Breaching, PROMETHEUS (Canadian Wildland Fire Growth Model) Project, 1999-2004
- Member (CFS Representative), National Content/Review Team, *Understanding the Fire Weather Index (FWI) System* CD-ROM Training Course, 2000-2002



- Canadian Forest Service Representative, Research Advisory Committee (ACFIRE) for FERIC Wildland Fire Operations Research Centre, 2001-2003
- Member of Organizing Committee, IV International Conference on Forest Fire Research/2002 Wildland Fire Safety Summit, Luso, Portugal – 2002.
- Co-Investigator (Crown Fire Modelling), European Economic Commission sponsored Forest Fire Spread Prevention and Mitigation – SPREAD Project, 2002-2005
- Member of Steering Committee & Proceedings Co-editor, Eighth International Wildland Fire Safety Summit, Missoula, MT – 2005
- Member of Organizing Committee, V International Conference on Forest Fire Research, Figueira da Foz, Portugal – 2006.
- Member, USDA Forest Service Wildland Fire R&D Program Review Panel, 2007
- Member, International Advisory Committee, European Economic Commission sponsored FIRE PARADOX Project, 2008-2010
- Member, Board of Directors, International Association of Wildland Fire, 2008-2013
- Subject Matter Expert (Wildland Fire Research, Fire Behavior, Firefighter Safety) for International Association of Wildland Fire, 2008 to present
- Member, Steering Committee, *The '88 Fires: Yellowstone and Beyond*, International Association of Wildland Fire, 2008
- Member, Editorial Advisory Committee of the *International Journal of Wildland Fire*, 2009-2013
- Program Committee Chair, 3rd Fire Behavior and Fuels Conference, International Association of Wildland Fire, 2009-2010
- Member of Organizing Committee, VI International Conference on Forest Fire Research, Coimbra, Portugal – 2010
- Member, New Sarepta Fire District Advisory Committee, County of Leduc, Alberta, 2010-2013.
- Program Committee Co-Chair, 11th International Wildland Fire Safety Summit, 2010-2011
- Member, Advisory Board, Kastamonu University Journal of Forestry Faculty (Turkey), 2011 to present
- Chair, International Wildland Fire Safety Award Selection Committee, International Association of Wildland Fire, 2012 to present (member since 2003)
- Member, Scientific and Professional Committee, V, VII and X Annual National Symposium on Forest Fires, La Nucia (Alicante), Spain, 2012, 2014 and 2019
- Member, Steering Committee, Large Wildland Fires: Social, Political & Ecological Effects Conference, International Association of Wildland Fire/Association of Fire Ecology, Missoula, MT – 2013-2014
- Member of Scientific Committee, VII International Conference on Forest Fire Research, Coimbra, Portugal – 2014
- Member of CIFFC sponsored Wildland Fire Behaviour Specialist Course Faculty, 2014 to present
- Consultant, BONFIRE (GloBal-scale analysis and mOdelliNg of FIRE behaviour potential) Project funded by the Portuguese Science Foundation, 2016 to present (<https://www.researchgate.net/project/BONFIRE-gloBal-scale-analysis-and-mOdelliNg-of-FIRE-behaviour-potential-PTDC-AAG-MAA-2656-2014>)

- Member of Scientific Committee, VIII International Conference on Forest Fire Research, Coimbra, Portugal – 2018
- Ember Award Selection Sub-committee Member, 2019 to present
- Editorial Board Member, *Fire*, 2019 to present

### OTHER PROFESSIONAL SERVICES

- Peer-Reviewer for Scientific and Technical Journals (e.g., *Annals of Forest Service*; *Atmospheric Chemistry and Physics*, *Australian Forestry*; *CALMScience*; *Canadian Journal of Forest Research*; *Ecology*; *Environmental Modelling & Software*; *European Journal of Forest Research*; *Fire*; *Fire Ecology*; *Fire Technology*; *Forest Ecology and Management*; *Forest Science*; *Forest Science Monograph*; *Forestry Chronicle*; *International Journal of Forest Research*; *International Journal of Wildland Fire*; *Journal of Forestry*; *Journal of Vegetation Science*; *Landscape and Ecological Engineering*; *Natural Hazards*, *New Zealand Journal of Forestry Science*; *Oral History Forum*; *Southwestern Naturalist*; and *Western Journal of Applied Forestry*).
- Peer-Reviewer for Australian Bushfire Cooperative Research Centre on report on February 7, 2009 Black Saturday Fires in Victoria.
- External Reviewer for several PhD Dissertations and Theses.
- External Reviewer for several promotion reviews of Scientists and University Professors.
- External Reviewer for U.S. Joint Fire Science Program, U.S. National Science Foundation, U.S. Department of Defense, Alberta Innovation Program, and Natural Sciences and Engineering Research Council of Canada proposals.
- Expert Witness and Technical Advisor for several legal cases in Canada and New Zealand.
- Numerous media interviews (e.g., BBC, CBC, Discovery Channel Canada).
- Expert Consultant for European Commission Joint Research Centre.
- Contributed to the Preliminary Assessment of the Application of the Canadian Forest Fire Danger Rating System (CFFDRS) to Alaskan Ecosystems) undertaken by Dr. J. Wolken, University of Alaska. ([https://www.frames.gov/documents/catalog/wolken\\_2014.pdf](https://www.frames.gov/documents/catalog/wolken_2014.pdf))
- Advice on “Next Steps for Wildfire Danger Assessment in the UK” project undertaken by Margarita Tsakiridou.

### INVITED SPEAKER PRESENTATIONS AND CONFERENCE/WORKSHOP MODERATOR ASSIGNMENTS

**Invited Speaker:** presentation on “Wildfire Ecology/Effects Research at the Great Lakes Forest Research Centre”, Forest Fire Management in Ontario -- A State of the Art Seminar, Geneva Park, ON, Feb 1979.

**Invited Guest Lecturer:** presentation on “Linking Fire Behavior to Fire Effects”, Vegetation and Wildlife Interrelations Course, University of Guelph, Guelph, ON, Nov. 1979.

**Session Moderator:** USDA Forest Service/University of Arizona Fire History Workshop, Tucson, AZ, Oct. 1980.

**Invited Guest Lecturer:** presentation on “Canadian Forest Fire Danger Rating System”, Forest Fire Management Course, University of Alberta, Edmonton, AB, Feb. 1982.

**Invited Speaker:** presentation on “Forest Fire Danger and Behavior Rating in the Northwest Territories”, Fire Weather Awareness Seminars (Atmospheric Environment Service), AES Western Region Office, Edmonton, AB, Apr. 1983.

**Invited Guest Lecturer:** presentation on “Current CFS Fire Research Activities”, Fire Control Course, Forest Technology School, Hinton, AB, Feb. 1984.

**Invited Guest Lecturer:** presentation on “Fire Documentation in Relation to Ecological Studies”, Advanced Fire Ecology Course (FOR 546), University of Alberta, Edmonton, AB, Nov. 1984.

**Invited Speaker:** presentation on “Canadian Forest Fire Danger Rating System”, Fire Behavior for Fire Managers Course (Indian & Northern Affairs Canada), Yellowknife, NWT, Jan. 1985.

**Invited Guest Lecturer:** presentation on “Current CFS Fire Research Activities”, Fire Control Course, Forest Technology School, Hinton, AB, Feb. 1985.

**Invited Speaker:** presentations on physics of forest fires, Canadian Forest Fire Danger Rating System and 1968 Lesser Slave Lake Fire, Keeping Current ... A Fire Management Workshop (Alberta Forest Service), Forest Technology School, Hinton, AB, Feb. 1985.

**Invited Speaker:** presentation on Canadian Forest Fire Danger Rating System applications, Mountain Fire Workshop (Alberta Forest Service), Forest Technology School, Hinton, AB, Feb. 1986.

**Invited Session Moderator:** 9th American Meteorological Society-Society of American Foresters Joint Conference on Fire and Forest Meteorology, San Diego, CA, Apr. 1987.

**Invited Speaker:** presentation on “A Review of Canadian Forestry Service Prescribed Fire Research in Alberta: 1965-1969”, Prescribed Burning Workshop - Forest Management Applications (Alberta Forest Service), Forest Technology School, Hinton, AB, Sept. 1987.

**Invited Guest Lecturer:** presentation on “Canadian Forest Fire Danger Rating System”, Forest Fire Management Course (FOR 340), University of Alberta, Edmonton, AB, Feb. 1989.

**Invited Guest Lecturer:** presentation on “Forest Fire Behaviour Research in Canada”, ADFA Bushfire Seminar, University College, UNSW, Australian Defence Force Academy, Canberra, ACT, Australia, May 1990.

**Invited Speaker:** presentation on “Fire Research in Support of Fire Management in Canada”, Seventh National Conference of the Australian Association of Rural Fire Authorities, Canberra, ACT, Australia, May 1990.

**Invited Speaker:** presentation on “Crown Fire Initiation and Spread: Experience in Canadian Forests and Relevance to Australian Exotic Pine Plantations”, Australian Forestry Council Research Working Group (RWG) No. 6 - Fire Management Research Workshop on “Plantation Fire Management: Opportunities for Research”, Victor Harbour, SA, Australia, July 1990.

**Invited Guest Lecturer:** seminar presentation on “Fire Behaviour Research in Western and Northern Canada”, Fire Protection Branch, Department of Conservation and Environment, Melbourne, VIC. Australia, Sep. 1990.

**Invited Speaker:** presentation on “Canadian Forest Fire Danger Rating System”, New Zealand Fire Service - Rural Fire Division sponsored seminars on Fire Danger Rating @ Auckland, Rotorua, Palmerston North, Dunedin, Christchurch, Nelson and Wellington, New Zealand, Oct. & Nov. 1990.

**Invited Speaker:** seminar presentation on “Fire Behavior in Exotic Pine Plantations of Australasia”, Department of Forestry, Australian National University, Canberra, ACT, Australia, Oct. 1991.

**Invited Speaker:** seminar presentation on “Crown Fires in Pine Plantations”, Country Fire Authority of Victoria, Melbourne, VIC, Australia, Nov. 1991.

**Invited Speaker:** seminar presentation on “Wildfires and Fire Danger Rating”, Meteorological Service of New Zealand, Head Office, Wellington, New Zealand, May 1992.

**Invited Speaker:** presentation on “Fire Behaviour Research for Fire Management Purposes”, Department of Conservation Science Research Division 1992 Seminar Series, Wellington, New Zealand, July 1992.

**Invited Speaker:** presentation on “Applying the Fire Weather Index System to the Urban-Rural Interface in New Zealand”, New Zealand Fire Service Commanders' Seminar, Marton, New Zealand, July 1992.

**Invited Speaker:** presentation on “Crown Fire Behaviour in Exotic Pine Plantations of Australasia”, University of Canterbury, School of Forestry Lunchtime Seminar Series, Christchurch, New Zealand, Aug. 1992.

**Invited Guest Lecturer:** presentation on “The Role of Fire Danger Ratings in Forest Land Management”, Advanced Silviculture Course, School of Forestry, University of Canterbury, Christchurch, New Zealand, Aug. 1992.

**Invited Speaker:** presentation on “The Science of Wildland Fire Behaviour”, Lincoln University, Department of Natural Resources Engineering Seminar Series, Lincoln, New Zealand, Aug. 1992.

**Invited Keynote Speaker:** presentation on “Fire Behaviour as a Factor in Forest and Rural Fire Suppression”, 1992 Annual Conference of the Forest and Rural Fire Association of New Zealand, Christchurch, New Zealand.

**Invited Speaker:** presentation on “Progress Report on the Fire Research Programme at FRI”, Fourteenth Meeting of FAFPRO Forest Technology Board, New Zealand Forest Research Institute, Rotorua, New Zealand, Aug. 1992.

**Invited Guest Lecturer:** presentation on “Fire Danger Rating and Fire Behaviour Prediction”, New Zealand Certificate in Forestry Stage V Course 5170 (Protection and Environmental Studies), Forest Training Centre, Rotorua, Sep. 1992.

**Invited Speaker:** seminar presentation on “Fire Behaviour as a Factor in Fire Suppression with Particular Reference to Exotic Pine Plantations” to Forestry Corporation of New Zealand field staff, Rotorua, New Zealand, Oct. 1992.

**Invited Speaker:** presentation on “Fire Behaviour in Exotic Pine Plantations with Particular Reference to Crown Fire Development”, Institute of Foresters of New Zealand, Nelson/Marlborough Branch meeting, Nelson, New Zealand, Nov. 1992.

**Invited Speaker:** presentation on “Proposed Revision to Fire Danger Class Criteria”, National Rural Fire Authority Regional Annual Meetings @ Palmerston North, Te Awamuta, Burnham, Balclutha and Nelson, New Zealand, Nov. 1992.

**Invited Speaker:** presentation on “The Science of Plantation Fire Protection”, Institute of Foresters of New Zealand, Rotorua Section meeting, Rotorua, New Zealand, Dec. 1992.

**Invited Speaker:** presentation on “The Future of Fire Management on the Conservation Estate: A Canadian Fire Researcher's Perspective”, Department of Conservation Senior Managers meeting, Dunedin, New Zealand, Feb. 1993.

**Invited Speaker:** seminar presentation on “Canadian Forest Fire Weather Index System”, Fiji Pine Limited field staff, Lautoka, Fiji, Apr. 1993.

**Invited Speaker:** presentation on “Fire Behavior Review (Fire Behavior Considerations Prior to and During Initial Attack with Airtankers)” Alberta Land & Forest Service Air Attack Officer Strategy and Tactics Seminar, Hinton, AB, Apr. 1994.

**Invited Speaker:** presentation on “Systems for Rating Fire Danger and Predicting Fire Behavior in Canada”, USDA Forest Service National Fire Behavior Workshop, Missoula, MT, June 1994.

**Invited Speaker:** presentation on “Fire Behavior in the Boreal Forest”, Workshop on Biomass Burning, Climate Change and the Carbon Cycle in the North American Boreal Forest Region-Scientific, Management and Policy Implications, Fairbanks, AK, Sep. 1995.

**Invited Rapporteur:** CFS National Workshop on “Wildland Fire Activity in Canada”, Edmonton, AB, Apr. 1996.

**Invited Speaker:** presentation on “Natural Fire Regimes and Implications for Forest and Ecosystem Management”, Yukon Science Institute Lecture Series, Whitehorse, YT, Apr. 1996.

**Invited Guest Lecturer:** two presentations on Canadian Forest Fire Danger Rating System, Forest Fire Management Course (FOR 340), University of Alberta, Edmonton, AB, winter term 1997.

**Invited Speaker:** presentations on “Living with Fire in the Boreal Forest” delivered at public forums in the Northwest Territories in Enterprise, Mar. 1997, Hay River, Apr. 1997, Fort Smith, Apr. 1997, and Norman Wells, May 1998.

**Invited Instructor:** presentation on “Fuels Management in the Boreal Forest” at Northwest Territories Fire Marshall's Forest Fire Management Training Course, Fort Smith, NWT, Apr. 1997.

**Invited Speaker:** presentations on “Living with Fire in the Boreal Forest”, annual meeting of the Association of Yukon Communities, Watson Lake and public forum in Haines Junction, YT, May 1997.

**Invited Speaker:** seminar presentation on “Fire Considerations in Forest Management”, Daishowa-Marubeni International Ltd., Peace River, AB, May 1997.

**Invited Speaker:** presentation on “Power of Wildland Fires”, Developing Fire Safe Communities Workshop, Whitehorse, YT, Jan. 1998.

**Invited Guest Lecturer:** four presentations (Fire Weather Index System, Fire Behavior Prediction System, wildland firefighter safety, living with fire in the boreal forest), University of Alberta undergraduate Forest Fire Management (FOR 340) class, winter term 1998.

**Invited Speaker:** presentation on “Recent Advances in Understanding and Predicting Crown Fire Behavior”, 1998 Interior West Fire Council Annual Meeting and Workshop, Big Sky, MT, Sep.-Oct. 1998.

**Invited Keynote Speaker:** presentation on “An Example of Multi-faceted Wildland Fire Research: the International Crown Fire Modelling Experiment”, III International Conference on Forest Fire Research/14th Conference on Fire and Forest Meteorology, Luso-Coimbra, Portugal, Nov. 1998.

**Session Moderator:** III International Conference on Forest Fire Research/14th Conference on Fire and Forest Meteorology, Luso-Coimbra, Portugal, Nov. 1998.

**Invited Guest Lecturer:** presentations on “Systems for Fire Danger Rating and Fire Behavior Prediction Used in Canada”, and “Crown Scorch/Crown Fires/Byram's Convection Number”, III Short Course on Forest Fire Behavior Modelling, Luso-Coimbra, Portugal, Nov. 1998.

**Invited Speaker:** presentation on “Predicting Transitions in Fire Behavior”, National Interagency Fire Behavior Workshop, Phoenix, AZ, Mar. 1999.

**Invited Instructor:** presentation on “Some Physical Characteristics of Wildland Fires in the Northern Boreal Forest”, Forest Fire Management in the Wildland/Urban Interface Workshop held in conjunction with the Northwest Territories Fire Chiefs Association Annual Conference and Professional Development Workshops, Hay River, NWT, Apr. 1999.

**Invited Speaker:** presentation on “An International Perspective on Wildland Firefighter Safety”, National Rural Fire Authority Workshops on Firefighter Safety, Rotorua and Greymouth, New Zealand, Aug. 1999.

**Invited Keynote Speaker:** presentation on “Rural Fire Management Beyond 2000”, 1999 Annual Conference of the Forest and Rural Fire Association of New Zealand, Greymouth, New Zealand, Aug. 1999.

**Invited Speaker:** presentation on “Crown Fires are Hot!” An Overview of the International Crown Fire Modelling Experiment”, University of Alberta Landscape Ecology Seminar Series, Edmonton, AB, Oct. 1999.

**Invited Speaker:** presentations on “What is ICFME? A Behind-the-Scenes Look at an International Cooperative Research Effort” and “A New Approach to Live Wildland Fire Training: A Case Study from New Zealand”, 1999 Interior West Fire Council Annual Meeting and Workshop, Estes Park, CO, Oct. 1999.

**Invited Guest Lectures:** presentation on “Fire Behavior from the Stand Level to the Landscape Scale”, Advanced Fire Ecology Course (FOR 546), University of Alberta, Edmonton, AB, Jan. 2000.

**Invited Speaker:** presentation on “Fire Behavior, the Total Fire Environment and Wildland Firefighter Safety,” Alberta Land & Forest Service Rapattack Spotter Strategy and Tactics Course, Environmental Training Centre, Hinton, AB, Apr. 2000.

**Invited Speaker:** presentation on “Living With Fire in the Boreal Forest” and fuels management exercise, GNWT Forest Management Division Community Fire Protection Workshop, Fort Smith, NWT, Apr. 2000.

**Invited Speaker:** presentation on “Introduction to the Canadian Forest Fire Danger Rating System”, S-590 Advanced Fire Behavior Interpretation Course, National Advanced Resource Technology Center, Marana, AZ, Apr. 2000.

**Invited Speaker:** presentations on “Living With Fire in the Boreal Forest” and “International Crown Fire Experiments, Fort Providence, N.W.T.”, Saskatchewan Fire Management & Forest Protection Spring Conference 2000, Prince Albert, SK, Apr. 2000.

**Invited Speaker:** presentation on “International Crown Fire Modelling Experiment”, Forest Fire Science and Management Forum, Halifax, NS, Sep. 2000.

**Session Moderator and Breakout Group Leader:** 2000 International Wildfire Safety Summit, Edmonton, AB, Oct. 2000.

**Invited Speaker:** presentation on “Fire Behavior Knowledge Gaps (& Research Needs) Pertaining to Ecosystem Management”, Workshop on Integrated Resource Management in Ecosystems Dominated by High Intensity Fire: Challenges, Tools and Solutions, Edmonton, AB, Nov. 2000.

**Invited Speaker:** presentation on “Wildland Fires and Rural/Urban Firefighter Safety: Raising the Awareness of the Inherent Dangers of Grass Fires”, Alberta Association of Fire Service Instructors Fall Workshop, Fort Saskatchewan, AB, Oct. 2000, Alberta Fire Chiefs Association Region 2 Annual Meeting, Leduc, AB, Jan. 2001, and Sturgeon County Fire Departments, Calahoo, AB, Apr. 2001.

**Invited Speaker:** presentation on “The Canadian Forest Fire Danger Rating System”, Northeastern Forest Fire Protection Commission Winter Training Session, West Lebanon, NH, Jan. 2001.

**Invited Speaker:** presentation on “What is the Canadian Forest Service Doing About the Wildland-Urban Interface (WUI) Fire Problem in Canada?”, National Academy of Sciences Natural Disasters Roundtable “Urban/Wildland Fire” Forum, Washington, DC, Jan. 2001.



**Invited Speaker:** presentation on “Non-Canadian Fire Danger Rating Systems”, Jakarta Fire Danger Rating System Team training session, Canadian Forest Service-Northern Forestry Centre, Edmonton, AB, Mar. 2001.

**Invited Instructor:** presentation on “Fire Behavior and Wildland Firefighter Safety,” Alberta Land & Forest Service Rapattack Spotter Strategy and Tactics Course, Environmental Training Centre, Hinton, AB, Apr. 2001.

**Invited Speaker:** presentation on “Addressing the Wildland-Urban Interface Problem in Canada Through Fire Behavior R&D”, Alaska Regional Firewise Communities Workshop, Kenai, AK, Apr. 2001.

**Invited Speaker:** seminar presentation on “Fire Behavior in the Boreal Forest: The International Crown Fire Modelling Experiment”, University of Alaska, Fairbanks, AK, Apr. 2001.

**Session Moderator:** 22nd Tall Timbers Fire Ecology Conference, Kananaskis, AB, Oct. 2001.

**Invited Speaker:** presentation on “Principles, Philosophies and Practicalities of Fire Danger Rating”, SE Asia Fire Danger Rating System Project Workshop, Canadian Forest Service-Northern Forestry Centre, Edmonton, AB, Oct. 2001.

**Invited Speaker:** presentation on “Introduction to the Canadian Forest Fire Danger Rating System”, Advanced National Fire Danger Rating System Course, National Advanced Resource Technology Center, Marana, AZ, Feb. 2002.

**Invited Speaker:** presentation on “An Overview of Systems Used for Rating Fire Danger and Predicting Fire Behavior Used in Canada”, S-590 Advanced Wildland Fire Behavior Interpretation Course, National Advanced Resource Technology Center, Marana, AZ, Mar. 2002.

**Invited Speaker:** presentation on “The Importance of Fire Behavior in Relation to Wildland Firefighter Safety and Fire Suppression Effectiveness”, Northeastern Forest Fire Protection Commission Spring Fire Academy, Amherst, NS, Apr. 2002.

**Invited Speaker:** presentation on “Wildland Fires and Rural/urban Firefighter Safety: Raising the Awareness of the Inherent Dangers of Grass Fires”, Saskatchewan Association of Fire Chiefs Annual Conference, Weyburn, SK, Apr. 2002.

**Invited Guest Lecturer:** presentations on “The Importance of Fire Behavior in Relation to Safe and Productive Fire Suppression” and “Crown Fires in Conifer Forests”, IV Short Course on Forest Fire Behavior Modelling, Luso-Coimbra, Portugal, Nov. 2002.

**Invited Keynote Speaker:** presentation on “Understanding Fire Behavior – The Key to Effective Fuels Management”, FERIC sponsored Fuels Management Workshop, Hinton, AB, Oct. 2003.

**Invited Speaker:** presentation on “Linking Fire Behavior Knowledge to Human Factors & Risk Management to Improve Firefighter Safety in the Total Fire Environment” Alberta Sustainable Resource Development Wildfire Training Academy, Hinton Training Centre, Hinton, AB, Dec. 2003.

**Invited Instructor:** presentations on “An Overview of Systems Used for Rating Fire Danger and Predicting Fire Behavior Used in Canada” and “Wildland Fire Behavior Case Studies and Analyses”, S-590 Advanced Wildland Fire Behavior Interpretation Course, National Advanced Resource Technology Center, Marana, AZ, Mar. 2004.

**Invited Speaker:** presentation on “Fire Behavior Considerations ... for Safe and Productive Fire Suppression”, FERIC sponsored Workshop on Heavy Equipment and Fireline Construction – The Past, Present and Future, Hinton, AB, Mar. 2005.

**Invited Speaker:** presentation on “Applied Wildland Fire Behavior Research for Fire Operations”, Alberta Fire Chiefs Region 2 Annual Meeting, Barrhead, AB, Apr. 2005.

**Invited Speaker:** presentation on “Latest Developments in Crown Fire Behavior Prediction”, 19th Annual Interior West Fire Council Conference, Canmore, AB, Oct. 2005.

**Invited Speaker:** presentation on “Wildland Fire and Drought: Searching for Practical Solutions”, Joint Session of 19th Annual Interior West Fire Council Conference and 6th American Meteorological Society Symposium on Fire and Forest Meteorology, Canmore, AB, Oct. 2005.

**Invited Guest Speaker:** presentation on “Forest Health: Fire Behavior Considerations”, Post-Harvest Stand Development Conference (sponsored by Foothills Model Forest, Foothills Growth and Yield Association, Alberta Forest Genetic Resources Council, and Forest Resources Improvement Association of Alberta), Edmonton, AB, Jan. 2006.

**Invited Guest Lecturer:** presentation on “Models for Predicting Crown Fire Behavior – A Review”, V Short Course on Forest Fire Behavior Modelling, Figueira da Foz, Portugal, Nov. 2006.

**Invited Keynote Speaker:** presentation on “You Are About to be Entrapped or Burned Over by a Wildfire: What Are Your Survival Options?”, V International Conference on Forest Fire Research, Figueira da Foz, Portugal, Nov. 2006.

**Invited Speaker:** presentation on “Wildland Fires and Rural/Urban Firefighter Safety: Raising the Awareness of the Inherent Dangers of Grass Fires”, Blue Ridge Volunteer Fire Department, Blue Ridge, AB, Apr. 2007.

**Invited Speaker:** presentation on “Surviving a Wildland Fire Entrapment or Burnover – What Are Your Options?”, Renewable Resources Seminar Series, University of Alberta, Edmonton, AB, Oct. 2007.

**Invited Guest Lecturer:** presentation on “Fire is Not a Binary Event!”, Forest Biology Course (REN 601), University of Alberta, Edmonton, AB, Oct. 2007.

**Invited Guest Lecturer:** presentation on “Living With Fire in the Boreal Forest”, Forest Fire Management Course (FOR 340), University of Alberta, Edmonton, AB, Apr. 2008.

**Invited Speaker:** presentation on “Application of the CFFDRS for Initial Attack Preparedness”, Alaska Division of Forestry Fire Preparedness Workshop, Fairbanks, AK, April 2008.

**Invited Speaker:** presentation on “Considerations in Applying the CFFDRS to Restricting Firing Operations”, Alaska Fire Service Military Zone Meeting, Fort Wainwright, AK, April 2008.

**Invited Speaker:** presentation on “A Primer on the Canadian Forest Fire Danger Rating System (CFFDRS)”, Alaska Division of Forestry Spring Operations Meeting, Fairbanks, AK, April 2008.

**Invited Speaker:** presentation on “Living With Fire in the Boreal Forest”, Renewable Resources Seminar Series, University of Alberta, Edmonton, AB, Oct. 2008.

**Invited Banquet Speaker:** presentation “Forest Fire Protection and Management in Nova Scotia: Reflecting on the Past, the Present, and the Future”, Halifax, NS, Nov. 2008

**Invited Guest Lecturer:** presentation on “Living With Fire in the Boreal Forest”, Forest Fire Management Course (FOR 340), University of Alberta, Edmonton, AB, Apr. 2009

**Invited Keynote Speaker:** presentation on “Are Wildland-Urban Interface Fire Disasters Avoidable?”, New Brunswick Association of Fire Chiefs 32nd Annual Convention, Moncton, NB, May 2009.

**Invited Speaker:** presentation on “Some Pragmatic Thoughts on the Prediction of Spotting in Wildland Fires”, MITACS/GEOIDE Conference on Forest Fire Modelling, Hinton, AB, June 2009.

**Invited Speaker:** presentation on “Living With Fire in the Boreal Forest”, Partners in Protection 13th Annual General Meeting, Jasper, AB, Oct. 2009.

**Invited Speaker:** series of presentations supported by the Scientific and Technological Research Council of Turkey, April 2011:

- Karadeniz Technical University, Faculty of Forestry, Trabzon: “Fundamentals of Fire Behaviour and Application to Wildland Fire Management”, “The Value of Case

Studies in Understanding Wildland Fire Behaviour”, “Wildfire Behaviour Monitoring and Documentation”, “Random Thoughts on Research and Operational Prediction of Wildland Fire Behaviour”, and “Living With Fire in the Boreal Forest of Canada”.

- Ministry of Environment and Forestry, National Headquarters, Ankara: “Perspectives on Developing a National Fire Danger Rating”.
- Kastamonu University, Faculty of Forestry, Kastamonu: “International Crown Fire Modelling Experiment (ICFME)”.
- Ministry of Environment and Forestry, Regional Office, Antalya: “Safety Hazards Associated with Suppressing Wildland Fires” and “Survival Options in Wildland Fire Entrapments and Burnovers”.

**Invited Speaker:** presentation on “NOT ON MY WATCH !” A Personal Perspective on Wildland Fire Safety, National Rural Fire Authority’s Annual Regional Rural Fire Committee Chairpersons Conference, Rotorua, New Zealand, June 2012.

**Invited Keynote Speaker:** presentation on “Wildland Fire Research’s Raison d’être”, SCION Rural Fire Research Workshop -- “Celebrating 20 Years of Rural Fire Research in NZ”, Rotorua, New Zealand, June 2012.

**Invited Speaker:** presentation on “The Science and Art Behind Fire Danger Ratings: An Historical and International Perspective”, Australian Bushfire Cooperative Research Centre Professional Development Event Series, Sydney, NSW, Australia, June 2012.

**Invited Guest Lecture:** presentation on “Why Wildland Fire is Not a Binary Event”, Wildland Disturbance Ecology and Management (WILD 5710), Utah State University, Logan, UT, Oct. 2012.

**Invited Seminar Speaker:** presentation on “On Linking the Impacts and Effects of Wildland Fires to Their Behavior”, Quinney College of Natural Resources Seminar Series, Utah State University, Logan, UT, Oct. 2012.

**Session Moderator:** International Association of Wildland Fire 4th Fire Behavior and Fuels Conference, Raleigh, NC, Feb. 2013.

**Invited Speaker:** presentations on “Synthesizing Knowledge on Crown Fire Behaviour in Conifer Forests” and “Wildfire Behaviour Documentation and Case Study Preparation”, Alberta Environment and Sustainable Resource Development Fire Behaviour Analyst (FBAN) Workshop, Edmonton, AB, Apr. 2013.

**Invited Guest Lecture:** presentation on “Why Wildland Fire is Not a Binary Event”, Wildland Disturbance Ecology and Management (WILD 5710), Utah State University, Logan, UT, Oct. 2013.

**Invited Speaker:** presentations on “Recent Developments and Applications in the Field of Wildland Fire Behaviour Research”, “New Models for Predicting Crown Fire Behaviour”, and “Thoughts on Improving Wildland Fire Behaviour Prediction”, Ontario

Ministry of Natural Resources – Aviation, Forest Fires and Emergency Services Fire Behaviour Analyst Workshop, Sault Ste. Marie, ON, Dec. 2013.

**Invited Speaker:** presentation on “Wildland Fire Case Study Development”, FPInnovations Forest Fuels Management Workshop, Hinton, AB, Jan. 2014.

**Invited Coordinator and Instructor:** The Theory and Practice of Wildland Fire Behaviour Estimation Course (3 days each). Kyllås and Hassela, Sweden, Apr. 2014 and Applying Fire Behaviour Knowledge in Wildland Fire Operations Course (3 days), Hassela, Sweden, Apr. 2014.

**Invited Speaker:** presentations on “*CFIS ... the Crown Fire Initiation and Spread* system software” and “Some Thoughts on Improving Predictions of Wildland Fire Behaviour”, Alberta Environment and Sustainable Resource Development Fire Behaviour Analyst (FBAN) Workshop, Edmonton, AB, Apr. 2014.

**Invited Speaker:** presentations on “Re-Thinking Forest Fires and Their Behaviour” and “Conflagration Prevention”, to Alberta Environment and Sustainable Resource Development – Lesser Slave Area wildfire management staff, Slave Lake, AB, Apr. 2014.

**Invited Keynote Speaker:** “Fire Behaviour: A (or The) Key Factor to Safe and Effective Control and Use of Fire”, Great Lakes Forest Fire Compact Annual Meeting, Elkhorn Resort, Riding Mountain National Park, MB, Sep. 2014.

**Invited Speaker:** presentations on “Overseas Use of CFFDRS” and “Crown Fire Behavior in Conifer Forests Synthesis”, Alaska Fire Science Consortium, Fairbanks, CFFDRS in Alaska Summit, Alaska, Oct. 2014.

**Invited Guest Lecturer:** presentation on “Crown Fire Behaviour and Fire Dynamics in Conifer Forests”, VII Short Course on Fire Behavior and Fire Dynamics in Conifer Forests”, Coimbra, Portugal, Nov. 2014.

**Invited Session Moderator and Poster Judge:** VII International Conference on Forest Fire Research, Coimbra, Portugal, Nov. 2014.

**Invited Speaker:** presentation on “The Practice of Predicting Wildland Fire Behaviour”, Ontario Ministry of Natural Resources – Aviation, Forest Fires and Emergency Services Fire Behaviour Analyst Workshop, Sault Ste. Marie, ON, Dec. 2014.

**Invited Keynote Speaker:** “Past, Present, and Future Issues in Wildland Fire Science and Management: A Global Perspective”, Northeastern Forest Fire Protection Compact Annual Winter Training/Awareness Meeting, Portland, ME, Jan. 2015.

**Invited Speaker:** presentations on “Wildland Firefighter Safety and Fire Behavior Prediction in the Field” and “Update on the Second Edition of the FBP System

“Redbook” (2015), Alberta Environment and Sustainable Resource Development Fire Behaviour Analyst (FBAN) Workshop, Edmonton, AB, Apr. 2015.

**Invited Speaker:** presentation on “Wildland Firefighter Safety”, Ontario Ministry of Natural Resources – Aviation, Forest Fires and Emergency Services Fire Behaviour Analyst Workshop, Sault Ste. Marie, ON, Dec. 2015.

**Invited Speaker:** presentation on “Discussion of Fire Behaviour Forecasts”, Ontario Ministry of Natural Resources – Aviation, Forest Fires and Emergency Services Fire Behaviour Analyst Workshop, Sault Ste. Marie, ON, Nov.-Dec. 2016.

**Invited Speaker:** Keynote Remarks, Advanced Wildland Fire Behaviour Course, Sault Ste. Marie, ON, Sep. 2017.

**Invited Speaker:** presentation on “CFB Suffield Grass Fire Case Study, September 11, 2017 ... a work in progress”, Fire Behaviour Analyst (FBAN) Workshop, Hinton, AB, Nov. 2017.

## **TECHNOLOGY AND INFORMATION TRANSFER ACTIVITIES**

**Instructor:** 1st Alberta Forest Service (AFS) Advanced Fire Behavior Course, Forest Technology School, Hinton, AB, Apr. 1982.

**Instructor:** 3rd AFS Advanced Fire Behavior Course, Forest Technology School, Hinton, AB, Apr. 1984.

**Instructor:** information sessions on the Canadian Forest Fire Behavior Prediction System (Saskatchewan Dept. of Parks & Renewable Resources, Manitoba Dept. of Natural Resources, and Alberta Forest Service), Prince Albert, SK, Winnipeg, MB, Calgary, AB [Bow-Crow Forest], Apr. 1985.

**Instructor:** 4th AFS Advanced Fire Behavior Course, Forest Technology School, Hinton, AB, Apr. 1985.

**Instructor:** 5th AFS Advanced Fire Behavior Course, Forest Technology School, Hinton, AB, Apr. 1986.

**Instructor:** 6th AFS Advanced Fire Behavior Course, Forest Technology School, Hinton, AB, Feb. 1987.

**Instructor:** information sessions on the Canadian Forest Fire Danger Rating System, Quebec and the four Atlantic Provinces (Fredericton, NB, Shubenacadie, NS, Charlottetown, PEI, and Gander, NL), Apr. 1987.

**Instructor:** 7th Advanced Fire Behavior Course, Forest Technology School, Hinton, AB, Apr. 1988.

**Instructor:** 8th AFS Advanced Fire Behavior Course, Forest Technology School, Hinton, AB, Apr. 1989.

**Coordinator & Instructor:** Advanced Fire Behaviour Courses [sponsored by National Rural Fire Authority in cooperation with the New Zealand Forest Research Institute], Rotorua, New Zealand, Sep. 1992.

**Coordinator & Instructor:** Advanced Fire Behaviour Courses [sponsored by National Rural Fire Authority in cooperation with the New Zealand Forest Research Institute], Christchurch, New Zealand, Sep. 1992.

**Coordinator & Instructor:** Advanced Fire Behaviour Courses [sponsored by National Rural Fire Authority in cooperation with the New Zealand Forest Research Institute], Bulls, New Zealand, Mar. 1993.

**Coordinator & Instructor:** Advanced Fire Behaviour Course Refresher Seminar [sponsored by National Rural Fire Authority in cooperation with New Zealand Forest Research Institute], Rotorua, Zealand, Mar. 1993.

**Coordinator & Instructor:** Advanced Fire Behaviour Course Refresher Seminar [sponsored by National Rural Fire Authority in cooperation with New Zealand Forest Research Institute], Christchurch, New Zealand, Mar. 1993.

**Coordinator & Instructor:** Fire Behaviour Awareness Workshops [sponsored by Carter Holt Harvey Forests Limited in association with New Zealand Forest Research Institute], Tokoroa, New Zealand (2 sessions), Apr. 1993.

**Coordinator & Instructor:** Fire Behaviour Awareness Workshops [sponsored by Carter Holt Harvey Forests Limited in association with New Zealand Forest Research Institute], Hamner Springs (2 sessions), New Zealand, Apr. 1993.

**Instructor:** Multi-agency Advanced Fire Behavior Course, Environmental Training Centre, Hinton, AB, Mar. 1994.

**Course Chairperson, Unit Leader & Instructor:** 1st Canadian Interagency Forest Fire Centre (CIFFC) sponsored National Advanced Wildland Fire Behavior Course, Hinton, AB, Feb. 1995.

**Coordinator & Instructor:** Fire Management Applications of the Canadian Forest Fire Danger Rating System (CFFDRS) Workshop. [Sponsored by Alaska Division of Forestry in association with the Canadian Forest Service], Anchorage, AK, Jan. 1996.

**Course Chairperson, Unit Leader & Instructor:** 2nd CIFFC sponsored National Advanced Wildland Fire Behavior Course, Sault Ste. Marie, ON, Jan. 1996.

**Course Chairperson, Unit Leader & Instructor:** 3rd CIFFC sponsored National Advanced Wildland Fire Behavior Course, Hinton, AB, Mar. 1996.

**Course Chair, Unit Leader & Instructor:** 1st CIFFC sponsored National Wildland Fire Behavior Specialist Course, Hinton, AB, Mar. 1996.

**Course Chairperson, Unit Leader & Instructor:** 4th CIFFC sponsored National Advanced Wildland Fire Behavior Course in cooperation with the Alaska Fire Service, Fairbanks, AK, Oct. 1996.

**Course Chairperson, Unit Leader & Instructor:** 5th CIFFC sponsored National Advanced Wildland Fire Behavior Course, Fredericton, NB, Nov. 1996.

**Coordinator & Speaker:** Western North American Fire Shelter Meeting [sponsored by Alberta Land & Forest Service in association with The Canadian Forest Service], Bragg Creek, AB, Sep. 1996.

**Course Chair, Unit Leader & Instructor:** 2nd CIFFC sponsored Wildland Fire Behavior Specialist Course, Hinton, AB, Feb. 1997.

**Course Chairperson, Unit Leader & Instructor:** 6th CIFFC sponsored National Advanced Wildland Fire Behavior Course, Hinton, AB, Nov. 1997.

**Course Chair, Unit Leader & Instructor:** 3rd CIFFC sponsored National Wildland Fire Behavior Specialist Course, Hinton, AB, Feb. 1998.

**Coordinator & Instructor:** Wildfire Behavior Documentation Workshop held in conjunction with the annual meeting of the Atlantic Forest Fire Management Coordinating Committee, Charlottetown, PEI, Sep. 1998.

**Poster Presentations:** “A Simple Aid for Predicting Fire Behavior in Grasslands Under Severe Burning Conditions”, co-authored with L.G. Fogarty (formerly New Zealand Forest Research Institute), Interior West Fire Council Annual Meeting and Workshop, Big Sky, MT, Sep.-Oct., 1998 and 2nd Canada/Australia/US Safety Summit, Winthrop, WA, Oct., 1998.

**Instructor:** 1st CIFFC sponsored Western Region Advanced Wildland Fire Behavior Course, Salmon, Arm, BC, Oct. 1998.

**Course Chair, Unit Leader & Instructor:** 4th CIFFC sponsored National Wildland Fire Behavior Specialist Course, Hinton, AB, Mar. 1999.

**Poster Presentation:** “A Simple Aid for Predicting Fire Behavior in Grasslands Under Severe Burning Conditions”, co-authored with L.G. Fogarty (formerly New Zealand Forest Research Institute), National Interagency Fire Behavior Workshop, Phoenix, AZ, Mar. 1999.



**Poster Presentations:** “Canadian Forest Fire Danger Rating System”, co-authored with T.A. Van Nest (Alberta Environmental Training Centre) and the “The Mann Gulch Fire and the Canadian Forest Fire Danger Rating System”, National Interagency Fire Behavior Workshop, Phoenix, AZ, Mar., 1999.

**Poster Presentation:** “Crown Fires are “HOT””: Introducing the International Crown Fire Modelling Experiment”, co-authored with B.J. Stocks (CFS) and R.A. Lanoville (GNWT), Fire on Ice Workshop, Khabarovsk, Russia, Aug., 1999.

**Instructor:** 2nd CIFFC sponsored Western Region Advanced Wildland Fire Behavior Course, Hinton, AB, Nov. 1999.

**Instructor:** 1st CIFFC sponsored Eastern Region Advanced Wildland Fire Behavior Course, Thunder Bay, ON, Jan. 2000.

**Course Chair, Unit Leader & Instructor:** 5th CIFFC sponsored National Wildland Fire Behavior Specialist Course, Hinton, AB, Feb. 2000.

**Poster Presentations:** “Predicting Fire Behavior in Wildland/Urban Environments”, co-authored with C.N. Stefner (CFS), and “A Pocket Card for Predicting Fire Behavior in Grasslands Under Severe Burning Conditions”, co-authored with L.G. Fogarty (formerly New Zealand Forest Research Institute) Interface Fires 2000 Conference, Halifax, NS, May 2000.

**Poster Presentations:** “CD-ROM *Wildland Fire - Safety on the Fireline* Now Available!”, co-authored with R.W. Thorburn (Alberta Environmental Training Centre), A. MacMallian (Christie Communications), D. Campbell (Saskatchewan Environment & Resource Management) and J. McLevin (Alberta Land & Forest Service), “New Insights into the Effectiveness of Fuel Reduction Treatments”, co-authored with J.A. Beck (FERIC), C.N. Stefner (CFS), R.A. Lanoville (GNWT) and G. Holloway (B.C. Forest Service), and “Predicting the Initiation and Spread of Crown Fires”, co-authored with M.G. Cruz and R.H. Wakimoto (Univ. of Montana), Forest Fire Science and Management Forum, Halifax, NS, Sep., 2000.

**Poster Presentation:** “The International Crown Fire Modelling Experiment”, co-authored with B.J. Stocks (CFS), B.M. Wotton (CFS) and R.A. Lanoville (GNWT), Euromediterranean Wildfire Meetings, Hyeres les Palmiers, France, Oct., 2000.

**Instructor:** 3rd CIFFC sponsored Western Region Advanced Wildland Fire Behavior Course, Salmon Arm, BC, Oct.-Nov. 2000.

**Course Chair, Unit Leader & Instructor:** 6th CIFFC sponsored National Wildland Fire Behavior Specialist Course, Hinton, AB, Feb.-Mar. 2001.

**Instructor:** 4th CIFFC sponsored Western Region Advanced Wildland Fire Behavior Course, Hinton, AB, Oct.-Nov. 2001.

**Course Chair & Instructor:** 1st CIFFC sponsored National Wildland Fire Behavior Specialist Refresher Course, Hinton, AB, Feb. 2002.

**Instructor:** 5th CIFFC sponsored Western Region Advanced Wildland Fire Behavior Course, Prince Albert, SK, Oct. 2002.

**Instructor:** 6th CIFFC sponsored Western Region Advanced Wildland Fire Behavior Course, Hinton, AB, Oct. 2003.

**Course Chair, Unit Leader & Instructor:** 7th CIFFC sponsored National Wildland Fire Behavior Specialist Course, Hinton, AB, Feb. 2004.

**Instructor:** 8th CIFFC sponsored Western Region Advanced Wildland Fire Behavior Course, Hinton, AB, Oct. 2005.

**Unit Leader & Instructor:** 8th CIFFC sponsored National Wildland Fire Behavior Specialist Course, Hinton, AB, Feb. 2006.

**Unit Leader & Instructor:** 9th CIFFC sponsored National Wildland Fire Behavior Specialist Course, Hinton, AB, Feb. 2008.

**Instructor:** 10th CIFFC sponsored National Wildland Fire Behavior Specialist Course, Hinton, AB, Feb. 2010.

**Lecturer:** presentation on “Living With Fire in the Boreal Forest”, Forest Fire Management Course (FOR 340), University of Alberta, Edmonton, AB, Apr. 2010.

**Lecturer:** presentation on “ ‘Lest we forget’: Canada’s major wildland fire disasters of the past, 1825-1938”, Forest Fire Management Course (FOR 340), University of Alberta, Edmonton, AB, Mar. 2011.

**Moderator:** 11<sup>th</sup> International Wildland Fire Safety Summit, Hotstove Session: Stories of Close Calls and Near Misses, Missoula, MT, Apr. 2011.

**Lecturer:** presentation on “What kind of fire behavior is required to open serotinous cones of jack pine and lodgepole pine?”, Renewable Resources Departmental Seminar Series, University of Alberta, Edmonton, Alberta, October 20, 2011.

**Instructor:** 11th CIFFC sponsored National Wildland Fire Behavior Specialist Course, Hinton, AB, Jan.-Feb. 2012.

**Poster presentation:** “Evaluation Monitoring Funded Projects Explain Relationships Between Bark Beetles, Fuels and Fire Behavior” co-authored with M.J. Jenkins, W.G. Page,

C.A. Gray and C. Toone, USDA Forest Service Environmental Monitoring Meeting, Apr. 2012.

**Special Session Moderator:** International Association of Wildland Fire 4th Fire Behavior and Fuels Conference, Raleigh, NC, Feb. 2013.

**Instructor and Coordinator:** “Crown Fire Behavior in Conifer Forests” Workshop, 4<sup>th</sup> IAWF Fire Behavior and Fuels Conference, Raleigh, NC, Feb. 2013.

**Poster presentation:** “Evaluation Monitoring Funded Projects Explain Relationships Between Bark Beetles, Fuels and Fire Behavior” co-authored with M.J. Jenkins, C.A. Gray, J.B. Runyon, W.G. Page and C. Toone, USDA Forest Service Environmental Monitoring Meeting, Apr. 2013.

**Speaker:** presentation on “Wildfire’s Resistance to Control in Mountain Pine Beetle-attacked Lodgepole Pine Forests”, Renewable Resources Departmental Seminar Series, University of Alberta, Edmonton, AB, Oct. 2013.

**Lecturer:** presentation on “Past, Present, and Future Issues in Wildland Fire Science and Management: A Global Perspective”, Introduction to Fire Science and Management Course (REN R 340) Course, University of Alberta, Edmonton, AB, Jan. 2014.

**Instructor:** 12th CIFFC sponsored National Wildland Fire Behavior Specialist Course, Hinton, AB, Feb. 2014.

**Instructor:** Practical Tools for Assessing Potential Crown Fire Behavior and Canopy Fuel Characteristics Workshop held in conjunction with Conference on Large Wildland Fires: Social, Political & Ecological Effects, Missoula, MT, May 2014.

**Lecturer:** presentation on “Wildland Firefighter and Public Fire Safety”, Introduction to Fire Science and Management Course (REN R 340) Course, University of Alberta, Edmonton, AB, Mar. 2015.

**Cadre Member:** 13th CIFFC sponsored National Wildland Fire Behavior Specialist Course, Hinton, AB, Jan.-Feb. 2016.

**Cadre Member:** 14th CIFFC sponsored National Wildland Fire Behavior Specialist Course, Hinton, AB, Feb. 2018.

**Speaker:** presentation on “A Rule of Thumb for Estimating Wildfire ROS from Wind Speed”, Alberta Agriculture and Forestry Fire Behaviour Analyst (FBAN) Workshop, Hinton, AB, Nov. 2018.

## LIST OF PUBLICATIONS<sup>2</sup>

---

<sup>2</sup> A good many of the publications are available through the Canadian Forest Service Publications website (<https://cfs.nrcan.gc.ca/authors/read/12563>). For those that are not, please contact the author.

## Peer-Reviewed Scientific Journal Articles and Conference Proceedings Papers

Alexander, M.E.; Hawksworth, F.G. 1976. Fire and dwarf mistletoes in North American coniferous forests. *Journal of Forestry* 74: 446-449.

Alexander, M.E. 1980. Four fire scar records on lodgepole pine (*Pinus contorta* Dougl.) in north-central Colorado. *Southwestern Naturalist* 25: 432-434.

Alexander, M.E. 1982. Fire behavior in aspen slash fuels as related to the Canadian Fire Weather Index. *Canadian Journal of Forest Research* 12: 1028-1029.

Alexander, M.E. 1982. Calculating and interpreting forest fire intensities. *Canadian Journal of Botany* 60: 349-357, 2185.

Alexander, M.E. 1984. Prescribed fire behavior and impact in an eastern spruce-fir slash fuel complex. *Canadian Forestry Service Research Notes* 4: 3-7, 25.

Harvey, D.A.; Alexander, M.E.; Janz, B. 1986. A comparison of fire weather severity in northern Alberta during the 1980 and 1981 fire seasons. *Forestry Chronicle* 62: 507-513.

Alexander, M.E.; Sando, R.W. 1989. Fire behavior and effects in aspen-northern hardwood stands. Pages 263-274 in *Proc. 10th Conf. on Fire and For. Meteorol.* (Apr. 17-21, 1989, Ottawa, ON). *For. Can. and Environ. Can.*, Ottawa, ON.

Stocks, B.J.; Lawson, B.D.; Alexander, M.E.; Van Wagner, C.E.; McAlpine, R.S.; Lynham, T.J.; Dube, D.E. 1989. The Canadian Forest Fire Danger Rating System: An Overview. *Forestry Chronicle* 65: 450-457.

Alexander, M.E.; Quintilio, D. 1990. Perspectives on experimental fires in Canadian forestry research. *Mathematical and Computer Modelling* 13(12):17-26.

Alexander, M.E. 1991. The 1985 Butte Fire in central Idaho: a Canadian perspective on the associated burning conditions. Pages 334-343 in *Proc. Interl. Symp. Fire and the Environment: Ecological and Cultural Perspectives* (Mar. 20-24, 1990, Knoxville, TN). *USDA For. Serv., Southeast. For. Exp. Stn., Asheville, NC. Gen. Tech. Rep. SE-69.*

Alexander, M.E. 1992. The Keetch-Byram Drought Index: a corrigendum. *Bulletin of the American Meteorological Society* 73: 61.

Catchpole, E.A.; Alexander, M.E.; Gill, A.M. 1992. Elliptical-fire perimeter-and area-intensity distributions. *Can. J. For. Res.* 22(7): 968-972. (Errata: 23(6):1244, 1993; 29(6):788, 1999)

Pearce, H.G.; Alexander, M.E. 1995. A simple test fire exercise for fire behavior training. *Wildfire* 5(1):37-41.

Nalder, I.A.; Wein, R.W.; Alexander M.E.; de Groot, W.J. 1997. Physical properties of dead and downed round-wood fuels in the boreal forests of Alberta and the Northwest Territories. *Canadian Journal of Forest Research* 27:1513-1517.

Nalder, I.A.; Wein, R.W.; Alexander, M.E.; de Groot, W.J. 1999. Physical properties of dead and downed roundwood fuels in the boreal forests of western and northern Canada. *International Journal of Wildland Fire* 9: 85-99.

Thorburn, R.W.; MacMillan, A.; Alexander, M.E. 2000. The application of interactive multimedia CD-ROM technology to wildland fire safety training. *Forestry Chronicle* 76: 953-959.

Amiro, B.D.; Stocks, B.J.; Alexander, M.E.; Flannigan, M.D.; Wotton, B.M. 2001. Fire, climate change, carbon and fuel management in the Canadian boreal forest. *International Journal of Wildland Fire* 10: 405-413.

Leblon, B.; Alexander, M.E.; Chen, J.; White, S. 2001. Monitoring fire danger of northern boreal forests using NOAA-AVHRR NDVI images. *International Journal of Remote Sensing* 22: 2839-2846.

Beck, J.A.; Alexander, M.E.; Harvey, S.D.; Beaver, A.K. 2002. Forecasting diurnal variation in fire intensity to enhance wildland firefighter safety. *International Journal of Wildland Fire* 11: 173-182.

Leblon, B.; Kasischke, E.S.; Alexander, M.E.; Doyle, M.; Abbott, M. 2002. Fire danger monitoring using ERS-1 SAR images in the case of northern boreal forests. *Natural Hazards* 27: 231-255.

Lee, B.S.; Alexander, M.E.; Hawkes, B.C.; Lynham, T.J.; Stocks, B.J.; Englefield, P. 2002. Information systems in support of wildland fire management decision making in Canada. *Computers and Electronics in Agriculture* 37: 185-198.

Cruz, M.G.; Alexander, M.E.; Wakimoto, R.H. 2003. Assessing canopy fuel stratum characteristics in crown fire prone fuel types in western North America. *International Journal of Wildland Fire* 12: 39-50.

Cruz, M.G.; Alexander, M.E.; Wakimoto, R.H. 2003. Assessing the probability of crown fire initiation based on fire danger indices. *Forestry Chronicle* 79: 976-983.

Cruz, M.G.; Alexander, M.E.; Wakimoto, R.H. 2003. Definition of a fire behavior model evaluation protocol: a case study application to crown fire behavior models. Pages 49-67 in Omi, P.N.; Joyce, L.A. (tech. eds.). *Fire, Fuel Treatments and Ecological Restoration: Conference Proceedings* (Apr. 16-18, 2002, Fort Collins, CO). USDA Forest Service, Rocky Mountain Research Station, Fort Collins, CO. Proceedings.RMRS-P-29.

Oldford, S.; Leblon, N.; Gallant, L.; Alexander, M.E. 2003. Mapping pre-fire conditions in the Northwest Territories, Canada, using NOAA-AVHRR images. *Geocarto International* 18(4): 21-32.

de Groot, W.J.; Bothwell, P.M.; Taylor, S.W.; Wotton, B.M.; Stocks, B.J.; Alexander, M.E. 2004. Jack pine regeneration and crown fires. *Canadian Journal of Forest Research* 34: 1634-1641.

Cruz, M.G.; Alexander, M.E.; Wakimoto, R.H. 2004. Modeling the likelihood of crown fire occurrence in conifer forest stands. *Forest Science* 50: 640-658.

Stocks, B.J.; Alexander, M.E.; Lanoville, R.A. 2004. Overview of the International Crown Fire Modelling Experiment (ICFME). *Canadian Journal of Forest Research* 34: 1543-1547.

Stocks, B.J.; Alexander, M.E.; Wotton, B.M.; Stefner, C.N.; Flannigan, M.D.; Taylor, S.W.; Lavoie, N.; Mason, J.A.; Hartley, G.R.; Maffey, M.E.; Dalrymple, G.N.; Blake, T.W.; Cruz, M.G.; Lanoville, R.A. 2004. Crown fire behaviour in a northern jack pine – black spruce forest. *Canadian Journal of Forest Research* 34:1548-1560. [erratum: *Can. J. For. Res.* 36: 2063. 2006; 41: 215. 2011.]

Taylor, S.W.; Wotton, B.M.; Alexander, M.E.; Dalrymple, G.N. 2004. Variation in wind and crown fire behaviour in a northern jack pine – black spruce forest. *Canadian Journal of Forest Research* 34: 1561-1576.

Cruz, M.G.; Alexander, M.E.; Wakimoto, R.H. 2005. Development and testing of models for predicting crown fire rate of spread in conifer forest stands. *Canadian Journal of Forest Research* 35: 1626-1639.

Alexander, M.E.; Cruz, M.G. 2006. Evaluating a model for predicting active crown fire rate of spread using wildfire observations. *Canadian Journal of Forest Research* 36: 3015-3028.

Cruz, M.G.; Butler, B.W.; Alexander, M.E.; Forthofer, J.M.; Wakimoto, R.H. 2006. Predicting the ignition of crown fuels above a spreading surface fire. Part I: Model idealization. *International Journal of Wildland Fire* 15: 47-60.

Cruz, M.G.; Butler, B.W.; Alexander, M.E. 2006. Predicting the ignition of crown fuels above a spreading surface fire. Part II: Model behavior and evaluation. *International Journal of Wildland Fire* 15: 61-72.

Taylor, S.W.; Alexander, M.E. 2006. Science, technology, and human factors in fire danger rating: The Canadian experience. *International Journal of Wildland Fire* 15: 121-135.

Abbott, K.N.; Alexander, M.E.; MacLean, D.A.; Leblon, B.; Beck, J.A.; Staples, G.C. 2007. Predicting forest floor moisture for burned and unburned *Pinus banksiana* forests in the Canadian Northwest Territories. *International Journal of Wildland Fire* 16: 71-80.

Abbott, K.N.; Leblon, B.; Staples, G.C.; Maclean, D.A.; Alexander, M.E. 2007. Fire danger monitoring using RADARSAT-1 over northern boreal forests. *International Journal of Remote Sensing* 28: 1317-1338.

Otway, S.G.; Bork, E.W.; Anderson, K.R.; Alexander, M.E. 2007. Predicting the probability of sustained smouldering combustion in trembling aspen duff in Elk Island National Park, Canada. *International Journal of Wildland Fire* 16: 690-701.

Otway, S.G.; Bork, E.W.; Anderson, K.R.; Alexander, M.E. 2007. Relating changes in duff moisture to the Canadian Forest Fire Weather Index System in *Populus tremuloides* stands in Elk Island National Park. *Canadian Journal of Forest Research* 37: 1987-1998.

Cruz, M.G.; Alexander, M.E.; Fernandes, P.A.M. 2008. Development of a model system to predict wildfire behavior in pine plantations. *Australian Forestry* 71: 113-121.

Alexander, M.E. 2010. Surface fire spread potential in trembling aspen during the summer in the boreal forest region of Canada. *Forestry Chronicle* 86: 200-212.

Cruz, M.G.; Alexander, M.E. 2010. Assessing crown fire potential in coniferous forests of western North America: a critique of current approaches and recent simulation studies. *International Journal of Wildland Fire* 19: 377-398.

Cruz, M.G.; Alexander, M.E.; Wakimoto, R.H. 2010. Comment on “Estimating canopy fuel characteristics in five conifer stands in the western United States using tree and stand measurements”. *Canadian Journal of Forest Research* 40: 2262-2263.

Alexander, M.E.; Cruz, M.G. 2012. Interdependencies between flame length and fireline intensity in predicting crown fire initiation and crown scorch height. *International Journal of Wildland Fire* 21: 95-113.

Cruz, M.G.; Alexander, M.E. 2012. Evaluating regression model estimates of canopy fuel stratum characteristics in four crown fire prone fuel types in western North America. *International Journal of Wildland Fire* 21: 168-179.

Albini, F.A.; Alexander, M.E.; Cruz, M.G. 2012. A mathematical model for predicting the maximum potential spotting distance from a crown fire. *International Journal of Wildland Fire* 21: 609-627.

Alexander, M.E. and M.G. Cruz. 2012. Estimating flame length from fireline intensity. *International Journal of Wildland Fire* [online].  
[http://www.publish.csiro.au/?act=view\\_file&file\\_id=WF11001\\_AC.pdf](http://www.publish.csiro.au/?act=view_file&file_id=WF11001_AC.pdf)

Alexander, M.E.; Cruz, M.G. 2012. Graphical aids for visualizing Byram's fireline intensity in relation to flame length and crown scorch height. *Forestry Chronicle* 88: 185-190.

Alexander, M.E.; Cruz, M.G. 2012. Modelling the impacts of surface and crown fire behaviour on serotinous cone opening in jack pine and lodgepole pine forests. *International Journal of Wildland Fire* 21: 709-721.

Jenkins, M.J.; Page, W.G.; Hebertson, E.G.; Alexander, M.E. 2012. Fuels and fire behavior dynamics in bark-beetle attacked forests in western North America and implications for fire management. *Forest Ecology and Management* 275: 23-34.

Alexander, M.E.; Cruz, M.G. 2013. Are the applications of wildland fire behaviour models getting ahead of their evaluation again? *Environmental Modelling & Software* 41: 65-71.

Alexander, M.E.; Cruz, M.G. 2013. Limitations on the accuracy of model predictions of wildland fire behaviour: a state-of-the-knowledge overview. *Forestry Chronicle* 89: 370-381.

Alexander, M.E.; Cruz, M.G. 2013. Assessing the effect of foliar moisture on the spread rate of crown fires. *International Journal of Wildland Fire* 22: 415-427, 869-870.

Cruz, M.G.; Alexander, M.E. 2013. Uncertainty associated with model predictions of surface and crown fire rates of spread. *Environmental Modelling & Software* 47: 16-28.

Page, W.G.; Jenkins, M.J.; Alexander, M.E. 2013. Foliar moisture content variations in lodgepole pine over the diurnal cycle during the red stage of mountain pine beetle attack. *Environmental Modelling and Software* 49: 98-102.

Page, W.G.; Alexander, M.E.; Jenkins, M.J. 2013. Wildfire's resistance to control in mountain pine beetle-attacked lodgepole pine stands. *Forestry Chronicle* 89: 783-794.

Alexander, M.E.; Cruz, M.G. 2014. Tables for estimating canopy fuel characteristics from stand variables in four Interior West conifer forest types. *Forest Science* 60: 784-794.

Cruz, M.G.; Alexander, M.E.; Dam, J.E. 2014. Using modeled surface and crown fire behavior characteristics to evaluate fuel treatment effectiveness: a caution. *Forest Science* 60: 1000-1005.

Page, W.G.; Jenkins, M.J.; Alexander, M.E. 2014. Crown fire potential in lodgepole pine forests during the red stage of mountain pine beetle attack. *Forestry* 87: 347-361.



Cruz, M.G.; Gould, J.S.; Alexander, M.E.; Sullivan A.L.; McCaw, W.L.; Matthews, S. 2015. Empirical-based models for predicting head-fire rate of spread in Australian fuel types. *Australian Forestry* 87: 118-158.

Page, W.G.; Jenkins, M.J.; Alexander, M.E. 2015. Models to predict the moisture content of lodgepole pine foliage during the red stage of mountain pine beetle attack. *Forest Science* 61: 128-134.

Cruz, M.G.; Alexander, M.E. 2017. Modelling the rate of fire spread and uncertainty associated with the onset and propagation of crown fires in conifer forest stands. *International Association of Wildland Fire* 26: 413-426.

Cruz, M.G.; Alexander, M.E.; Plucinski, M.P. 2017. The effect of silvicultural treatments on fire behaviour potential in radiata pine plantations of South Australia. *Forest Ecology and Management* 397: 27-38.<sup>3</sup>

Cruz, M.G.; Alexander, M.E.; Sullivan, A.L. 2017. Mantras of wildland fire behaviour modelling: facts or fallacies? *International Journal of Wildland Fire* 26: 973-981.

Cruz, M.G.; Alexander, M.E.; Sullivan, A.L.; Gould, J.S.; Kilinc, M. 2018. Assessing model improvements in predicting wildland fire rates of spread. *Environmental Modelling & Software* 105: 54-63.

Cruz, M.G.; Alexander, M.E.; Sullivan, A.L. 2018. A response to ‘Clarifying the meaning of mantras in wildland fire behaviour modelling: a reply to Cruz et al. (2017)’. *International Journal of Wildland Fire* 27: 776-780.

Cruz, M.G.; Alexander, M.E. 2019. The 10% wind speed rule of thumb for estimating a wildfire’s forward rate of spread in forests and shrublands. *Annals in Forest Science* 76(2). 44. 11 p.

Cruz, M.G.; Alexander, M.E. 2019. Comments on “Evaluating crown fire rate of spread predictions from physics-based models”. *Fire Technology* 55. Online early.  
<https://link.springer.com/article/10.1007/s10694-019-00857-1>

Moriarty, K.; Cheng, A.S.; Hoffman, C.M.; Cottrell, S.P. Alexander, M.E. 2019. Firefighter sense-making of “surprising” fire behavior in mountain pine beetle-attacked lodgepole pine forests. *Fire* 2, 34. 17 p.

### **Invited Articles and Papers**

Stocks, B.J.; Lawson, B.D.; Alexander, M.E.; Van Wagner, C.E.; McAlpine, R.S.; Lynham, T.J.; Dube, D.E. 1991. The Canadian system of forest fire danger rating. Pages

---

<sup>3</sup> See: <https://research.csiro.au/pyropage/wp-content/uploads/sites/17/delightful-downloads/2017/08/CSIRO-PyroPage-Issue-13-Fuel-management-zones-in-pine-plantations-1.pdf>

9-18 in Proc. Conf. Bushfire Modelling and Fire Danger Rating Systems (July 11-12, 1988, Canberra, ACT, Australia). CSIRO Div. For., Canberra, A.C.T.

Alexander, M.E. 1992. Fire behaviour as a factor in forest and rural fire suppression. Pages 64-103 in Proc. For. Rural Fire Assoc. N.Z. 2nd Annu. Conf. (Aug. 5-7, 1992, Christchurch, N.Z.). For. Rural Fire Assoc. N.Z., Rotorua, New Zealand.

Alexander, M.E.; Stocks, B.J.; Lawson, B.D. 1996. The Canadian Forest Fire Danger Rating System. Initial Attack 1996 (Spring): 6-9.

Alexander, M.E.; Stocks, B.J.; Lawson, B.D. 1996. Methode canadienne d'evaluation des dangers d'incendie de foret. Attaque Initiale 1996 (Printemps): 6-9.

Alexander, M.E.; Stocks, B.J.; Wotton, B.M.; Lanoville, R.A. 1998. An example of multi-faceted wildland fire research: the International Crown Fire Modelling Experiment. Pages 83-112 in Proc. III Int. Conf. For. Fire Res./14th Conf. Fire For. Meteorol. (Nov. 16-20, 1998, Luso, Portugal), Vol. II. Univ. Coimbra, Coimbra, Portugal.

Alexander, M.E. 2000. Rural fire management beyond 2000. in Proc. For. Rural Fire Assoc. N.Z. 9th Annu. Conf. (Aug. 4-6, 1999, Greymouth, N.Z.). For. Rural Fire Assoc. N.Z., Rotorua, New Zealand. 2 p.

Alexander, M.E. 2000. Fire behavior knowledge gaps (& research needs) pertaining to ecosystem management. Invited paper presented at the Workshop on Integrated Resource Management in Ecosystems Dominated by High Intensity Fire: Challenges, Tools and Solutions (Nov. 8-10, 2000, Edmonton, AB). 6 p.

[https://www.frames.gov/documents/catalog/alexander\\_2000\\_high-intensity\\_fire.pdf](https://www.frames.gov/documents/catalog/alexander_2000_high-intensity_fire.pdf)

Alexander, M.E.; Stocks, B.J.; Wotton, B.M.; Lanoville, R.A. 2001. Tracking the spread and intensity of crown fires. Initial Attack 2001 (Fall): 8-11.

Alexander, M.E. 2002. The staff ride approach to wildland fire behavior and firefighter safety. Fire Management Today 62(4): 25-30.

Alexander, M.E.; Thomas, D.A. 2003. Wildland fire behavior case studies and analyses: Value, approaches, and practical uses. Fire Management Today 63(3): 4-8.

Alexander, M.E.; Thomas, D.A. 2003. Wildland fire behavior case studies and analyses: Other examples, methods, reporting standards, and some practical advice. Fire Management Today 63(4): 4-12.

Alexander, M.E.; Thomas, D.A. 2004. Forecasting wildland fire behavior: Aids, guides, and knowledge-based protocols. Fire Management Today 64(1): 4-11.

Alexander, M.E. 2006. Forest health: Fire behavior considerations. *in* Appendix – DVD, Proceedings of the Post-harvest Stand Development Conference, Edmonton, AB, 31

January – 1 February 2006. Sponsored by Foothills Model Forest, Foothills Growth and Yield Association, Alberta Forest Genetic Resources Council, and Forest Resources Improvement Association of Alberta. Foothills Model Forest, Hinton, AB. 56 p.

Alexander, M.E. 2006. You are about to be entrapped or burned over by a wildfire: what are your survival options? in D.X. Viegas (ed.). Proc. 5th Int. Conf. For. Fire Res., 27-30 November 2006, Figueira da Foz, Portugal. Elsevier B.V., Amsterdam, The Netherlands. CD-ROM. 12 p.

Alexander, M.E. 2006. Models for predicting crown fire behavior – a review. Pages 173-225 in V Short Course on Fire Behaviour, 25-26 November 2006, Figueira da Foz, Portugal. Association for the Development of Industrial Aerodynamics, Forest Fire Research Centre, Coimbra, Portugal.  
([https://www.frames.gov/documents/catalog/alexander\\_2006b.pdf](https://www.frames.gov/documents/catalog/alexander_2006b.pdf))

Alexander, M.E.; Thomas, D.A. 2006. Prescribed fire case studies, decision aids, and planning guides. Fire Management Today 66(1): 5-20.

Alexander, M.E. 2007. Surviving a wildland fire entrapment or burnover. Canadian Silviculture 2007(Aug.): 23.

Cruz, M.G.; Alexander, M.E. 2010. Crown fires. Pages 30-46 in VI Short Course on Fire Behaviour, 13-14 November 2010, Coimbra, Portugal. Association for the Development of Industrial Aerodynamics, Forest Fire Research, Coimbra, Portugal.  
([https://www.frames.gov/documents/catalog/cruz\\_and\\_alexander\\_2010.pdf](https://www.frames.gov/documents/catalog/cruz_and_alexander_2010.pdf))

Alexander, M.E.; Cruz, M.G. 2011. Chapter 8: Crown fire dynamics in conifer forests. Pages 107-142 in Synthesis of Knowledge of Extreme Fire Behavior: Volume 1 for Fire Managers. USDA For. Serv., Pac. Northwest Res. Stn., Portland, OR. Gen. Tech. Rep. PNW-GTR-854.

Alexander, M.E. 2012. Towards the understanding of extreme wildland fire behavior. International Association of Fire Safety Science Newsletter 32: 26.

Alexander, M.E. 2012. Introduction to Dr. Robert Bell's article. Fire Ecology 8(1): 1-2.

Alexander, M.; Heathcott, M.; Schwanke, R. 2012. Winter wildfires? FireSmart Farm and Ranch Magazine 2012 (Fall/Winter): 18.

Alexander, M.E. 2014. Introduction to the article by H.E. Wright Jr. and M.L. Heinselman. Fire Ecology 10(3): 1-3.

Alexander, M.E.; Cruz, M.G. 2014. Crown fire behaviour and fire dynamics. Pages 53-87 in VII Short Course on Fire Behaviour booklet, 15-16 November 2014, held at the VII International Conference on Forest Fire Research, Coimbra, Portugal.

Alexander, M.E.; Cruz, M.G. 2016. Chapter 9: Crown fire dynamics in conifer forests. Pages 163-258 in *Synthesis of Knowledge of Extreme Fire Behavior: Volume 2 for Fire Behavior Specialists, Researchers and Meteorologists*. USDA For. Serv., Pac. Northwest Res. Stn., Portland, OR. Gen. Tech. Rep. PNW-GTR-891.

Alexander, M.E. 2019. Are shaded fuelbreaks the answer to Canada's community wildfire protection problem? *For. Chron.* 95: 2-4.

Alexander, M.E.; Cruz, M.G. 2019. Fireline intensity. in Manzello, S.L. (ed.). *Encyclopedia of Wildfires and Wildland-Urban Interface Fires*. Springer, Cham, Switzerland. In press.

Alexander, M.E.; Cruz, M.G.; Taylor, S.W. 2019. Crown scorch height. in Manzello, S.L. (ed.). *Encyclopedia of Wildfires and Wildland-Urban Interface Fires*. Springer, Cham, Switzerland. In press.

Cruz, M.G.; Alexander, M.E. 2019. Flame dimensions. in Manzello, S.L. (ed.). *Encyclopedia of Wildfires and Wildland-Urban Interface Fires*. Springer, Cham, Switzerland. In press.

### **Agency Reports and Publications**

Alexander, M.E. 1979. Bibliography and a resume of current studies on fire history. *Environ. Can., Can. For. Serv., Great Lakes For. Res. Cent., Sault Ste. Marie, ON. Inf. Rep. 0-X-304*. 43 p.

Alexander, M.E.; Mason, J.A.; Stocks, B.J.. 1979. Two and a half centuries of recorded forest fire history. *Environ. Can., Can. For. Serv., Great Lakes For. Res. Cent., Sault Ste. Marie, ON. Misc. Leaflet*. 2 p.

McRae, D.J.; Alexander, M.E.; Stocks, B.J. 1979. Measurement and description of fuels and fire behavior on prescribed burns: a handbook. *Environ. Can., Can. For. Serv., Great Lakes For. Res. Cent., Sault Ste. Marie, ON. Inf. Rep. 0-X-287*. 44 p.

Stocks, B.J.; Alexander, M.E.; McRae, D.J. 1979. Forest fire research in Ontario. *Environ. Can., Can. For. Serv., Great Lakes For. Res. Cent., Sault Ste. Marie, ON. For. Res. Newsletter - Summer Issue*. 8 p.

Alexander, M.E. 1982. Calculating spring Drought Code starting values in the prairie provinces and Northwest Territories. *Environ. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. For. Manage. Note 12*. 4 p.

Alexander, M.E. 1982. Diurnal adjustment table for the Fine Fuel Moisture Code. *Environ. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. For. Manage. Note 17*. 3 p.

Alexander, M.E. 1983. Tables for determining spring Drought Code starting values in west-central and northern Canada. Environ. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. For. Manage. Note 19. 8 p.

Alexander, M.E. 1983. Overwinter adjustment to spring starting values of the Drought Code. Environ. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. For. Rep. 28:5.

Alexander, M.E. 1983. Analysis of the Canadian Forest Fire Weather Index for the 1968 Lesser Slave Lake Fire. Environ. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. For. Rep. 28:8-10.

Newstead, R.G.; Alexander, M.E. 1983. Short-term fire retardant effectiveness in a lowland black spruce fuel complex. Environ. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. For. Rep. 28:3-4.

Canadian Forestry Service [Fire Danger Group] 1984. Tables for the Canadian Forest Fire Weather Index System. Fourth edition. Environ. Can., Can. For. Serv., Ottawa, ON. For. Tech. Rep. 25. 48 p. [M.E. Alexander member of CFS Fire Danger Group]

Alexander, M.E.; Lawson, B.D.; Stocks, B.J.; Van Wagner, C.E. 1984. User guide to the Canadian Forest Fire Behavior Prediction System: rate of spread relationships. Interim edition. Environ. Can., Can. For. Serv., Fire Danger Group. 73 p. [1st Printing - July 1984; revision and 2nd printing - Sept. 1984]

Canadian Forestry Service Fire Danger Group [Stocks, B.J., M.E. Alexander, R.S. McAlpine, B.D. Lawson and C.E. Van Wagner]. 1987. Canadian Forest Fire Danger Rating System -- Users' Guide. Produced by the Canadian Forestry Service, Ottawa, ON. Three-ring binder (unnumbered publication).

Alexander, M.E.; Smith, R.M.; Mann, C.L. 1988. A diagrammatic guide to elliptical shapes of wildland fires. Govt. Can., Can. For. Serv., North. For. Cent., Edmonton, AB. Technol. Transfer Note A-002. 4 p.

Alexander, M.E.; De Groot, W.J. 1989. A decision aid for characterizing fire behavior and determining fire suppression needs. For. Can., North. For. Cent., Edmonton, AB. Technol. Transfer Note A-008. 4 p.

Ogilvie, C.J.; Alexander, M.E.; Lieskovsky, R.J.; Bird, J. 1989. Interim guidelines for aerial application of foam on forest fires. For. Can., North. For. Cent., Edmonton, AB. Technol. Transfer Note A-010. 2 p. [Also published in: Foam Applications for Wildland & Urban Fire Management 2(3):5. 1989.]

Hirsch, K.G.; Alexander, M.E. 1989. Relationship between the Cladonia Fire Hazard Index and Fine Fuel Moisture Code. For. Can., North. For. Cent., Edmonton, AB. Technol. Transfer Note A-011. 2 p.

Alexander, M.E.; Bisgrove, G.F. (technical coordinators). 1990. The Art and Science of Fire Management. Proceedings of the First Interior West Fire Council Annual Meeting and Workshop (October 24-27, 1988, Kananaskis Village, AB) For. Can., Northwest Reg., North For. Cent., Edmonton, AB. Inf. Rep. NOR-X-309. 333 p.

Alexander, M.E.; Stocks, B.J.; Lawson, B.D. 1991. Fire behavior in black spruce-lichen woodland: the Porter Lake Project. For. Can., Northwest Reg., North. For. Cent., Edmonton, AB. Inf. Rep. NOR-X-310. 44 p.

Quintilio, D.; Alexander, M.E.; Ponto, R.L. 1991. Spring fires in a semimature trembling aspen stand in central Alberta. For. Can., Northwest Reg., North. For. Cent., Edmonton, AB. Inf. Rep. NOR-X-323. 30 p.

Forestry Canada Fire Danger Group (Van Wagner, C.E.; Stocks, B.J.; Lawson, B.D.; Alexander, M.E.; Lynham, T.J.; McAlpine, R.S.). 1992. Development and structure of the Canadian Forest Fire Behavior Prediction System. For. Can., Sci. and Sustainable Develop. Directorate, Ottawa, ON. Inf. Rep. ST-X-3. 63 p.

Forêts Canada Groupe de travail sur les dangers d'incendie. 1992. Laboratoire et Structure de la Méthode canadienne de prévision du comportement des incendies de forêt. Forêts Canada, Direction générale des sciences et du développement durable, Ottawa, ON. Rapport d'Information ST-X-3F. 68 p. [M.E. Alexander member of Forêts Canada Groupe de travail sur les dangers d'incendie]

Hirsch, K.G.; Alexander, M.E.; Anderson, K.R. 1993. Dew-point temperature tables for fire weather stations with ventilated psychrometers. For. Can., Northwest Reg., North. For. Cent., Edmonton, AB. For. Manage. Note 56. 16 p.

Taylor, S.W.; Pike, R.G.; Alexander, M.E. 1996. Field guide to the Canadian Forest Fire Behavior Prediction (FBP) System. Can. For. Serv., Pac. For. Cent. and B.C. Minist. For., Res. Branch, Victoria, BC. FRDA Handb. 012. 60 p.  
<https://www.for.gov.bc.ca/hfd/pubs/docs/frh/Frh012.pdf>

Taylor, S.W.; Pike, R.G.; Alexander, M.E. 1996. Manuel de terrain pour la Méthode canadienne de prévision du comportement des incendies de forêt (PCI). Service canadien des forêts, Centre forestier du Pacifique, Victoria, Colombie Britannique. EMVRF Manuel 012. 62 p.

Fogarty, L.G.; Alexander, M.E. 1999. A field guide for predicting grassland fire potential: derivation and use. Nat. Resour. Can., Can. For. Serv., Ottawa, ON, For. Res., Rotorua, New Zealand, and Natl. Rural Fire Authority, Wellington. New Zealand. Fire Technol. Transfer Note No. 20. 10 p.

Alexander, M.E.; Fogarty, L.G. 1999. Guide-terrain de prévision du danger de feux d'herbages: fondements et utilisation. Ressources Naturelles Canada, Service Canadien

des Forets, Ottawa, ON, Forest Research, Rotorua, New Zealand, and National Rural Fire Authority, Wellington, New Zealand. Fire Technology Transfer Note No. 20[F]. 13 p.

Alexander, M.E.; Fogarty, L.G. 2002. A pocket card for predicting fire behavior in grasslands under severe burning conditions. Nat. Resour. Can., Can. For. Serv., Ottawa, ON, For. Res., Rotorua, New Zealand, and Natl. Rural Fire Authority, Wellington, New Zealand. Fire Technology Transfer Note No. 25. 8 p.

Lynham, T.J.; Alexander, M.E.; Morris, D.M.; Kantor, J.L. 2002. Ecological effects of forest fires in the boreal and Great Lakes-St. Lawrence forest regions of Ontario: a partially annotated bibliography. Nat. Resour. Can., Can. For. Serv., Great Lakes For. Cent., Sault Ste. Marie, ON. Inf. Rep. GLC-X-6. 169 p.

Alexander, M.E.; Stefner, C.N.; Mason, J.A.; Stocks, B.J.; Hartley, G.R.; Maffey, M.E.; Wotton, B.M.; Taylor, S.W. Lavoie, N.; and Dalrymple, G.N. 2004. Characterizing the jack pine-black spruce fuel complex of the International Crown Fire Modelling Experiment (ICFME). Nat. Resour. Can., Can. For. Serv., North. For. Cent., Edmonton, AB. Inf. Rep. NOR-X-393. 49 p.

Lavoie, N.; Alexander, M. E.; Macdonald, S. E. 2007. Fire weather and fire danger climatology of the Fort Providence area, Northwest Territories. Nat. Resour. Can., Can. For. Serv., North. For. Cent., Edmonton, AB. Inf. Rep. NOR-X-412. 51 p.

Alexander, M.E. 2008. Appendix 3: Latitude considerations in adapting the Canadian Forest Fire Weather Index System to other countries. Pages 67-73 in Weather Guide for the Canadian Forest Fire Danger Rating System by B.D. Lawson and O.B. Armitage, Nat. Resour. Can., Can. For. Serv., North. For. Cent., Edmonton, AB.

Wotton, B.M.; Alexander, M.E.; Taylor, S.W. 2009. Updates and revisions to the 1992 Canadian Forest Fire Behavior Prediction System. Nat. Resour. Can., Can. For. Serv., Great Lakes For. Cent., Sault Ste. Marie, ON. Information Report GLC-X-10E. 45 p.

Wotton, B.M.; Alexander, M.E.; Taylor, S.W. 2009. Mises à jour et révisions de la Méthode canadienne de prévision du comportement des incendies de forêt de 1992. Ressources naturelles Canada, Service canadien des forêts, Centre de foresterie des Grands Lacs, Sault Ste. Marie, ON. Rapport d' Information GLC-X- 10F. 47 p.

Lavoie, N.; Alexander, M.E.; Macdonald, E.S. 2010. Photo guide for quantitatively assessing characteristics of forest fuels in a jack pine – black spruce chronosequence in the Northwest Territories. Nat. Resour. Can., Can. For. Serv., North. For. Cent., Edmonton, AB. Inf. Rep. NOR-X-419. 42 p.

Taylor, S.W.; Alexander, M.E. 2016. A field guide to the Canadian Forest Fire Behavior Prediction (FBP) System. 2<sup>nd</sup> edition. Nat. Resour. Can., Can. For. Serv., North. For. Cent., Edmonton, AB. Spec. Rep. 11. 101 p.

<https://www.ubcpublishing.ca/field-guide-to-the-canadian-forest-fire-behavior-prediction-fbp-system-second-edition>

Taylor, S.W.; Alexander, M.E. 2018. A field guide to the Canadian Forest Fire Behavior Prediction (FBP) System. 3<sup>rd</sup> edition. Nat. Resour. Can., Can. For. Serv., North. For. Cent., Edmonton, AB. Spec. Rep. 11. 101 p.

Taylor, S.W.; Alexander, M.E. 2018. Guide de la méthode canadienne de prévision du comportement des incendies de forêt (PCI). 3<sup>ème</sup> édition. Ressources naturelles Canada, Service canadien des forêts, Centre de foresterie du Nord, Edmonton (Alb.). Rapport spécial no 11. 140 p.

### **Special Publications**

Alexander, M.E. (editor). 1974. Let the Forests Burn? -Technical Session Proc. (Feb. 23, 1973, Fort Collins, CO). Colo. State Univ., Dep. For. and Wood Sci., Fort Collins. CO. 37 p.

Alexander, M.E.; Hawksworth, F.G. 1975. Wildland fires and dwarf mistletoes: a literature review of ecology and prescribed burning. USDA For. Serv., Rocky Mt. For. and Range Exp. Stn., Fort Collins, CO. Gen. Tech. Rep. RM-14. 12 p.

Alexander, M.E.; Sandberg, D.V. 1976. Fire ecology and historical fire occurrence in the forest and range ecosystems of Colorado: a bibliography. Colo. State Univ., Dep. For. and Wood Sci., Fort Collins, CO. Occas. Pap. 16 p. (Supplement No. 1, 4 p. 1979)

Alexander, M.E. 1978. Estimating fuel weights of two common shrubs in Colorado lodgepole pine stands. USDA For. Serv., Rocky Mt. For. and Range Exp. Stn., Fort Collins, CO. Res. Note RM-354. 4 p.

Alexander, M.E. 1979. Fuels description in lodgepole pine stands of the Colorado Front Range. M.Sc. Thesis, Colo. State Univ., Fort Collins, CO. 150 p.

Street, R.B.; Alexander, M.E. 1980. Synoptic weather associated with five major forest fires in Pukaskwa National Park. Environ. Can., Atmos. Environ. Serv., Ont. Reg., Toronto, ON. Int. Rep. SSD-80-2. 62 p.

Lotan, J.E.; Alexander, M.E.; Arno, S.F.; and others. 1981. Effects of fire on flora: a state-of-knowledge review (National Fire Effects Workshop, Apr. 10-14, 1978, Denver, CO). USDA For. Serv., Washington, DC. Gen. Tech. Rep. WO-16. 71 p.

Mastrogioseppe, R.J.; Alexander, M.E.; Romme, W.H. 1983. Forest and rangeland fire history bibliography. USDA For. Serv., Intermt. For. Range Exp. Stn., North. For. Fire Lab., Fire Effects Use Res. Develop. Prog., Missoula, MT. 49 p.



Alexander, M.E.; McRae, D.J. 1984. Bibliography supplement to CFS prescribed burn handbook. Ont. Min. Nat. Res., Aviation and Fire Manage. Cent., Sault Ste. Marie, ON. Fire Manage. Bull. 88 (3rd revision). 6 p.

Alexander, M.E. 1987. Fire behavior characteristics/suppression interpretations chart and table. Pages 35-36 in S-390 (B.C.) Fire Behavior Prediction Student Workbook. Fire Suppression Training Series. B.C. Min. For. and Lands, Protection Branch, Victoria, BC.

Merrill, D.F.; Alexander, M.E. (editors). 1987. Glossary of forest fire management terms. Fourth edition. Natl. Res. Counc. Can., Can. Comm. For. Fire Manage., Ottawa, ON. Publ. NRCC No. 26516. 91 p.

Alexander, M.E.; De Groot, W.J. 1988. Fire behavior in jack pine stands as related to the Canadian Forest Fire Weather Index (FWI) System. Govt. Can., Can. For. Serv., North. For. Cent., Edmonton, AB. Poster (with text). [Reprinted in 1992 by Natl. Rural Fire Authority N.Z., Wellington, New Zealand].

(<http://cfs.nrcan.gc.ca/publications/download-pdf/24310>)

Alexander, M.E.; Lanoville, R.A. 1989. Predicting fire behavior in the black spruce-lichen woodland fuel type of western and northern Canada. For. Can., North. For. Cent. Edmonton, AB. and Govt. Northwest Territories, Dep. Renewable Resour., Territorial For. Fire Cent., Fort Smith, NWT. Poster (with text).

(<http://cfs.nrcan.gc.ca/publications/download-pdf/23093>)

NRFA; NZFRI. 1993. Fire Weather Index System tables for New Zealand. Natl. Rural Fire Authority [NRFA] N.Z., Wellington, New Zealand and N.Z. For. Res. Instit. [NZFRI], Rotorua, New Zealand. 48 p. [authored by M.E. Alexander and H.G. Pearce of NZFRI]

Alexander, M.E. 1993. Standard specifications for Fire Weather Index System computer calculations. Natl. Rural Fire Authority, Wellington, New Zealand. Circ. 1993/14. 7 p.

Alexander, M.E. 1994. Proposed fire danger class criteria for forest and rural areas in New Zealand. Natl. Rural Fire Authority, Wellington, New Zealand. Circ. 1994/2. 73 p.

McCaw, W.L.; Alexander, M.E. 1994. Tripartite agreement on wildland fire science research signed. Int. For. Fire News No. 11:27-29.

([http://www.fire.uni-freiburg.de/iffn/tech/tech\\_13.htm](http://www.fire.uni-freiburg.de/iffn/tech/tech_13.htm))

Pearce, H.G.; Morgan, R.F.; Alexander, M.E. 1994. Wildfire behaviour case study of the 1986 Awarua wetlands fire. N.Z. For. Res. Instit., Rotorua, New Zealand, and Natl. Rural Fire Authority, Wellington, New Zealand. Fire Technol. Transfer Note No. 5. 6 p.

Alexander, M.E. 1994. New Zealand fire danger classes. National Rural Fire Authority, Wellington, New Zealand, and New Zealand Forest Research Institute, Rotorua, New Zealand. Poster (with text).

Cole, F.V.; Alexander, M.E. 1995. Head fire intensity class graph for FBP System Fuel Type C-2 (Boreal Spruce). AK. Dep. Nat. Resour., Div. For., Fairbanks, AK. and Nat. Resour. Can., Can. For. Serv., Edmonton, AB. Poster (with text).

<http://cfs.nrcan.gc.ca/pubwarehouse/pdfs/24358.pdf>

Anon. 1997. *Intermediate wildland fire behavior, S-290*. Environ. Training Cent., Hinton, AB, and Natl. Wildfire Coord. Group, Boise, ID. Natl. Fire Equip. System (NFES) Publ. NFES 1592. CD-ROM. [M.E. Alexander member of national content/review team]

Alexander, M.E.; Fogarty, L.G. 1997. A simple field guide for estimating the behaviour and suppression requirements of fires driven by wind coming from a constant direction, in open, fully cured grasslands at low fuel moisture. N.Z. For. Res. Instit., Rotorua, New Zealand, and Natl. Rural Fire Authority, Wellington, New Zealand. Pocket card.

Alexander, M.E. 1998. Crown fire thresholds in exotic pine plantations of Australasia. Ph.D. Thesis, Aust. Natl. Univ., Canberra, ACT. Australia. 228 p.

<https://openresearch-repository.anu.edu.au/handle/1885/9555>)

Anon. 1998. Principles of fire behavior. Environ. Train. Cent., Hinton, AB. CD-ROM. [M.E. Alexander member of national content/review team]

Alexander, M.E. 2000. Fire behaviour as a factor in forest and rural fire suppression. For. Res., Rotorua in assoc. N.Z. Fire Serv. Comm. and Natl. Rural Fire Authority, Wellington, New Zealand. For. Res. Bull. No. 197, For. Rural Fire Sci. Tech. Ser. Rep. No. 5. 28 p.

<http://www.fire.org.nz/Research/Published-Reports/Documents/4d0cfd8b2c9476a48039c43edc4c550f.pdf>)

Alexander, M.E.; Driscoll, D; Heathcott, M.; George, E. (tech. coords.). 2000. People, Ecosystems and Wildland Fires - Working in Harmony. Abstracts and program of the 2000 Interior West Fire Council Annual Meeting and Workshop held October 3-5 in Edmonton, Alberta. Alta. Environ., Land For. Serv., For. Prot. Div. and Nat. Resour. Can., Can. For. Serv., North. For. Cent., Edmonton, AB. 67 p.

Anon. 2000. Wildland fire -- safety on the fireline. Environ. Train. Cent., Hinton, AB, and Can. Interagency For. Fire Cent., Natl. Training Work. Group, Winnipeg, MB. CD-ROM. [M.E. Alexander member of national content/review team]

Anon. 2002. Understanding the Fire Weather Index (FWI) System. Environ. Train. Cent., Hinton, AB, Can. Interagency For. Fire Cent., Winnipeg, MB, and Can. For. Serv., North. For. Cent., Edmonton, AB. CD-ROM. [M.E. Alexander member of national content/review team]

Alexander, M.E.; Thomas, D.A. (Issue Coordinators). 2003. Wildland Fire Behavior Case Studies and Analyses: Part 1. Fire Management Today 63(3): 1-95. USDA For. Serv., Washington, DC.

Alexander, M.E.; Thomas, D.A. (Issue Coordinators). 2003. Wildland Fire Behavior Case Studies and Analyses: Part 2. Fire Management Today 63(4): 1-91. USDA For. Serv., Washington, DC.

Alexander, M.E.; Thomas, D.A. (Issue Coordinators). 2004. Forecasting Wildland Fire Behavior: Aids and Guides. Fire Management Today 64(1): 1-99. USDA For. Serv., Washington, DC.

Alexander, M.E.; Tymstra, C.; Frederick, K.W. 2004. Incorporating breaching and spotting considerations into *PROMETHEUS* – the Canadian wildland fire growth model. Foothills Model Forest, Hinton, AB. Chisholm/Dogrib Fire Research Initiative Quicknote 6. 2 p.

Baxter, G.; Alexander, M.; Dakin, G. 2004. Travel rates of Alberta wildland firefighters using escape routes on a moderately steep slope. FERIC Advantage Report. Vol. 5 No. 25. 15 p.

Butler, B.W.; Alexander, M.E. (editors). 2005. Proceedings of Eighth International Wildland Fire Safety Summit: Human Factors - Ten Years Later, April 26-28, 2005, Missoula, Montana. International Association of Wildland Fire, Hot Springs, SD. CD-ROM.

Alexander, M.E.; Thomas, D.A. (Issue Coordinators). 2006. Prescribed Fire Case Studies, Decision Aids, and Planning Guides. Fire Management Today 66(1): 1-107. USDA For. Serv., Washington, DC.

Alexander, M.E. 2008. Proposed revision of fire danger class criteria for forest and rural areas of New Zealand. 2nd edition. National Rural Fire Authority, Wellington, in association with the Scion Rural Fire Research Group, Christchurch, New Zealand. 62 p. [http://cfs.nrcan.gc.ca/bookstore\\_pdfs/29007.pdf](http://cfs.nrcan.gc.ca/bookstore_pdfs/29007.pdf)

Alexander, M.E. 2009. The 1988 fires of Yellowstone and beyond as a wildland fire behavior case study. USDA For. Serv., Wildland Fire Lessons Learned Cent., Tucson, AZ. 30 p. ([http://www.wildfirelessons.net/documents/Alexander\\_Yellowstone88\\_FB.pdf](http://www.wildfirelessons.net/documents/Alexander_Yellowstone88_FB.pdf))

Robinson, M.; Bushey, C.L.; Alexander, M.E.; Trott, A.; Ekstrom, M. (compilers). 2010. Program and abstracts of 3rd Fire Behavior and Fuels Conference, 25-29 October 2010, Spokane, Washington. International Association of Wildland Fire, Birmingham, AL. 235 p.

Robinson, M.; Ziegler, J.; Alexander, M.E.; Bushey, C.L.; Ekstrom, M. (compilers). 2011. Program and abstracts of 11th International Wildland Fire Safety Summit, 4-8

April 2011, Missoula, Montana. International Association of Wildland Fire, Missoula, MT. 77 p.

Werth, P.A.; Potter, B.E.; Clements, C.B.; Finney, M.A.; Goodrick, S.L.; Alexander, M.E.; Cruz, M.G.; Forthofer, J.M.; McAllister, S.S. 2011. Synthesis of knowledge of extreme fire behavior: Volume 1 for fire managers. USDA For. Serv., Pac. Northwest Res. Stn., Portland, OR. Gen. Tech. Rep. PNW-GTR-854. 144 p.

Alexander, M.E.; Heathcott, M.J.; Schwanke, R.L. 2013. Fire behaviour case study of two early winter grass fires in southern Alberta, 27 November 2011. Partners in Protection Association, Edmonton, AB. 76 p.

Alexander, M.E. (Issue Coordinator). 2014. Synthesis on Crown Fire Behavior in Conifer Forests. *Fire Management Today* 73(4): 1-50.

Cruz, M.G.; Sullivan, A.L.; Alexander, M.E. 2014. Fire behaviour knowledge in Australia: Knowledge gaps and Fire Behaviour Analyst (FBAN) training revision plan. CSIRO Ecosystems Sciences and CSIRO Digital Productivity and Services Flagship, Canberra, Australian Capital Territory. Client Report No. EP145697. 22 p.

Cruz, M.G.; Sullivan, A.L.; Leonard, R.; Malkin, S.; Matthews, S.; Gould, J.S.; McCaw, W.L.; Alexander, M.E.. 2014. Fire behaviour knowledge in Australia: A synthesis of disciplinary and stakeholder knowledge on fire spread prediction capability and application. Bushfire Cooperative Research Centre, East Melbourne, VIC. 171 p.  
[http://www.bushfirecrc.com/sites/default/files/managed/resource/fire\\_knowledge\\_synthesis\\_final\\_report.pdf](http://www.bushfirecrc.com/sites/default/files/managed/resource/fire_knowledge_synthesis_final_report.pdf)

Werth, P.A.; Potter, B.E.; Alexander, M.E.; Clements, C.B.; Cruz, M.G.; Finney, M.A.; Forthofer, J.M.; Goodrick, S.L.; Hoffman, C.M.; Jolly, W.M.; McAllister, S.S.; Ottmar, R.D.; Parsons, R.A. 2016. Synthesis of knowledge of extreme fire behavior: Volume 2 for fire behavior specialists, researchers and meteorologists. USDA For. Serv., Pac. Northwest Res. Stn., Portland, OR. Gen. Tech. Rep. PNW-GTR-891. 257 p.

Ou, A.A.; Alexander, M.E.; Ashton, A.J.; McLoughlin, N.R. 2019. An example of extreme fire behavior associated with a dry cold front passage: the 2012 Zama Wildfire Complex in northwestern Alberta. Alberta Agriculture and Forestry, Forestry Division, Edmonton, AB. In preparation.

## **Books**

Cruz, M.G.; Gould, J.S.; Alexander, M.E.; Sullivan, A.L.; McCaw, W.L.; Matthews, S. 2015. A guide to rate of fire spread vegetation. Revised edition. CSIRO Land and Water Flagship, Canberra, ACT and AFAC models for Australian, Melbourne, Vic. 125 p.<sup>4</sup>

---

<sup>4</sup> [https://research.csiro.au/pyropage/wp-content/uploads/sites/17/delightful-downloads/2017/08/CSIRO-PyroPage-Issue-3-Fire-Spread-Model-Book\\_r1.pdf](https://research.csiro.au/pyropage/wp-content/uploads/sites/17/delightful-downloads/2017/08/CSIRO-PyroPage-Issue-3-Fire-Spread-Model-Book_r1.pdf)

Scott, A.C.; Bowman, D.M.J. Bond, W.J.; S.; Pyne, S.J.; Alexander, M.E. 2014. Fire on Earth: An Introduction. Wiley-Blackwell, Chichester, England. 413 p.<sup>5</sup>

Leblon, B; Alexander, M.E. (editors). 2015. Current international perspectives on wildland fires, mankind and the environment. Nova Science Publishers Inc., Hauppauge, New York. 262 p.

### **Book Chapters**

Alexander, M.E.; Dube, D.E. 1983. Fire management in wilderness areas, parks and other nature reserves. Pages 273-297 (Chapter 15) in R.W. Wein and D.A. MacLean (eds.). SCOPE 18: The Role of Fire in Northern Circumpolar Ecosystems. John Wiley & Sons, Chichester, England.

Bourgeau-Chavez, L.L.; Alexander, M.E.; Stocks, B.J. Kasischke, E.S. 2000. The distribution of forest ecosystems and the role of fire in the North American boreal region. Pages 111-131 in E.S. Kasischke and B.J. Stocks (eds.). Fire, Climate Change, and Carbon Cycling in the Boreal Forest. Springer, New York, NY. Ecol. Stud. Vol.138.

Bourgeau-Chavez, L.L.; Alexander, M.E.; Stocks, B.J.; Kasischke, E.S. 2000. Characteristics of forest ecozones in the North American boreal region. Pages 258-273 in E.S. Kasischke and B.J. Stocks (eds.). Fire, Climate Change, and Carbon Cycling in the Boreal Forest. Springer, New York, NY. Ecol. Stud. Vol.138.

Cahoon, D.R.; Stocks, B.J.; Alexander, M.E.; Baumn, B.A.; Goldammer, J.G. 2000. Wildland fire detection from space: theory and application. Pages 151-169 in J.L. Innes, M. Beniston and M.M. Verstraete (eds.). Biomass Burning and Its Inter-Relationships with the Climate System. Kluwer Academic Publ., Dordrecht, The Netherlands. Adv. Global Change Res. Vol. 3.

Grissom, P.; Alexander, M.E.; Cella, B.; Cole, F.; Kurth, J.T.; Malotte, N.P.; Martell, D.L.; Mawdsley, W.; Roessler, J.; Quillin, R.; Ward, P.C. 2000. Effects of climate change on management policy: mitigation options in the North American boreal forest. Pages 85-102 in E.S. Kasischke and B.J. Stocks (eds.) Fire, Climate Change, and Carbon Cycling in the Boreal Forest. Springer, New York, NY. Ecol. Stud. Vol. 138.

Murphy, P.J.; Mudd, J.P.; Stocks, B.J.; Kasischke, E.S.; Berry, D.; Alexander, M.E.; French, N.H.F. 2000. Historical fire records in the North American boreal forest. Pages 274-288 in E.S. Kasischke and B.J. Stocks (eds.). Fire, Climate Change, and Carbon Cycling in the Boreal Forest. Springer, New York, NY. Ecol. Stud. Vol. 138.

---

<sup>5</sup> See also: <http://bcs.wiley.com/he-bcs/Books?action=index&bcsId=8578&itemId=1119953561>

San-Miguel-Ayanz, J.; Carlson, J.D.; Alexander, M.E.; Tolhurst, K.; Morgan, G.; Sneeuwjagt, R.; Dudfield, M. 2003. Current methods to assess fire danger potential. Pages 21-61 in E. Chuvieco (ed.). Wildland Fire Danger Estimation and Mapping - The Role of Remote Sensing Data. World Sci. Publish. Co. Pte. Ltd., Singapore. Ser. Remote Sensing Vol. 4.

Beck, J.; Parminter, J.; Alexander, M.; MacDermid, T.; Van Nest, T.; Beaver, A.; Grimaldi, S. 2005. Fire ecology and management. Pages 489-525 in S.B. Watts and L. Tolland, eds. Forestry Handbook of British Columbia. University of British Columbia, Faculty of Forestry, Vancouver, BC.

(<http://www.forestry.ubc.ca/files/2012/06/Forestry-Handbook-BC-2013-Part-2.pdf>)

Alexander, M.E.; Mutch, R.W.; Davis, K.M. 2007. Wildland fires: Dangers and survival. Pages 286-335 in P.S. Auerbach, ed. Wilderness Medicine. 5th ed. Mosby, Philadelphia, PA.

Alexander, M.E.; Mutch, R.W.; Davis, K.M.; Bucks, C.M. 2012. Wildland fires: Dangers and survival. Pages 240-280 in P.S. Auerbach, ed. Wilderness Medicine. 6th ed. Elsevier, Philadelphia, PA.

Alexander, M.E.; Cruz, M.G.; Vaillant, N.M. 2012. Crown fires in conifer forests of the world: Do you have something to contribute or would you like to know about something? Pages 160-165 in D. Spano, V. Bacciu, M. Salis and C. Sirca, eds. Modelling Fire Behaviour and Risk. University of Sassari, Italy.

Alexander, M.E. 2014. Fundamentals of wildland fire as a physical process. Pages 297-340 in Fire on Earth: An Introduction. Wiley-Blackwell, Chichester, England.

Alexander, M.E. 2014. Estimating free-burning wildland fire behaviour. Pages 341-372 in Fire on Earth: An Introduction. Wiley-Blackwell, Chichester, England.

Alexander, M.E. 2014. The practical application of wildland fire behaviour knowledge. Pages 373-391 in Fire on Earth: An Introduction. Wiley-Blackwell, Chichester, England.

Alexander, M.E. 2014. Part Four – The Science and Art of Wildland Fire Behaviour Prediction. Pages 295-403 in Fire on Earth: An Introduction. Wiley-Blackwell, Chichester, England.

Alexander, M.E.; Thorburn, W.R. 2015. *LACES*: Adding an “A” for *Anchor point(s)* to the *LCES* wildland firefighter safety system. Pages 121-144 in B. Leblon and M.E. Alexander (eds.). Current International Perspectives on Wildland Fires, Mankind and the Environment. Nova Science Publishers, Inc. Hauppauge, New York.

Alexander, M.E.; Mutch, R.W.; Davis, K.M.; Bucks, C.M. 2017. Wildland fires: Dangers and survival. Pages 276-318 in P.S. Auerbach, ed. Auerbach’s Wilderness Medicine, Volume 1. 7th ed. Elsevier, Philadelphia, PA.

## **Symposium, Conference and Workshop Proceedings Papers**

Alexander, M.E. 1978. Reconstructing the fire history of Pukaskwa National Park. Pages 4-11 in *Fire Ecology in Resource Management: Workshop Proceedings*. (Dec. 6-7, 1977, Edmonton, AB). Environ. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. Inf. Rep. NOR-X-210.

Alexander, M.E. 1980. Forest fire history research in Ontario: a problem analysis. Pages 96-109 in *Proc. Fire History Workshop*. (Oct. 20-24, 1980, Tucson, AZ). USDA For. Serv., Rocky Mt. For. and Range Exp. Stn., Fort Collins, CO. Gen. Tech. Rep. RM-81.

Alexander, M.E. 1980. Bibliography on fire history: a supplement. Pages 132-134 in *Proc. Fire History Workshop*. (Oct. 20-24, 1980, Tucson, AZ). USDA For. Serv., Rocky Mt. For. and Range Exp. Stn., Fort Collins, CO. Gen. Tech. Rep. RM-81.

Stocks, B.J.; Alexander, M.E. 1980. Forest fire behaviour and effects research in northern Ontario: a field oriented program. Pages 18-24 in *Proc. Sixth Conf. Fire and For. Meteorol.* (Apr. 22-24, 1980, Seattle, WA). Soc. Amer. For., Washington, DC.

Romme, W. (committee chairman); Alexander, M.E.; and others. 1980. Fire history terminology: report of the ad hoc committee. Pages 135-137 in *Proc. Fire History Workshop* (Oct. 20-24, 1980, Tucson, AZ.). USDA For. Serv., Rocky Mt. For. and Range Exp. Stn., Fort Collins, CO. Gen. Tech. Rep. RM-81.

Stocks, B.J.; Alexander, M.E.; McRae, D.J. 1981. A forest fire research program in support of fire management in Ontario. Pages 95-99 in *Proc. Forest Protection--Importance to Future Supplies of Forest Resources* (Sept. 18-19, 1980, Marquette, MI). Soc. Amer. For., Wisc.-Mich. Sec., Marquette, MI.

Alexander, M.E.; Euler, D.L. 1981. Ecological role of fire in the uncut boreal mixedwood forest. Pages 42-64 in *Proc. Boreal Mixedwood Symp.* (Sept. 16-18, 1980, Thunder Bay, ON). Environ. Can., Can. For. Serv., Great Lakes For. Res. Cent., Sault Ste. Marie, ON. COJFRC Symp. Proc. O-P-9.

Alexander, M.E.; Janz, B.; Quintilio, D. 1983. Analysis of extreme wildfire behavior in east-central Alberta: a case study. Pages 38-46 in *Preprint Volume Seventh Conf. Fire and For. Meteorol.* (Apr. 25-29, 1983, Fort Collins, CO). Amer. Meteorol. Soc., Boston, MA.

Van Nest, T.A.; Janz, B.; Alexander, M.E. 1985. Downslope forest fire spread: the Torrens example. Pages 9-16 in *Proc. Second West Reg. Fire Weather Comm. Sci. and Tech. Seminar* (Mar. 6, 1984, Edmonton, AB), Govt. Can., Can. For. Serv., North. For. Cent., Edmonton, AB.

Alexander, M.E. 1985. Estimating the length-to-breadth ratio of elliptical forest fire patterns. Pages 287-304 in Proc. Eighth Conf. Fire and For. Meteorol. (Apr. 29-May 2, 1985, Detroit, MI). Soc. Amer. For., Bethesda, MD. SAF Publ. 85-04.

Lawson, B.D.; Stocks, B.J.; Alexander, M.E.; Van Wagner, C.E. 1985. A system for predicting fire behavior in Canadian Forests. Pages 6-16 in Proc. Eighth Conf. Fire and For. Meteorol. (Apr. 29-May 2, 1985, Detroit, MI). Soc. Amer. For., Bethesda, MD. SAF Publ. 85-04.

Mastrogiuseppe, R.J.; Alexander, M.E.; Romme, W.H. 1985. Forest and rangeland fire history bibliography. Pages 353 in Proc. Symp. and Workshop on Wilderness Fire (Nov. 15-18, 1983, Missoula, MT). USDA For. Serv., Intermt. For. and Range Exp. Stn., Ogden, UT. Gen. Tech. Rep. INT-182.

Kiil, A.D.; Quintilio, D.; Alexander, M.E. 1986. Adaptation of a national system of fire danger rating in Alberta, Canada: a case study in technology transfer. Pages 410-421 in Proc. 18th IUFRO World Congress (Sept. 7-21, 1986, Ljubljana, Yugoslavia), Division 6: General Subjects. Interl. Union For. Res. Organ., Vienna, Austria.

De Groot, W.J.; Alexander, M.E. 1986. Wildfire behavior on the Canadian Shield: a case study of the 1980 Chachukew Fire, Saskatchewan. Pages 23-45 in Proc. Third Cent. Reg. Fire Weather Comm. Sci. and Tech. Seminar (Apr. 3, 1986, Winnipeg, MB), Govt. Can., Can. For. Serv., North. For. Cent., Edmonton, AB.

Alexander, M.E.; Lanoville, R.A. 1987. Wildfires as a source of fire behavior data: a case study from Northwest Territories, Canada. Pages 86-93 in Postprint Volume Ninth Conf. Fire and For. Meteorol. (Apr. 21-24, 1987, San Diego, CA). Amer. Meteorol. Soc., Boston, MA.

Alexander, M.E.; Andrews, P.L.; Davis, K.M.; Lynham, T.J.; Robinson, O.L.; Rothermel, R.C.; Van Wagner, C.E. (listed in alphabetical order). 1987. Fire Occurrence and Behavior Analysis: Report of Futuring Group 9. Pages 253-255 in Proc. Symp. Wildland Fire 2000 (Apr. 27-30, 1987, Tahoe, CA). USDA For. Serv., Pac. Southwest For. and Range Exp. Stn., Berkeley, CA. Gen. Tech. Rep. PSW-101.

Alexander, M.E. 1988. Help with making crown fire hazard assessments. Pages 147-156 in Proc. Symp. and Workshop on Protecting People and Homes from Wildfire in the Interior West (Oct. 6-8, 1987, Missoula, MT). USDA For. Serv., Intermt. Res. Stn., Ogden, UT. Gen. Tech. Rep. INT-251.

McAlpine, R.S.; Alexander, M.E. 1988. Recent developments in the Canadian Forest Fire Danger Rating System. Pages 19-57 in Proc. Fourth Cent. Reg. Fire Weather Comm. Sci. and Tech. Seminar (Apr. 2, 1987, Winnipeg, MB). Govt. Can., Can. For. Serv., West. and North. Reg., Man. District Off., Winnipeg, MB.



Ascher, A.C.; Alexander, M.E.. 1990. Mounting the attack on wildfire: The video. Page 92 in *The Art and Science of Fire Management*. Proc. First Interior West Fire Council. Annu. Meeting and Workshop (Oct. 24-27, 1988, Kananaskis Village, AB). For. Can., Northwest Reg., North. For. Cent., Edmonton, AB. Inf. Rep. NOR-X-309.

Delisle, G.P.; Alexander, M.E.; Maffey, M.E. 1990. Cartographic history of forest fires in Alberta: 1931-1983. Pages 90-91 in *The Art and Science of Fire Management*. Proc. First Interior West Fire Council. Annu. Meeting and Workshop (Oct. 24-27, 1988, Kananaskis Village, AB). For. Can., Northwest Reg., North. For. Cent., Edmonton, AB. Inf. Rep. NOR-X-309.

Sando, R.W.; Alexander, M.E. 1990. Quantifying the physical aspects and impact of fire in aspen ecosystems. Pages 321-322 in *Proc. Aspen Symposium '89* (July 23-25, 1989, Duluth, MN), proceedings. USDA For. Serv., North Cent. For. Exp. Stn., St. Paul, MN. Gen. Tech. Rep. NC-140.

McAlpine, R.S.; Stocks, B.J.; Van Wagner, C.E.; Lawson, B.D.; Alexander, M.E.; Lynham, T.J. 1990. Forest fire behavior research in Canada. Pages A.02:1-12 in *Proc. Int. Conf. on Forest Fire Research* (Nov. 19-22, 1990, Coimbra, Portugal). Univ. Coimbra, Coimbra, Portugal.

Alexander, M.E. 1991. Fire behavior forecasting in the boreal forest: two decision support aids for Canadian fire managers. Pages 403-404 in *High Intensity Fire in Wildlands: Management Challenges and Options*. Proc. 17th Tall Timbers Fire Ecol. Conf. (May 18-21, 1989, Tallahassee, FL). Tall Timbers Res. Stn., Tallahassee, FL.

Alexander, M.E. 1991. Probability of ignition in relation to fine fuel moisture content and firebrand size. Page 3 in *Proceedings of the National Workshop on Forest Fire Occurrence Prediction* (May 3-4, 1989, Winnipeg, MB), T.J. Lynham (compiler & editor). For. Can., Ont. Reg., Great Lakes For. Cent., Sault Ste. Marie, ON.

Alexander, M.E.; Pearce, H.G.; Farrow, R.F.; Smart, P.N. 1993. Experimental fires in radiata pine logging slash within the Kinleith Forest during early 1993. Pages 40-41 in *Proc. For. Rural Fire Assoc. N.Z. 3rd Annu. Conf.* (Aug. 4-6, 1993, Wellington, New Zealand). For. Rural Fire Assoc. N.Z., Rotorua, New Zealand.

Pearce, H.G.; Alexander, M.E. 1994. Fire danger ratings associated with New Zealand's major pine plantation wildfires. Pages 534-543 in *Proc. 12th Conf. Fire and For. Meteorol.* (Oct. 26-28, 1993, Jekyll Island, GA). Soc. Am. For., Bethesda, MD. SAF Publ. 94-02.

Alexander, M.E.; Cole, F.V. 1995. Predicting and interpreting fire intensities in Alaskan black spruce forests using the Canadian system of fire danger rating. Pages 185-192 in *Managing Forests to Meet People's Needs*, Proc. 1994 Soc. Am. For./Can. Instit. For. Convention (Sep. 18-22, 1994, Anchorage, AK.). Soc. Am. For., Bethesda, MD. SAF Publ. 95-02.  
([https://www.frames.gov/documents/catalog/alexander\\_and\\_cole\\_1995.pdf](https://www.frames.gov/documents/catalog/alexander_and_cole_1995.pdf))

Pearce, H.G.; Morgan, R.F.; Alexander, M.E. 1995. Wildfire behaviour in a New Zealand wetland: a case study. Pages 200-201 in *Fire in Wetlands: A Management Perspective*, Proc. 19th Tall Timbers Fire Ecol. Conf. (Nov. 3-6, 1993, Tallahassee, FL). Tall Timbers Res. Stn., Tallahassee, FL.

Alexander, M.E. 1996. The relevancy and validity of protective fire shelters in Canada. Pages CFS-25-CFS-28 in *Reports Tabled at Forty Fourth Annual Meeting, Canadian Committee on Forest Fire Management*. (Nov. 23-24, 1995, Edmonton, AB). Can. Comm. For. Fire Manage., Winnipeg, MB.

Stocks, B.J.; Alexander, M.E. 1996. International crown fire modelling experiment. Pages CFS-31-CFS-33 in *Reports Tabled at Forty Fourth Annual Meeting, Canadian Committee on Forest Fire Management* (Nov. 23-24, 1995, Edmonton, AB). Can. Comm. For. Fire Manage., Winnipeg, MB.

Stocks, B.J.; Lawson, B.D.; Alexander, M.E.; Van Wagner, C.E.; McAlpine, R.S.; Lynham, T.J.; Dube, D.E. 1996. El sistema Canadiense de evaluacion del grado de peligro de incendios forestales: Una vision general. Pages 82-94 in J.A. Guillermo (ed.). *Proc. Prognosis Y Gestion en Control de Incendios Forestales, Actas del Taller Internatiocional* (8-10 de Noviembre de, 1995 Santiago, Chile). Univ. Chile, Santiago, Chile.

Alexander, M.E.; Stocks, B.J.; Wotton, B.M.; Flannigan, M.D.; Todd, J.B.; Butler, B.W.; Lanoville, R.A. 1998. The International Crown Fire Modelling Experiment: an overview and progress report. Pages 20-23 in *Preprint Volume 2nd Symp. Fire and For. Meteorol.* (Jan. 11-16, 1998, Phoenix, AZ). Am. Meteorol. Soc., Boston, MA.

Fogarty, G.L.; Pearce, H.G.; Catchpole, W.R.; Alexander M.E. 1998. Adoption vs. adaptation: lessons from applying the Canadian Forest Fire Danger Rating System in New Zealand. Pages 1011-1028 in *Proc. III Int. Conf. For. Fire Res./14th Conf. Fire For. Meteorol.* (Nov. 16-20, 1998, Luso, Portugal), Vol. II. Univ. Coimbra, Coimbra, Portugal.

Stocks, B.J.; Alexander, M.E.; Wotton, B.M.; Lanoville, R.A. 1999. The International Crown Fire Modelling Experiment, Northwest Territories, Canada. Pages 70-71 in *Proc. 9th Int. Boreal For. Res. Assoc. Conf.* (Sep. 21-23, 1998, Oslo, Norway), S. Woxholt (ed.). Norwegian For. Res. Instit., Oslo, Norway.

Alexander, M.E. 2000. The Mann Gulch Fire and the Canadian Forest Fire Danger Rating System. Pages 97-98 in *Preprints Third AMS Symp. Fire For. Meteorol.* (Jan. 9-14, 2000, Long Beach, California). Am. Meteor. Soc., Boston, MA.

Alexander, M.E.; Fogarty, L.G. 2000. A pocket card for predicting fire behavior in grasslands under severe burning conditions. Pages 8-17 in B.W. Butler and K. Shannon

(eds.). Proc. 2000 Int. Wildfire Safety Summit (Oct. 10-12, 2000, Edmonton, AB). Int. Assoc. Wildland Fire, Montana City, MT. CD-ROM.

Alexander, M.E.; Stocks, B.J.; Amiro, B.D.; Lanoville, R.A. 2000. Crown fires are “HOT”: Introducing the International Crown Fire Modelling Experiment. Page 284 in L.F. Neuenschwander, K.C. Ryan, G.E. Goldberg and J.D. Greer (eds.). Proc. Joint Fire Science Conf. Workshop Crossing the Millennium: Integrating Spatial Technologies and Ecological Principles for a New Age in Fire Management (June 15-17, 1999, Boise, ID), Vol. I. Univ. Idaho, Moscow, ID and Interl. Assoc. Wildland Fire, Fairfield, WA.

Lee, B.S.; Alexander, M.E.; Hawkes, B.C.; Lynham, T.J.; Stocks, B.J. 2000. Canadian forest fire management systems. Pages I-45-I-52 in Proc. Second Interl. Conf. Geospatial Inform. Agric. For. (Jan. 10-12, 2000, Lake Buena Vista, FL), Vol. I. ERIM Interl., Ann Arbor, MI.

Thorburn, R.W.; MacMillan, A.; Alexander, M.E. 2000. *Wildland Fire -- Safety on the Fireline*: an application of interactive multimedia CD-ROM technology to wildland firefighter safety training. Pages 182-189 in B.W. Butler and K. Shannon (eds.). Proc. 2000 Int. Wildfire Safety Summit (Oct. 10-12, 2000, Edmonton, AB). Int. Assoc. Wildland Fire, Montana City, MT. CD-ROM.

Alexander, M.E.; Fogarty, L.G. 2001. A pocket card for predicting fire behavior in grasslands under severe burning conditions. Pages 315-316 in Pearce, G.; Lester, L (tech. coords.). Bushfire 2001 Proc., Australasian Bushfire Conf. (July 3-6, 2001, Christchurch, New Zealand). N.Z. For. Res. Instit. Ltd., Rotorua, New Zealand.

Beck, J.A.; Alexander, M.E.; Harvey, S.D.; Beaver, A.K. 2001. Forecasting diurnal variation in fire intensity for use in wildland fire management applications. Pages 1-8 in Preprint Volume Fourth AMS Symp. Fire For. Meteorol. (Nov. 13-15, 2001, Reno, NV). Am. Meteorol. Soc., Boston, MA. [reprinted as Wildfire Safety Tip 4 by the Canadian Interagency Forest Fire Centre, Winnipeg, MB]

Leblon, B.; Kasischke, E.S.; Alexander, M.E.; Doyle, M.; Abbot, M. 2001. Fire danger monitoring using ERS-1 SAR images in the case of northern boreal forests. Pages 813-820 in Proc. 23rd Can. Symp. Remote Sens. (Aug. 21-24, 2001, Sainte-Foy, QC). Can. Aeronautics Space Inst., Ottawa, ON.

Strickland, G.; Leblon, B.; Chen, J.; Alexander, M.E. 2001. A model to assess fire danger using NOAA-AVHRR images. Pages 667-675 in Proc. 23rd Can. Symp. Remote Sens. (Aug. 21-24, 2001, Sainte-Foy, QC). Can. Aeronautics Space Inst., Ottawa, ON.

Thorburn, R.W.; Alexander, M.E. 2001. LACES versus LCES: Adopting an “A” for “anchor points” to improve wildland firefighter safety. in Proc. 2001 International Wildland Fire Safety Summit (Nov. 6-8, 2001, Missoula, MT). Int. Assoc. Wildland Fire, Fairfax, VA. CD-ROM. 13 p. [reprinted as Wildfire Safety Tip 5 by the Canadian Interagency Forest Fire Centre, Winnipeg, MB]

Thorburn, R.W.; MacMillan, A.; Alexander, M.E.; Campbell, D.; McLevin, J. 2001. Wildland Fire - Safety on the Fireline: A new CD-ROM based wildland firefighter safety training course. Pages 351-352 in Pearce, G.; Lester, L (tech. coords.). Bushfire 2001 Proc., Australasian Bushfire Conf. (July 3-6, 2001, Christchurch, New Zealand). N.Z. For. Res. Instit. Ltd., Rotorua, New Zealand.

Thorburn, R.W.; MacMillan, A.; Alexander, M.E.; Campbell, D.; McLevin, J. 2001. *Wildland Fire - Safety on the Fireline: a new CD-ROM based wildland firefighter safety training course.* in Proc. 2001 Int. Wildland Fire Safety Summit (Nov. 6-8, 2001, Missoula, MT). Int. Assoc. Wildland Fire, Fairfax, VA. CD-ROM. 2 p.

Thorburn, R.W.; MacMillan, A.; Alexander, M.E.; Nimchuk, N.; Frederick, K.W.; Van Nest, T.A. 2001. Principles of Fire Behavior: a CD-ROM based interactive multimedia wildland fire training course. Pages 353-354 in Pearce, G.; Lester, L. (tech. coords.). Bushfire 2001 Proc., Australasian Bushfire Conference (July 3-6, 2001, Christchurch, New Zealand). N.Z. For. Res. Instit. Ltd., Rotorua, New Zealand.

Thorburn, R.W.; MacMillan, A.; Alexander, M.E.; Nimchuk, N.; Frederick, K.W.; Van Nest, T.A. 2001. Principles of Fire Behavior: a CD-ROM based interactive multimedia wildland fire training course. in Proc. 2001 Int. Wildland Fire Safety Summit (Nov. 6-8, 2001, Missoula, MT). Int. Assoc. Wildland Fire, Fairfax, VA. CD-ROM. 6 p.

Abbott, K.; Leblon, B.; Staples, G., Alexander, M.E.; MacLean, D. 2002. Use of RADARSAT-1 images to map forest fuel moisture over boreal forests. in Proc. 2000 IEEE Interl. Geoscience and Remote Sensing Symp. and 24th Can. Symp. Remote Sensing (June 24-28, 2002, Toronto, Ontario). Instit. Electrical and Electronics Engineers (IEEE), New York, NY. CD-ROM. 3 p.

Alexander, M.E.; St. John, P.; Thorburn, R.W.; Simons, P.; MacMillan, A. 2002. CD-ROM based training course *Understanding the Fire Weather Index (FWI) System* now available! in Viegas, D.X. (ed.) Forest Fire Research & Wildland Fire Safety, Proc. IV Interl. Conf. For. Fire Res./2002 Wildland Fire Safety Summit (Nov. 18-23, 2002, Luso-Coimbra, Portugal). Millpress Sci. Publ., Rotterdam, Netherlands. CD-ROM. 2 p.

Cruz, M.G.; Alexander, M.E.; Wakimoto, R.H.. 2002. Predicting crown fire behavior to support forest fire management decision-making. in Viegas, D.X. (ed.) Forest Fire Research & Wildland Fire Safety, Proc. IV Interl. Conf. For. Fire Res./2002 Wildland Fire Safety Summit (Nov. 18-23, 2002, Luso-Coimbra, Portugal). Millpress Sci. Publ., Rotterdam, Netherlands. CD-ROM. 11 p.

Oldford, S.; Leblon, B.; Gallant, L; Alexander, M.E. 2002. Mapping pre-fire conditions in the Northwest Territories, Canada, using NOAA-AVHRR images. in Proc. 95th Annu. Conf. Can. Instit. Geomatics and Joint Interl. Symp. GeoSpatial Theory, Processing and Applications (July 8-12, 2002, Ottawa, Ont.). Can. Instit. Geomatics, Ottawa, Ont. CD-ROM. 10 p.

Leblon, B.; Oldford, S.; Abbott, K.; Strickland, G.; Gallant, L.; Alexander, M.E. 2003. Use of optical, thermal infrared and radar remote sensing for monitoring fuel moisture conditions. Pages 33-37 in E. Chuvieco, P. Martin and C. Justice (eds.). Proc. 4th Interl. Workshop Remote Sensing and GIS Applications For. Fire Management: Innovate Concepts and Methods in Fire Danger Estimation (June 5-7, 2003, Ghent, Belgium). EARSel, GOFC, Ghent Univ., Ghent, Belgium.

de Groot, W.J.; Alexander, M.E.; Wotton, B.M.; Steffner, C.N.; Carlsson, D.H. 2004. Jack pine regeneration at the International Crown Fire Modelling Experiment. Pages 203-209 in R.T. Engstrom, K.E.M. Galley and W.J. de Groot (editors). Proc. 22nd Tall Timbers Fire Ecol. Conference: Fire in Temperate, Boreal, and Montane Ecosystems. Tall Timbers Res. Stn., Tallahassee, FL.

Alexander, M.E.; Baxter, G.J.; Dakin, G.R. 2005. Travel rates of Alberta wildland firefighters using escape routes. *in* B.W. Butler and M.E. Alexander (editors). Proc. Eighth Inter. Wildland Fire Safety Summit: Human Factors - Ten Years Later, April 26-28, 2005, Missoula, MT. Int. Assoc. Wildland Fire, Hot Springs, SD. CD-ROM. 12 p.

Butler, B.W.; Alexander, M.E. 2005. Foreword: why “human factors ten years later”? *in* B.W. Butler and M.E. Alexander (eds.). *in* Proc. Eighth Int. Wildland Fire Safety Summit: Human Factors - Ten Years Later, April 26-28, 2005, Missoula, MT. Int. Assoc. Wildland Fire, Hot Springs, SD. CD-ROM. 6 p.

Alexander, M.E. 2006. Prescribed burn documentation and fire danger ratings: a case study. *in* D.X. Viegas (ed.). Proc. 5th Int. Conf. For. Fire Res., 27-30 November 2006, Figueira da Foz, Portugal. Elsevier B.V., Amsterdam, The Netherlands. CD-ROM. 12 p.

Alexander, M.E.; Cruz, M.G.; Lopes, A.M.G. 2006. CFIS: a software tool for simulating crown fire initiation and spread. *in* D.X. Viegas (ed.). Proc. 5th Int. Conf. For. Fire Res., 27-30 November 2006, Figueira da Foz, Portugal. Elsevier B.V., Amsterdam, The Netherlands. CD-ROM. 13 p.

Cruz, M.G.; Butler, B.W.; Alexander, M.E.; Viegas, D.X. 2006. Development and evaluation of a semi-physical crown fire initiation model. *in* D.X. Viegas (ed.). Proc. 5th Int. Conf. For. Fire Res., 27-30 November 2006, Figueira da Foz, Portugal. Elsevier B.V., Amsterdam, The Netherlands. CD-ROM. 17 p.

Otway, S.G.; Bork, E.W.; Anderson, K.R.; Alexander, M.E. 2006. Predicting ground fire ignition potential in aspen communities. Pages 537-546 in Andrews, P.L.; Butler, B.W. (comps.). Fuels Management -- How to Measure Success: Conf. Proc. (Mar. 28-30, 2006, Portland, OR). USDA For. Serv., Rocky Mt. Res. Station, Fort Collins, CO. Proc. RMRS-P-41.

Thomas, D.A.; Alexander, M.E. 2006. *Fire Management Today* offers its services to wildland fire safety. *in* Proc. 9th Wildland Fire Safety Summit (April 25-27, 2006,

Pasadena, CA). Int. Assoc. Wildland Fire, Hot Springs, SD. CD-ROM. 3 p. (<http://www.fs.fed.us/fire/fmt/Safetyissues.htm>)

Cruz, M.G.; Fernandes, P.A.M.; Alexander, M.E. 2007. Development of a model system to predict wildfire behavior in pine plantations. Pages 119-128 in Programme, Abstracts & Papers 2007 Instit. For. Aust. and New Zealand Instit. For. Conf. (3-7 June 2007, Coffs Harbour, New South Wales). Instit. For. Aust., Canberra, Australia.

Alexander, M.E.; Ackerman, M.Y.; Baxter, G.J. 2009. An analysis of Dodge's escape fire on the 1949 Mann Gulch Fire in terms of a survival zone for wildland firefighters. in Proc. 10th Wildland Fire Safety Summit, 27-30 April 2009, Phoenix, AZ International Assoc. Wildland Fire, Birmingham, AL. CD-ROM. 27 p.

Alexander, M.E. 2010. Introduction to the Proceedings of Third Fire Behavior and Fuels Conference. . in Wade, D.D; Robinson, M.L., eds. Proceedings of 3rd Fire Behavior and Fuels Conference, 25-29 October 2010, Spokane, WA. Birmingham, AL: International Association of Wildland Fire. 2 p. CD-ROM

Alexander, M.E. 2010. 'Lest we forget': Canada's major wildland fire disasters of the past, 1825-1938. in Wade, D.D; Robinson, M.L., eds. Proceedings of 3rd Fire Behavior and Fuels Conference, 25-29 October 2010, Spokane, WA. Birmingham, AL: International Association of Wildland Fire. 21 p. CD-ROM

Alexander, M.E.; Cruz, M.G. 2010. Introducing the *Canopy Fuel Stratum Characteristics Calculator*. in Wade, D.D; Robinson, M.L., eds. Proceedings of 3rd Fire Behavior and Fuels Conference, 25-29 October 2010, Spokane, WA. Birmingham, AL: International Association of Wildland Fire. 6 p. CD-ROM

Alexander, M.E.; Cruz, M.G.; Vaillant, N.M.; Peterson, D.L. 2010. Towards a crown fire synthesis: what would you like to know and what might you be able to contribute? in Wade, D.D; Robinson, M.L., eds. Proceedings of 3rd Fire Behavior and Fuels Conference, 25-29 October 2010, Spokane, WA. Birmingham, AL: International Association of Wildland Fire. 6 p. CD-ROM

Alexander, M.E. 2010. Foliar moisture content input in the Canadian Forest Fire Behavior Prediction System for areas outside of Canada. in Viegas, D.X., ed. Proceedings of the 6th International Conference on Forest Fire Research, Coimbra, Portugal, 15-18 November 2010. University of Coimbra, Coimbra, Portugal. CD-ROM. 13 p.

Alexander, M.E. 2010. Fire behavior in moderately heavy logging slash: documenting the past with photographs. in Viegas, D.X., ed. Proceedings of the 6th International Conference on Forest Fire Research, Coimbra, Portugal, 15-18 November 2010. University of Coimbra, Coimbra, Portugal. CD-ROM. 12 p.

Alexander, M.E. 2011. Introduction to the Proceedings of the Eleventh International Wildland Fire Safety Summit. in Fox, R.L., ed. Proceedings of the 11th International

Wildland Fire Safety Summit, Missoula, Montana, 4-8 April 2011. International Association of Wildland Fire, Missoula, MT. CD-ROM. 3 p.

Alexander, M.E.; Buxton-Carr, P. 2011. Wildland fire suppression related fatalities in Canada, 1941-2010: a preliminary report. in Fox R.L., ed. Proceedings of the 11th International Wildland Fire Safety Summit, Missoula, Montana, 4-8 April 2011. International Association of Wildland Fire, Missoula, MT. CD-ROM. 15 p.

Alexander, M.E.; Cruz, M.G. 2011. What are the safety implications of crown fires? in Fox, R.L., ed. Proceedings of the 11th International Wildland Fire Safety Summit, Missoula, Montana, 4-8 April 2011. International Association of Wildland Fire, Missoula, MT. CD-ROM. 16 p.

Alexander, M.E. 2013. Wildland fire safety chapter in *Wilderness Medicine* updated. Page 84 in R.L. Fox (ed.). Proceedings of 12th International Wildland Fire Safety Summit, 25-26 October 2012, Sydney, Australia. International Association of Wildland Fire, Missoula, MT. 1 p. CD-ROM.

Gould, J.S.; Cruz, M.G.; Alexander, M.E. 2013. The 1958 Wandilo Forest Fire tragedy revisited. Pages 31-32 in R.L. Fox (ed.). Proceedings of 12th International Wildland Fire Safety Summit, 25-26 October 2012, Sydney, Australia. International Association of Wildland Fire, Missoula, MT.

Alexander, M.E. 2014. Honoring those that have come before us: introductory remarks to the George M. Byram special session tribute. Pages 166-169 in D.D. Wade, R.L. Fox (eds.) and M.L. Robinson (comp.). Proceedings of 4<sup>th</sup> Fire Behavior and Fuels Conference, 18-22 February 2013, Raleigh, NC and 1-4 July 2013, St. Petersburg, Russia. International Association of Wildland Fire, Missoula, MT.

Alexander, M.E. 2014. Learning from those who came before us: closing remarks to the George M. Byram special session tribute. Pages 224-226 in D.D. Wade, R.L. Fox (eds.) and M.L. Robinson (comp.). Proceedings of 4<sup>th</sup> Fire Behavior and Fuels Conference, 18-22 February 2013, Raleigh, NC and 1-4 July 2013, St. Petersburg, Russia. International Association of Wildland Fire, Missoula, MT.

Alexander, M.E.; Vaillant, N.M.; Cruz, M.G. 2014. Synthesizing knowledge on crown fire behavior in conifer forests: we could use your help! Pages 251-252 in D.D. Wade, R.L. Fox (eds.) and M.L. Robinson (comp.). Proceedings of 4<sup>th</sup> Fire Behavior and Fuels Conference, 18-22 February 2013, Raleigh, NC and 1-4 July 2013, St. Petersburg, Russia. International Association of Wildland Fire, Missoula, MT.

Cruz, M.G.; Alexander, M.E. 2014. Uncertainty in model predictions of wildland fire rate of spread. Pages 466-477 in D.X. Viegas (ed.). *Advances in Forest Fire Research*. Coimbra University Press, Coimbra, Portugal.

Alexander, M.E.; Cruz, M.G. 2015. Practical tools for assessing potential crown fire behavior and canopy fuel characteristics. Pages 249-251 in Keane, R.E.; Jolly, M.; Parsons, R.; Riley, K. (eds.). Proceedings of the Large Wildland Fires Conference, May 2014, Missoula, MT. USDA Forest Service, Rocky Mountain Research Station, Fort Collins, CO. Proceedings RMRS-P-73.

Cruz, M.G.; Alexander, M.E. 2015. Error associated with model predictions of wildland fire rate of spread. Page 277 in Keane, R.E.; Jolly, M.; Parsons, R.; Riley, K. (eds.). Proceedings of the Large Wildland Fires Conference, May 2014, Missoula, MT. USDA Forest Service, Rocky Mountain Research Station, Fort Collins, CO. Proceedings RMRS-P-73.

Page, W.G.; Alexander, M.E.; Jenkins, M.J. 2015. Effects of bark beetle attack on canopy fuel flammability and crown fire potential in lodgepole pine and Engelmann spruce forests. Pages 174-180 in Keane, R.E.; Jolly, M.; Parsons, R.; Riley, K. (eds.). Proceedings of the Large Wildland Fires Conference, May 2014, Missoula, MT. USDA Forest Service, Rocky Mountain Research Station, Fort Collins, CO. Proceedings RMRS-P-73.

Frost, S.M.; Jenkins, M.; Alexander, M.E. 2015. Fuel mapping and fuel treatment alternatives for large fire mitigation in the sage-steppe. Page 335 in Keane, R.E.; Jolly, M.; Parsons, R.; Riley, K. (eds.). Proceedings of the Large Wildland Fires Conference, May 2014, Missoula, MT. USDA Forest Service, Rocky Mountain Research Station, Fort Collins, CO. Proceedings RMRS-P-73.

Alexander, M.E.; Taylor, S.W.; Page, W.G. 2016. Wildland firefighter safety and fire behavior prediction on the fireline. Pages 44-58 in Proceedings of the 13<sup>th</sup> International Wildland Fire Safety Summit & 4<sup>th</sup> Human Dimensions of Wildland Fire Conference, April 20-24, 2015, Boise, ID. International Association of Wildland Fire, Missoula, MT.

Fernandes, P.M.; Sil, A.; Ascoli, D.; Cruz, M.G.; Alexander, M.E.; Rossa, C.G.; Baeza, J.; Burrows, N.; Davies, G.M.; Fidelis, A.; Gould, J.S.; Govender, N.; Kilinc, M.; McCaw, L. 2018. Drivers of wildland fire behaviour variation across the Earth. Pages 1267-1270 in D.X. Viegas (ed.). Advances in Forest Fire Research, 2018. Coimbra University Press, Coimbra, Portugal.

Cruz, M.G.; Alexander, M.E.; Sullivan, A.L.; Gould, J.S.; Kilinc, M. 2019. Improvements in Australia's bushfire rate of spread models over time. in Hood, S.M.; Drury, S.; Steelman, T.; Steffens, R. (eds.). Proceedings of the Fire Continuum Conference – Preparing for the Future of Wildland Fire, May 21-24, 2018, Missoula, MT. USDA Forest Service, Rocky Mountain Research Station, Fort Collins, CO. Proceedings RMRS-P-xx. In press.

Fernandes, P.M.; Sil, A.; Ascoli, D.; Cruz, M.G.; Rossa, C.G.; Alexander, M.E. 2019. Characterizing fire behavior across the globe. in Hood, S.M.; Drury, S.; Steelman, T.; Steffens, R. (eds.). Proceedings of the Fire Continuum Conference – Preparing for the



Future of Wildland Fire, May 21-24, 2018, Missoula, MT. USDA Forest Service, Rocky Mountain Research Station, Fort Collins, CO. Proceedings RMRS-P-xx. In press.

Frost, S.M.; Jenkins, M.; Alexander, M.E. 2019a. Fire regime analysis of Army Garrison Camp Williams. in Hood, S.M.; Drury, S.; Steelman, T.; Steffens, R. (eds.). Proceedings of the Fire Continuum Conference – Preparing for the Future of Wildland Fire, May 21-24, 2018, Missoula, MT. USDA Forest Service, Rocky Mountain Research Station, Fort Collins, CO. Proceedings RMRS-P-xx. In press.

Frost, S.M.; Jenkins, M.; Alexander, M.E. 2019b. Wildfire behavior case study of the 2010 Machine Gun Fire, Army Garrison Camp Williams. in Hood, S.M.; Drury, S.; Steelman, T.; Steffens, R. (eds.). Proceedings of the Fire Continuum Conference – Preparing for the Future of Wildland Fire, May 21-24, 2018, Missoula, MT. USDA Forest Service, Rocky Mountain Research Station, Fort Collins, CO. Proceedings RMRS-P-xx. In press.

Perrakis, D.D.B.; Cruz, M.G.; Alexander, M.E.; Taylor, S.W.; Beverly, J.L. 2019. Linking dynamic empirical fire spread models: introducing Canadian Conifer Pyrometrics. in Proceedings of 6<sup>th</sup> Fuels and Fire Behavior Conference. International Association of Wildland Fire, Missoula, Montana. In press.

### **Technical and Popular Articles**

Alexander, M.E. 1973. Fire forum sponsored by Colorado student chapter. *Journal of Forestry* 71(6): 380.

Alexander, M.E. 1974. High mobility ... the interregional fire suppression crew. *Fire Management* 35(3):14-17, 19.

Alexander, M.E.; Yancik, R.F. 1977. The effect of precommercial thinning on fire potential in a lodgepole pine stand. *Fire Management Notes* 38(3):7-9, 20.

Alexander, M.E. 1977. Book review: Proceedings of International Symposium on Air Quality from Urban and Forest Fires. *Forestry Chronicle* 53(1):54.

Alexander, M.E. 1984. Book review: Forest fire prevention and control. *Forestry Chronicle* 60(1):54.

Alexander, M.E. 1985. Book review: Fire in Forestry. *Forestry Chronicle* 61(2):119-120.  
Alexander, M.E.; Stocks, B.J.; Dube, D.E. 1988. Canadian Forest Fire Danger Rating System seminars. *Forest Fire News* No. 25:26.

Alexander, M.E.; De Groot, W.J.; Hirsch, K.G.; Lanoville, R.A. 1989. Use of posters for interpreting fire behavior and danger research. *Fire Management Notes* 50(2):41-44.

Alexander, M.E.; Andrews, P.L. 1989. Wildland fire occurrence and behavior analysis in the year 2000 and beyond. *Fire Management Notes* 50(4): 35-37.

Alexander, M.E. 1989. Fiji adopts Canadian system of rating fire danger. *Forest Fire News* No. 26:30. [Also published in: *International Forest Fire News* II(1):3. 1989]

Alexander, M.E. 1989. Foam effectiveness in relation to quantified fire behavior. *Foam Applications for Wildland & Urban Fire Management* 2(2):4-5.

Alexander, M.E. 1989. Australian workshop on bushfire meteorology and dynamics. *Climatological Bulletin* 23(3):135-136. [Also published in: *Int. For. Fire News* No. 3:10. 1990].

Alexander, M.E.; Bisgrove, G.F. 1990. Proceedings of the 1988 Interior West Fire Council annual meeting and workshop. *Fire Management Notes* 51(4):15. [also published in: *Wildfire News & Notes* 4(5):7. 1990 and *International Forest Fire Newsletter* No. 4:27-28. 1990.]

Alexander, M.E. 1990. Computer calculation of the Keetch-Byram Drought Index -- programmers beware! *Fire Management Notes* 51(4): 23-25.

Alexander, M.E. 1991. Weather data for 1955 Balmoral Fire sought. *New Zealand Forestry* 36(2):16-17.

Alexander, M.E. 1992. Fire behaviour in exotic pine plantations of Australasia. *Australian Forest Grower* 15(1):20.

Alexander, M.E. 1992. The 1990 Stephan Bridge Road Fire: a Canadian perspective on the fire danger conditions. *Wildfire News & Notes* 6(1):6.

Alexander, M.E.; Pearce, H.G. 1992. Follow-up to the Spokane area firestorm '91 report: What were the Canadian fire danger indices? *Wildfire News & Notes* 6(4):6-7.

Alexander, M.E. 1992-93. Forest and rural fire research in New Zealand resumed. *Fire Management Notes* 53-54(1):19. [See also: *International Forest Fire News* No. 7:3-4. 1992]

Alexander, M.E.; Maffey, M.E. 1992-93. Predicting fire behavior in Canada's aspen forests. *Fire Management Notes* 53-54(1):10-13.

Alexander, M.E.; Pearce, H.G. 1993. The Canadian fire danger ratings associated with the 1991 Oakland-Berkeley Hills Fire. *Wildfire News & Notes* 7(2):1, 5.

Cole, F.; Alexander, M.E. 1995. Canadian fire danger rating system proves valuable tool in Alaska. *USDI Bureau Land Manage., Alaska Fire Serv., Fairbanks, AK. Fireline* 8(3):2-3.

Stocks, B.J.; Alexander, M.E.; Lanoville, R.A. 1999. The International Crown Fire Modelling Experiment - an update. *International Forest Fire News* No. 21: 89-90.

Alexander, M.E.; Thorburn, R.W. 2001. Fireline safety training course available on CD-ROM. *Fire Management Today* 61(2): 45.

Alexander, M.E.; Cole, F.V. 2001. Rating fire danger in Alaska ecosystems: CFFDRS provides an invaluable guide to systematically evaluating burning conditions. *USDI Bureau Land Manage., Alaska Fire Serv., Fort Wainwright, AK. Fireline* 12(4): 2-3.

Alexander, M.E. 2002. An emerging fire management issue in Canada: forest-fire fuels. *Canadian Silviculture* 2002(Fall): 5, 14-15.

Alexander, M.E. 2003. Technology transfer and wildland fire management/research. *Fire Management Today* 63(2): 41-42.

Alexander, M.E.; Stam, J.C. 2003. Safety alert for wildland firefighters: fuel conditions in spruce-beetle-killed forests. *Fire Management Today* 63(2): 25.

Thorburn, R.W.; MacMillan, A.; Alexander, M.E.; Nimchuk, N.; Frederick, K.W.; Van Nest, T.A. 2003. "Principles of Fire Behavior": a CD-ROM-based interactive multimedia training course. *Fire Management Today* 63(2): 43-44.

Alexander, M.E. 2004. What triggered the Brewer Fire blowup remains the mystery. *Fire Management Today* 64(2): 56-57.

Alexander, M.E.; Thomas, D.A. 2004. First of its kind: A historical perspective on wildland fire behavior training. *Fire Management Today* 64(1): 99.

St. John, P.; Alexander, M.E. 2004. Canadian Forest Fire Weather Index System: training now available on CD-ROM. *Fire Management Today* 64(2): 54-55.

Alexander, M. 2005. FERIC contributes to international wildland firefighter safety conference. *Crowning Chronicles* 2(3): 6-8. [published by Saskatchewan Fire Management & Forest Protection Branch, Prince Albert, SK]

Alexander, M. 2005. The Interior West Fire Council is coming back to Canada in 2005! *Crowning Chronicles* 2(9): 2-3. [published by Saskatchewan Fire Management & Forest Protection Branch, Prince Albert, SK]

Alexander, M.E. 2005. Long-term experiment takes some of the mystery out of crown fires. *Fire Management Today* 65(3): 36-37.

Alexander, M.; Baxter, G. 2005. Canadian fire management agencies indirectly benefit from New Zealand wildland fire research. *Crowning Chronicles* 2(7): 4-6. [published by Saskatchewan Fire Management & Forest Protection Branch, Prince Albert, SK]

Alexander, M. 2006. Follow-up report on the Eighth International Wildland Fire Safety Summit. *Crowning Chronicles* 2(10): 4-5. [published by Saskatchewan Fire Management & Forest Protection Branch, Prince Albert, SK]

Alexander, M.E. 2006. Aspen forest duff moisture depletion and ground fire potential. *Crowning Chronicles* 2(11): 3-4. [published by Saskatchewan Fire Management & Forest Protection Branch, Prince Albert, SK]

Alexander, M.E. 2007. A fuels management bibliography with subject index. *Fire Management Today* 67(1): 44-48.

Alexander, M.E. 2007. Improving wildland firefighter safety and public safety through fire behavior research and development. *Fire Management Today* 67(1): 49-50.

Alexander, M.E. 2007. Simple question; difficult answer: How much fuel is acceptable? *Fire Management Today* 67(3): 6-11.

Alexander, M.E. 2007. How much fuel is in that pile or windrow? *Fire Management Today* 67(3): 12, 27.

Alexander, M.E. 2007. Software can assess fuel treatment effectiveness on crown fire behavior. *Fire Management Today* 67(3): 30.

Alexander, M.E. 2008. Wildland fire safety featured in wilderness medicine book. *Fire Management Today* 68(1): 41-42.

Alexander, M.E. 2008. Fuels management bibliography: an erratum. *Fire Management Today* 68(1): 32.

Alexander, M.E.; Butler, B.W. 2008. Proceedings of the wildland fire safety summits. *Fire Management Today* 68(1): 40.

Alexander, M.E. 2009. Wildland fire behavior and “The Course of Science” flowchart: is there a connection? *Fire Management Today* 69(3): 44-46.

Alexander, M.E. 2009. Are we abusing our use of models and modelling in wildland fire and fuel management? *Fire Management Today* 69(4): 23-26.

Alexander, M.E. 2010. Users of US crown fire modelling software beware! *BC Forest Professional* 17(3): 4.

Alexander, M.E.; Taylor, S.W. 2010. Wildland fire behavior case studies and the 1938 Honey Fire controversy. *Fire Management Today* 70(1): 15-25.

Alexander, M.E. 2010. How big was Dodge's escape fire? *Fire Management Today* 70(3): 24.

Alexander, M.E. 2011. On predicting wildland fire behaviour and fire effects. *BC Forest Professional* 18(1): 5. Full-length version available at:  
[http://www.abcfp.ca/publications\\_forms/BCFORMagazine/article\\_index.htm#JF11](http://www.abcfp.ca/publications_forms/BCFORMagazine/article_index.htm#JF11)

Alexander, M.E. 2011. A synthesis on crown fires in conifer forests is underway. *Fire Management Today* 71(1): 36.

Alexander, M.E. 2011. A global look at crown fires in conifer forests. *Wildfire* 20(2): 9.

Alexander, M.E. 2011. A celebration of excellence in wildland fire science: the *International Journal of Wildland Fire* is 20 years old. *Fire Management Today* 71(3): 22-23.

Alexander, M.E. 2011. Beyond fire behavior and fuels: learning from the past to help guide us in the future. *Fire Management Today* 71(4): 40-41.

Alexander, M.E. 2011. Is wildland fire research paying its way? *Forestry Chronicle* 87: 715.

Alexander, M.E. 2012. Slave Lake Fire another incident in a long line of wakeup calls for Alberta (and Canada). *Forestry Chronicle* 88: 107-108.

Alexander, M.E. 2012. Recounting the wildfire-related fatalities experienced during the surveying of the Canadian Pacific Railway in 1871. *Forestry* 3(1): 41-42. [Forest History Society of Ontario Newsletter]

Alexander, M.E. 2012. Update to wildland fire safety chapter in *Wilderness Medicine*. *Fire Management Today* 72(3): 46.

Alexander, M.E.; Baxter, G.J.; Dakin, G.R. 2013. How much time does it take for a wildland firefighter to reach a safety zone? *Wildfire* 22(4): 12-13.

Alexander, M.E. 2013. LACES license plates: a tool to promote wildland firefighter safety. *Forestry Chronicle* 89: 581, 584.

Alexander, M.E. 2014. Book review: The sky was on fire – Slave Lake's story of disaster, exodus, and new beginnings. *Forestry Chronicle* 90: 257.

Alexander, M.E.; Cruz, M.G. 2014. The general nature of crown fires. *Fire Management Today* 73(4): 6-7.

Alexander, M.E.; Cruz, M.G. 2014. Energy release rates, flame dimensions, and spotting characteristics of crown fires. *Fire Management Today* 73(4): 24-27.

Alexander, M.E.; Cruz, M.G. 2014. The elliptical shape and size of wind-driven crown fires. *Fire Management Today* 73(4): 28-33.

Alexander, M.E.; Cruz, M.G.; Vaillant, N.M. 2014. Introduction to the special issue on crown fire behavior in conifer forests. *Fire Management Today* 73(4): 6-7.

Alexander, M.E.; Cruz, M.G.; Vaillant, N.M. 2014. Toward improving our application and understanding of crown fire behavior. *Fire Management Today* 73(4): 46-47.

Cruz, M.G.; Alexander, M.E. 2014. Canopy fuel characteristics of conifer forests. *Fire Management Today* 73(4): 12-16.

Cruz, M.G.; Alexander, M.E. 2014. The start, propagation, and spread rate of crown fires. *Fire Management Today* 73(4): 17-23.

Cruz, M.G.; Alexander, M.E. 2014. Operational prediction of crown fire behavior. *Fire Management Today* 73(4): 34-40.

Alexander, M. 2015. Catalan fire expert receives Wildland Fire Safety Award. *Wildfire* 24(3): 10.

Alexander, M.E. 2017. New forestry journal features fire review articles. *Fire Management Today* 75(1): 50.

Alexander, M.E. 2017. Towards the understanding of extreme wildland fire behavior II. *Fire Safety Science News* 41: 7-8.

Alexander, M.E.; Cruz, M.G. 2019. A rule of thumb for estimating a wildfire's forward spread rate. *Wildfire* 28(4). In press.

### **Conference and Workshop Abstracts and Extended Abstracts**

Alexander, M.E.; Sandberg, D.V.; Barrows, J.S. 1976. Fuels and fire potential in lodgepole pine forests of the Colorado Front Range [Abstr.]. *J. Colo.-Wyo. Acad. Sci.* 8(1):51. (Paper presented at 47th Annual Meeting of the Colorado-Wyoming Academy of Sciences, Apr. 23-24, 1976, Boulder, CO)

Alexander, M.E.; Woods, G.T. 1977. Fire weather/danger climatology of Quetico Provincial Park, Ontario [Abstr.]. *Bull. Amer. Meteorol. Soc.* 58(12):1354. (Paper presented at 5th Joint AMS-SAF Conf. Fire and For. Meteorol., Mar. 14-16, 1978, Atlantic City, NJ)

Alexander, M.E.; De Groot, W.J.. 1989. Fire behavior in jack pine stands as related to the Canadian Forest Fire Weather Index (FWI) System [Abstr.]. Pages 79-80 in Program and Abstracts, Wilderness/Parks Fire Conf.: Fire Policies & Management Strategies in Wilderness & Parks -- Past & Future (May 23-26, 1989, Bozeman, MT). Mont. State Univ., Bozeman, MT.

Alexander, M.E.; De Groot, W.J.; Hirsch, K.G.; Lanoville, R.A. 1989. Posters as interpretive aids of fire behavior/danger research in Canada [Abstr.]. in Educational Display Abstracts, Meeting Global Wildland Fire Challenges (July 23-26, 1989, Boston, MA). Natl. Fire Prot. Assoc., Quincy, MA. 1 p.

Alexander, M.E.; De Groot, W.J.; Hirsch, K.G.; Lanoville, R.A. 1989. Wall posters as interpretive aids of fire behavior/danger research and development [Abstr.]. Page 67 in Abstracts: Research Posters, Workshops and Commercial Exhibits--Forestry Research Marketplace: Results in Action (Nov. 21-23, 1989, Toronto, ON). For. Can., Ont. Reg., Sault Ste. Marie, ON. OFRC Symp. Proc. O-P-18.

Alexander, M.E.; Lanoville, R.A. 1989. Predicting fire behavior in black spruce-lichen woodland fuel type of western and northern Canada [Abstr.]. Pages 81-82 in Program and Abstracts, Wilderness/Parks Fire Conf.: Fire Policies & Management Strategies in Wilderness and Parks -- Past & Future (May 23-26, 1989, Bozeman, MT). Mont. State Univ., Bozeman, MT.

Alexander, M.E.; Quintilio, D. 1989. Perspectives on outdoor experimental fires in Canadian forestry research [Abstr.]. Page 609 in Proc. Simulation Soc. Aust. Eighth Biennial Conf. and Bushfire Dynamics Workshop (Sept. 25-27, 1989, Canberra, ACT, Australia). Aust. Natl. Univ., Canberra, ACT, Australia.

Alexander, M.E., Cheney, N.P.; Trevitt, A.C.F. 1991. Tree-crown streets and wildfires in pine plantations of Australasia [Abstr.]. Page 167 in Proc. 11th Conf. Fire and For. Meteorol. (Apr. 16-19, 1991, Missoula, MT). Soc. Amer. For., Bethesda, MD. SAF Publ. 91-04. [Also published as: Page 23 in Abstracts Aust. Bushfire Conf., (Sep. 30 - Oct. 2, 1991, Canberra, ACT, Australia). Univ. Coll., Univ. New South Wales, Aust. Defence Force Acad., Canberra, ACT, Australia. 1991]

Alexander, M.E.; McCaw, W.L.; Smith, R.H.; Neal, J.E. 1991. High-intensity fire behaviour in an exotic pine plantation: the Iffley experiments, Western Australia. Page 18 in Abstracts. Aust. Bushfire Conf. (Sep. 30 - Oct. 2, 1991, Canberra, ACT, Australia). Univ. Coll., Univ. New South Wales, Aust. Defence Force Acad., Canberra, ACT, Australia.

Alexander, M.E.; Maffey, M.E. 1991. Predicting fire behavior in Canada's aspen forests [Abstr.]. Page 157 in S. Navratil and P.B. Chapman (eds.). Proc. Symp. Aspen Management for the 21st Century (Nov. 20-21, 1990, Edmonton, AB). For. Can.,

Northwest Reg., North. For. Cent., Edmonton, AB and Poplar Counc. Can., Edmonton, AB.

Sando, R.W.; Alexander, M.E. 1991. Quantifying the physical aspects and impact of fire in aspen ecosystems [Abstr.]. Page 161 in S. Navratil and P.B. Chapman (eds.). Proc. Symp. Aspen Management for the 21st Century (Nov. 20-21, 1990, Edmonton, AB). For. Can., Northwest Reg., North. For. Cent., Edmonton, AB and Poplar Counc. Can., Edmonton, AB.

Alexander, M.E. 1994. Guidelines for investigation and documentation of wildfire behavior, with particular reference to exotic pine plantations [Abstr.]. Page 51 in Proc. 2nd Int. Conf. For. Fire Res. (Nov. 21-24, 1994, Coimbra, Portugal), Vol. I. Univ. Coimbra, Coimbra, Portugal.

Alexander, M.E. 1995. Predicting fire behavior in wildland/urban environments [Abstr.]. Page 120 in Proc. Symp. Fire Management in the Wildland/Urban Interface: Sharing Solutions (Oct. 2-5, 1994, Kananaskis Village, AB). Partners in Protection, Edmonton, AB.

Pearce, H.G.; Alexander, M.E. 1995. A simple test fire exercise for fire behaviour training [Abstr.]. Page 209 in Landscape Fires '93: Proc. Aust. Bushfire Conf. (Sep. 27-29, 1993, Perth, WA, Australia). Dep. Conserv. Land Manage., Perth, WA, Australia. CALMScience Suppl. 4.

Fogarty, L.G.; Pearce, H.G.; Catchpole, W.R.; Alexander M.E. 1997. Adoption vs. adaptation: lessons from applying the Canadian Forest Fire Danger Rating System in New Zealand [Abstr.]. Page 187 in B.J. McKaige, R.J. Williams and W.M. Waggitt (comps.). Australian Bushfire Conference, Bushfire 97 Proc. (July 8-10, 1997, Darwin, NT, Australia). CSIRO Tropical Ecosyst. Res. Cent., Winnellie, NT, Australia.

Leblon, B.; Galland, L.; Chen, J.; Alexander, M.E.; Granberg, H. 1997. Use of optical and thermal infrared NOAA-AVHRR data as inputs in the Canadian Forest Fire Danger Rating System. Page 358 in Abstracts, Geomatics in the era of RADARSAT, 19th Can. Symp. Remote Sensing (May 25-30, 1997, Ottawa, ON). Can. Instit. Geomatics, Ottawa, ON.

Alexander, M.E. 1998. A wildland fire behavior researcher's perspective of firefighter safety in Canada [Abstr.]. Page 37 in Proceedings Canada/US Wildland Fire Safety Summit (Sep. 29 - Oct. 2, 1997, Rossland, BC). Int. Assoc. Wildland Fire, Fairfield, WA.

Alexander, M.E.; Stocks, B.J. 1998. Appreciation of fire behavior in boreal ecosystems: two new interpretive aids [abstr.]. Page 62 in Fire in Ecosystem Management: Shifting the Paradigm from Suppression to Prescription. Proc. 20th Tall Timbers Fire Ecol. Conf. (May 7-10, 1996, Boise, ID). Tall Timbers Res. Stn., Tallahassee, FL.



Alexander, M.E.; Lanvoille, R.A.; Vandell, M. 1999. What is ICFME? A behind-the-scenes look at an international cooperative research effort [Abstr.]. Pages 11-13 in United by Fire: Working Beyond Boundaries -- Program of the 1999 Interior West Fire Council Annual Meeting and Workshop (Oct. 25-28, 1999, Estes Park, CO). Colo. State For. Serv., Fort Collins, CO.

Alexander, M.E. 1999. A new approach to live wildland fire training: a case study from New Zealand [Abstr.]. Page 25 in United by Fire: Working Beyond Boundaries -- Program of the 1999 Interior West Fire Council Annual Meeting and Workshop (Oct. 25-28, 1999, Estes Park, CO). Colo. State For. Serv., Fort Collins, CO.

Alexander, M.E. 2000. Closing remarks [Abstr.]. Pages 56-57 in M.E. Alexander, D. Driscoll, M. Heathcott and E. George (tech. coords.). People, Ecosystems and Wildland Fires - Working in Harmony. Abstracts and program of the 2000 Interior West Fire Council Annual Meeting and Workshop held October 3-5 in Edmonton, Alberta. Alta. Environ., Land For. Serv., For. Prot. Div. and Nat. Resour. Can., Can. For. Serv., North. For. Cent., Edmonton, AB.

Alexander, M.E.; Lanvoille, R.A.; Wotton, B.M.; Stocks, B.J. 2000. Introduction to the International Crown Fire Modelling Experiment [Abstr.]. Page 7 in B.W., Butler and K. Shannon (eds.). Proc. 2000 Int. Wildfire Safety Summit (Oct. 10-12, 2000, Edmonton, AB). Int. Assoc. Wildland Fire, Montana City, MT. CD-ROM.

Alexander, M.E.; Stefner, C.N. 2000. The Mann Gulch Fire and the Canadian Forest Fire Danger Rating System [Abstr.]. Page 58 in M.E. Alexander, D. Driscoll, M. Heathcott and E. George (tech. coords.). People, Ecosystems and Wildland Fires - Working in Harmony. Abstracts and program of the 2000 Interior West Fire Council Annual Meeting and Workshop held October 3-5 in Edmonton, Alberta. Alta. Environ., Land For. Serv., For. Prot. Div. and Nat. Resour. Can., Can. For. Serv., North. For. Cent., Edmonton, AB.

Alexander, M.E.; Stocks, B.J.; Wotton, B.M.; Lanvoille, R.A. 2000. The International Crown Fire Modelling Experiment [Abstr.]. Page F238 in Proceedings, 2000 Fall Meeting of the American Geophysical Union (Dec. 15-19, 2000, San Francisco, CA), EOS Transactions 81(48) Suppl.

Beck, J.A.; Alexander, M.E.; Stefner, C.N.; Lanvoille, R.A.; Holloway, G. 2000. New insights into the effectiveness of fuel reduction treatments at the stand level [Abstr.]. Page 59-60 in M.E. Alexander, D. Driscoll, M. Heathcott and E. George (tech. coords.). People, Ecosystems and Wildland Fires - Working in Harmony. Abstracts and program of the 2000 Interior West Fire Council Annual Meeting and Workshop held October 3-5 in Edmonton, Alberta. Alta. Environ., Land For. Serv., For. Prot. Div. and Nat. Resour. Can., Can. For. Serv., North. For. Cent., Edmonton, AB.

Cruz, M.G.; Wakimoto, R.H.; Alexander, M.E. 2000. Predicting the initiation and spread of crown fires [Abstr.]. Page 61-62 in M.E. Alexander, D. Driscoll, M. Heathcott and E. George (tech. coords.). People, Ecosystems and Wildland Fires - Working in Harmony. Abstracts and program of the 2000 Interior West Fire Council Annual Meeting and

Workshop held October 3-5 in Edmonton, Alberta. Alta. Environ., Land For. Serv., For. Prot. Div. and Nat. Resour. Can., Can. For. Serv., North. For. Cent., Edmonton, AB.

Cruz, M.G.; Wakimoto, R.H.; Alexander, M.E. 2000. Modeling the initiation and spread of crown fires [Abstr.] in Abstracts and program, Fire Conference 2000: The First National Congress on Fire Ecology, Prevention and Management (Nov. 27-Dec. 1, 2000, San Diego, CA). Univ. Calif. Davis, Univ. Ext., Davis, CA. 2 p.

Thorburn, R.W.; MacMillan, A.; Alexander, M.E.; Campbell, D.; McLevin, J. 2000. A new computer-based wildland firefighter safety training course [Abstr.]. Pages 65-66 in M.E. Alexander, D. Driscoll, M. Heathcott and E. George (tech. coords.). People, Ecosystems and Wildland Fires - Working in Harmony. Abstracts and program of the 2000 Interior West Fire Council Annual Meeting and Workshop held October 3-5 in Edmonton, Alberta. Alta. Environ., Land For. Serv., For. Prot. Div. and Nat. Resour. Can., Can. For. Serv., North. For. Cent., Edmonton, AB.

Wilmore, B.; Fox, J.D., Jr.; Sandberg, D.V.; Alexander, M.E. 2000. Duff moisture dynamics in black spruce feathermoss stands and their relation to the Canadian Forest Fire Danger Rating System [Abstr.]. in Abstracts and program, Fire Conference 2000: The First National Congress on Fire Ecology, Prevention and Management (Nov. 27-Dec. 1, 2000, San Diego, CA). Univ. Calif. Davis, Univ. Ext., Davis, CA. 1 p.

Alexander, M.E. 2001. Crown fire thresholds in pine plantations. Page 71 in Yearbook 2001. Aust. Natl. Univ., Sch. Resour. Environ. Society, Canberra, ACT, Australia.

Alexander, M.E.; Lanoville, R.A. Loring, M.; Stefner, C.N.; Archibald, B. 2001. Application of the Canadian Forest Fire Danger Rating System (CFFDRS) to community fire protection in the Northwest Territories [Abstr.]. Page 317 in Pearce, G.; Lester, L (tech. coords.). Bushfire 2001 Proc., Australasian Bushfire Conf. (July 3-6, 2001, Christchurch, New Zealand). N.Z. For. Res. Instit. Ltd., Rotorua, New Zealand.

Alexander, M.E.; Stefner, C.N.; Beck, J.A.; Lanoville, R.A. 2001. New insights into the effectiveness of fuel reduction treatments on crown fire potential at the stand level [Abstr.]. Page 318 in Pearce, G.; Lester, L (tech. coords.). Bushfire 2001 Proc., Australasian Bushfire Conf. (July 3-6, 2001, Christchurch, New Zealand). N.Z. For. Res. Instit. Ltd., Rotorua, New Zealand.

Alexander, M.E.; Stefner, C.N.; Lanoville, R.A.; Wotton, B.M.; Stocks, B.J.; Taylor, S.W. 2001. Fire behavior research in the boreal forest: The International Crown Fire Modelling Experiment, 1997-2000 [Abstr.]. Page 319 in Pearce, G.; Lester, L (tech. coords.). Bushfire 2001 Proc., Australasian Bushfire Conf. (July 3-6, 2001, Christchurch, New Zealand). N.Z. For. Res. Instit. Ltd., Rotorua, New Zealand.

Conny, J.M.; Klouda, G.A.; Slater, J.F.; Cofer, W.R.; Stocks, B.J.; Alexander, M.E. 2001. Sampling of aerosols from boreal wildfires for carbon speciation: NIST activities at

the International Crown Fire Modeling Experiment, Northwest Territories, Canada. Page 440 in AAAR 2001 Abstracts. Amer. Assoc. Aerosol Res., Cincinnati, OH.

Cruz, M.G.; Wakimoto, R.H.; Alexander, M.E. 2001. Predicting crown fire behavior to support fire management decision making [Abstr.]. Paper presented at the Tools and Methodologies for Fire Danger Mapping Workshop & FARSITE Training Course (Mar. 9-14, 2001, Vila Real, Portugal). 1 p.

Alexander, M.E. 2001. What is the Canadian Forest Service doing about the wildland-urban interface (WUI) fire problem in Canada? [Abstr.]. Paper presented at the National Academy of Sciences' Natural Disasters Roundtable Forum on the "Urban/Wildland Fire" (Jan. 26, 2001, Washington, DC). 2 p. <http://dels.nas.edu/dr/docs/alexander.pdf> [<http://books.nap.edu/html/tbntb/report.pdf>]

Alexander, M.E.; St. John, P.; Thorburn, R.W.; Simons, P.; MacMillan, A. 2002. CD-ROM based training course *Understanding the Fire Weather Index (FWI) System* now available! [Abstr.]. Page 92 Viegas, D.X. (ed.) *Forest Fire Research & Wildland Fire Safety, Proc. IV Interl. Conf. For. Fire Res./2002 Wildland Fire Safety Summit* (Nov. 18-23, 2002, Luso-Coimbra, Portugal). Millpress Sci. Publ., Rotterdam, Netherlands. CD-ROM.

Cruz, M.G.; Alexander, M.E.; Wakimoto, R.H. 2002. Predicting crown fire behavior to support forest fire management decision-making [Abstr.] Page 109 Viegas, D.X. (ed.) *Forest Fire Research & Wildland Fire Safety, Proc. IV Interl. Conf. For. Fire Res./2002 Wildland Fire Safety Summit* (Nov. 18-23, 2002, Luso-Coimbra, Portugal). Millpress Sci. Publ., Rotterdam, Netherlands. CD-ROM.

Lavoie, N.; Alexander, M.; Macdonald, E. 2002. Fuel dynamics and variation of flammability during stand development of jack pine/black spruce stands [Abstr.]. Page 69 in *Workshop Program & Abstracts, 4th International Workshop on Disturbance Dynamics in Boreal Forests: Disturbance Processes and Their Ecological Effects* (Aug. 9-14, 2002, Prince George, BC). Univ. Alta., Edmonton, AB.

Alexander, M.E. 2002. The importance of fire behavior in relation to safe and productive fire suppression [Abstr.]. Invited Presentation at IV Short Course on Forest Fire Behavior Modelling (Nov. 23-24, 2002, Luso-Coimbra, Portugal). 2 p.

Alexander, M.E. 2002. Crown fires in conifer forests [Abstr.]. Invited Presentation at IV Short Course on Forest Fire Behavior Modelling (Nov. 23-24, 2002, Luso-Coimbra, Portugal). 2 p.

Cruz, M.G.; Alexander, M.E.; Wakimoto, R.H. 2003. Definition of a fire behavior model evaluation protocol: a case study application to crown fire behavior models [Abstr.]. Pages 449-450 in Omi, P.N.; Joyce, L.A. (tech. eds.). *Fire, Fuel Treatments and Ecological Restoration: Conf. Proc.* (Apr. 16-18, 2002, Fort Collins, CO). USDA For. Serv., Rocky Mt. Res. Stn., Fort Collins, CO. Proc. RMRS-P-29.

Taylor, S.W.; Alexander, M.E. 2003. Considerations in developing a national forest fire danger rating system [Abstr.]. Page 227 in Proc. XII World For. Congress (Sep. 21-28, 2003, Quebec, QC), Volume B – Forest for the Planet. Food and Agricultural Organization of the United Nations, Rome, Italy, Nat. Resour. Can., Can. For. Serv., Ottawa, ON and Govt. of Que., Quebec, QC.

Alexander, M.E.; Lanoville, R.A. 2004. The International Crown Fire Modelling Experiment fuel treatment trials [Abstr.]. Page 222 in R.T. Engstrom, K.E.M. Galley and W.J. de Groot (eds.). Proc. 22nd Tall Timbers Fire Ecol. Conf.: Fire in Temperate, Boreal, and Montane Ecosystems. Tall Timbers Res. Stn., Tallahassee, FL.

Alexander, M.E.; Stocks, B.J. 2004. The International Crown Fire Modeling Experiment: Background, genesis, overview and summary [Abstr.]. Page 200 in R.T. Engstrom, K.E.M. Galley and W.J. de Groot (eds.). Proc. 22nd Tall Timbers Fire Ecol. Conf.: Fire in Temperate, Boreal, and Montane Ecosystems. Tall Timbers Res. Stn., Tallahassee, FL.

Hobbs, M.W.; Alexander, M.E.; Weber, M.G. 2004. Understory vegetative response following high-intensity crown fires in jack pine-black spruce stands. Page 202 in R.T. Engstrom, K.E.M. Galley and W.J. de Groot (eds.). Proc. 22nd Tall Timbers Fire Ecol. Conf.: Fire in Temperate, Boreal, and Montane Ecosystems. Tall Timbers Res. Stn., Tallahassee, FL.

Lavoie, N.; Alexander, M.E. 2004. Experimental reburns 1-4 years after high-intensity crown fire. Page 229 in R.T. Engstrom, K.E.M. Galley and W.J. de Groot (eds.). Proc. 22nd Tall Timbers Fire Ecol. Conf.: Fire in Temperate, Boreal, and Montane Ecosystems. Tall Timbers Res. Stn., Tallahassee, FL.

Stefner, C.N.; Alexander, M.E.; Maffey, M.E.; Mason, J.A.; Stocks, B.J.; Hartley, G.R. 2004. Sampling the International Crown Fire Modelling Experiment jack pine-black spruce fuel complex. Page 223 in R.T. Engstrom, K.E.M. Galley and W.J. de Groot (eds.). Proc. 22nd Tall Timbers Fire Ecol. Conf.: Fire in Temperate, Boreal, and Montane Ecosystems. Tall Timbers Res. Stn., Tallahassee, FL.

Cruz, M.G.; Alexander, M.E.; Viegas, D.X. 2005. Modificação da estrutura de povoamentos florestais para redução do potencial do comportamento do fogo: modelação vs. Realidade (Stand structure modification to reduce fire potential: simulation vs. reality) [Abstr.]. Page 237 in Silva, R.; Pascoa, F., eds. A Floresta e as Gentes - Resumo das Comunicacoes Apresentadas ao 5 Congresso Florestal Nacional (May 16-19, 2005, Viseu, Portugal). Sociedade Portuguesa de ciencias florestais, Lisbon, Portugal.

Alexander, M.E. 2006. You are about to be entrapped or burned over by a wildfire: what are your survival options? [Abstr.]. For. Ecol. Manage. 234: S6.

Alexander, M.E. 2006. Prescribed burn documentation and fire danger ratings: a case study [Abstr.]. For. Ecol. Manage. 234: S256.

Alexander, M.E.; Cruz, M.G.; Lopes, A.M.G. 2006. CFIS: a software tool for simulating crown fire initiation and spread [Abstr.]. *For. Ecol. Manage.* 234: S133.

Cruz, M.G.; Butler, B.W.; Alexander, M.E.; Viegas, D.X. 2006. Development and evaluation of a semi-physical crown fire initiation model [Abstr.]. *For. Ecol. Manage.* 234: S96.

Alexander, M.E. 2007. Chapter on wildland fire safety featured in wilderness medicine book [Abstr.]. in *Proc. Wildfire 2007 – 4th International Wildland Fire Conference*, 13-17 May 2007, Seville, Spain. Minist. Environ., Madrid, Spain and Junta de Andalucia, Seville, Spain. CD-ROM. 1 p.

Alexander, M.E. 2008. History and legacy of fire danger rating in wildland fire management. Page 17 in *WMO International Workshop on Advances in Operational Weather Systems and Fire Danger Rating*, 14-16 July 2008, Edmonton, AB.

Alexander, M.E. 2009. Opening remarks: The 1988 Yellowstone fires as a fire behavior case history [Extended Abstr.]. Page 8 in R.E. Masters, K.E.M. Galley, and D.G. Despain (eds.). *The '88 Fires: Yellowstone and Beyond*. Tall Timbers Miscellaneous Publication No. 16, Tall Timbers Res. Stn., Tallahassee, FL.

Alexander, M.E.; Cruz, M.G. 2009. Recent advances in modelling the onset of crowning and crown fire rate of spread [Extended Abstr.]. Page 19 in R.E. Masters, K.E.M. Galley, and D.G. Despain (eds.). *The '88 Fires: Yellowstone and Beyond*. Tall Timbers Miscellaneous Publication No. 16, Tall Timbers Res. Stn., Tallahassee, FL.

Alexander, M.E.; Baxter, G.J.; Ackerman, M.Y. 2009. Is a wellsite opening a safety zone for a wildland firefighter or a survival zone or neither? [Extended Abstr.]. Page 110 in R.E. Masters, K.E.M. Galley, and D.G. Despain (eds.). *The '88 Fires: Yellowstone and Beyond*. Tall Timbers Miscellaneous Publication No. 16, Tall Timbers Res. Stn., Tallahassee, FL.

Cruz, M.G.; Alexander, M.E. 2009. Assessing discontinuous fire behaviour and uncertainty associated with the onset of crowning [extended abstract]. Page 20 in R.E. Masters, K.E.M. Galley, and D.G. Despain (eds.). *The '88 Fires: Yellowstone and Beyond*. Tall Timbers Miscellaneous Publication No. 16, Tall Timbers Res. Stn., Tallahassee, FL.

Alexander, M.E. 2010. Foliar moisture content input in the Canadian Forest Fire Behavior Prediction System for areas outside of Canada. Page 118 in D.X. Viegas (ed.). *Abstracts of the VI International Conference on Forest Fire Research*, 15-18 November 2010, Coimbra, Portugal. ADAI/CEIF, University of Coimbra, Coimbra, Portugal.

Alexander, M.E. 2010. Fire behavior in moderately heavy logging slash: documenting the past with photographs. Page 193 in D.X. Viegas (ed.). *Abstracts of the VI International Conference on Forest Fire Research*, 15-18 November 2010, Coimbra, Portugal. ADAI/CEIF, University of Coimbra, Coimbra, Portugal.

Bilgili, E.; Durmaz, B.D.; Alexander, M.E.; Saglam, B.; Kucuk, O.; Baysal, I. 2010. The effect of pruning on crown fire behavior in a calabrian pine plantation, northeastern Turkey. Page 36 in D.X. Viegas (ed.). Abstracts of the VI International Conference on Forest Fire Research, 15-18 November 2010, Coimbra, Portugal. ADAI/CEIF, University of Coimbra, Coimbra, Portugal.

Cruz, M.G.; Alexander, M.E. 2011. Use of fire behaviour models to support silvicultural and fuel management decision making in industrial pine plantations. in Proceedings of the 5th International Wildland Fire Conference, 9-13 May 2011, Sun City, South Africa. 2 p.

Cruz, M.G.; Alexander, M.E.; Vaillant, N.M.; Peterson, D.L. 2011. Crown fires in conifer forests of the world: do you have something to contribute or would like to know about something? in Proceedings of the 5th International Wildland Fire Conference, 9-13 May 2011, Sun City, South Africa. 2 p.

Cruz, M.G.; Alexander, M.E.; Vaillant, N.M.; Peterson, D.L. 2011. Crown fires in conifer forests of the world: do you have something to contribute or would like to know about something? (Abstr.) Page 237 in Duce, P.; Spano, D., eds. Book of Abstracts, International Conference on Fire Behaviour and Risk: Focus on Wildland Urban Interfaces, 4-6 October 2011, Alghero, Italy. University of Sassari and National Research Council of Italy, Sassari, Italy.

Alexander, M.E. 2011. What kind of fire behavior is required to open serotinous cones of jack pine and lodgepole pine? (Abstr.) Page 19 in Program booklet -- Interior West Fire Ecology Conference: Challenges & Opportunities in a Changing World, 14-17 November 2011, Snowbird Resort, UT. Association of Fire Ecology, Redlands, CA.

Alexander, M.E.; Thomas, D.A. 2011. On the value of wildland fire behavior case studies. (Abstr.) Page 18 in Program booklet -- Interior West Fire Ecology Conference: Challenges & Opportunities in a Changing World, 14-17 November 2011, Snowbird Resort, UT. Association of Fire Ecology, Redlands, CA.

Potter, B.; Werth, P.; Clements, C.B.; Finney, M.A.; Goodrick, S.; Alexander, M.; Cruz, M.; Forthofer, J.M.; McAllister, S.; Ottmar, R.D.; Jolly, W.M.; Parsons, R. 2011. Extreme fire behavior synthesis and review summary (Abstr.). in Program of Ninth Symposium on Fire and Forest Meteorology, 18-20 October 2011, Palm Springs, CA. (<https://ams.confex.com/ams/9FIRE/webprogram/Paper192355.html>)

Alexander, M.E. 2012. Wildland fire safety chapter in *Wilderness Medicine* updated. Page 31 in Program and Abstracts of 12th International Wildland Fire Safety Summit, 25-26 October 2012, Sydney, Australia. International Association of Wildland Fire, Missoula, MT.

Gould, J.; Alexander, M.; Cruz, M. 2012. The 1958 Wandilo Forest Fire tragedy revisited. Page 19 in Program and Abstracts of 12th International Wildland Fire Safety

Summit, 25-26 October 2012, Sydney, Australia. International Association of Wildland Fire, Missoula, MT.

Jenkins, M.J.; Page, W.G.; Alexander, M.E. 2012. Diurnal variation in foliar moisture content of lodgepole pine in the red stage of mountain pine beetle attack. in Abstracts and Presenter Biographical Information of Oral Presentations, 5th International Fire Ecology and Management Congress, 3-8 December 2012, Portland, Oregon. Association of Fire Ecology, Redlands, CA.

Vaillant, N.M.; Alexander, M.E.; Cruz, M.G.; Peterson, D.L. 2012. The JFSP crown fire behavior synthesis project wants your input! Poster #119 in Abstracts and Presenter Biographical Information of Poster Presentations, 5th International Fire Ecology and Management Congress, 3-8 December 2012, Portland, Oregon. Association of Fire Ecology, Redlands, CA.

Alexander, M.E. 2013. Honoring and learning from those that have come before us: introducing and closing remarks to the George M. Byram special session tribute (Abstr.). Pages 132-133 in Program of 4th Fire Behavior and Fuels Conference, At the Crossroads: Looking Toward the Future in a Changing Environment, 18-22 February 2013, Raleigh, NC. International Association of Wildland Fire, Missoula, MT.

Alexander, M.E.; Cruz, M.G.; Vaillant, N.M. 2013. Crown fire behavior in conifer forests (Abstr.). Page 45 in Program of 4th Fire Behavior and Fuels Conference, At the Crossroads: Looking Toward the Future in a Changing Environment, 18-22 February 2013, Raleigh, NC. International Association of Wildland Fire, Missoula, MT.

Alexander, M.E.; Cruz, M.G.; Vaillant, N.M. 2013. Synthesizing knowledge on crown fire behavior in conifer forests: we could use your help! (Abstr.). Page 100 in Program of 4th Fire Behavior and Fuels Conference, At the Crossroads: Looking Toward the Future in a Changing Environment, 18-22 February 2013, Raleigh, NC. International Association of Wildland Fire, Missoula, MT.

Cruz, M.G.; Alexander, M.E. 2013. Error uncertainty in fire spread predictions (Abstr.). Page 63 in 2013 CSIRO Bushfire Behaviour Science Symposium for Practitioners and Celebrating 60 Years of Commonwealth Bushfire Research, 14-16 October 2013. CSIRO Ecosystem Sciences and CSIRO Climate Adaptation Flagship, Canberra, ACT.

Cruz, M.G.; Alexander, M.E. 2014. Uncertainty associated with wildland fire rate of spread predictions: a meta-analysis. Page 96 in D.X. Viegas (ed.). Abstracts Book of 7<sup>th</sup> International Conference of Forest Fire Research, 17-20 November 2014, Coimbra, Portugal. University of Coimbra, ADAI/CEIF, Coimbra, Portugal.

Alexander, M.E.; Page, W.G. 2015. Wildland firefighter safety and fire behavior prediction in the field. Pages 68-69 in Program Booklet of 13<sup>th</sup> International Wildland Fire Safety Summit & 4<sup>th</sup> Human Dimensions in Wildland Fire Conference, 20-24 April 2015, Boise ID. International Association of Wildland Fire, Missoula, MT.

Cruz, M.G.; Alexander, M.E.; Sullivan, A.L.; Gould, J.S. 2016. Fire behaviour prediction – improvement in model accuracy and opportunities for future research. in Oral Abstract Presentation 56, 5<sup>th</sup> International Fire Behaviour and Fuels Conference, 11-15 April 2016, Melbourne, VIC, Australia. International Association of Wildland Fire, Missoula, MT.

Jenkins, M.J.; Page, W.G.; Jorgenson, A.; Gray, C.; Guinta, A.; Toone, C.; Runyon, J.; Alexander, M.; Hebertson, E. 2017. Bark beetles, fuels and fire behavior – a comprehensive overview of a decade of research in North American conifer forests. Presentation at the 7<sup>th</sup> International Fire Ecology and Management Congress, Fire Vision 20/20: A 20-Year Reflection and Look into the Future, 28 November-2 December, 2017. [https://whova.com/embedded/session/ifeam\\_201711/272154/](https://whova.com/embedded/session/ifeam_201711/272154/)

Leblon, B.; Oldford, S.; Gallant, L.; Strickland, G.; Abbott, K.; Bourgeau-Chavez, L.; Buckley, J.R.; Alexander, M.E.; Flannigan, M.; Staples, G. 2017. An overview of twenty years of research at the Faculty of Forestry and Environmental Management, University of New Brunswick, Canada on fuel moisture estimation using optical, thermal infrared and radar remote sensing in boreal forests in Alberta, the Northwest Territories, and Alaska. Pages 3-4 in Abstracts List, Opportunities to Apply Remote Sensing in Boreal/Arctic Wildfire Management and Science, April 4-6, 2017, University of Alaska, Fairbanks. AK.

<https://www.frames.gov/partner-sites/afsc/events/previous-events/workshops/2017-rs-workshop/>

Leblon, B.; Gallant, L.; Strickland, G.; Oldford, S.; Abbott, K.; Bourgeau-Chavez, L.; Buckley, J.R.; Staples, G.; Alexander, M.E.; Flannigan, M. 2017. An overview of twenty years of research on fuel moisture estimation using remote sensing over boreal forests at the University of New Brunswick, Canada. Wildfire Remote Sensing Workshop, June 20-22, 2017, Montreal, QC.

### **Miscellaneous Reports and Publications**

Alexander, M.E.; Sandberg, D.V.; Barrows, J.S. 1976. Progress report: quantitative description of fuels and fire behavior potential in even-aged lodgepole pine stands of the Colorado Front Range. Colo. State Univ., Dep. For. and Wood Sci., Fire Sci. and Tech. Prog., Fort Collins, CO. 16-534-CA Report submitted to USDA Forest Service, Rocky Mtn. For. and Range Exp. Stn. Fort Collins, CO. 68 p.

Alexander, M.E. 1977. Prescribed fire planning in Point Pelee National Park. Environ. Can., Can. For. Serv., Great Lakes For. Res. Cent., Sault Ste. Marie, ON. 14 p.

Alexander, M.E. 1978. Photo series of natural residues and conditions in Colorado lodgepole pine fuel complexes. Colo. State Univ., Dep. For. and Wood Sci., Fire Sci. and Tech. Prog., Fort Collins, CO. 16-534-CA Report submitted to USDA Forest Service, Rocky Mtn. For. and Range Exp. Stn. Fort Collins, CO. 48 p.



Alexander, M.E.; Sandberg, D.V.; Barrows, J.S. 1978. Final report: quantitative description of fuels and fire behavior potential in even-aged lodgepole pine stands of the Colorado Front Range. Colo. State Univ., Dep. For. and Wood Sci., Fire Sci. and Tech. Prog., Fort Collins, CO. 16-534-CA Report submitted to USDA Forest Service, Rocky Mtn. For. and Range Exp. Stn. Fort Collins, CO. 35 p.

Alexander, M.E.; Mason, J.A. 1979. Newspaper accounts of forest fires in Pukaskwa National Park. Environ. Can., Can. For. Serv., Great Lakes For. Res. Cent., Sault Ste. Marie, ON. Misc. Off. Rep. 19 p.

Alexander, M.E. 1982. The 1968 Lesser Slave Lake Fire: historical analysis of the Canadian Forest Fire Weather Index. Environ. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. Study NOR-5-191 File Rep. No. 1. 31 p.

Alexander, M.E. 1982. Canadian Forest Fire Danger Rating System: An overview. Environ. Can., Can. For. Serv., North. For. Res. Cent., Edmonton AB. Study NOR-5-191. File Rep. No. 2. 10 p.

Lee, C.Y.; Alexander, M.E. 1982. Calculating spring Drought Code starting values with the Texas Instruments model 59 hand-held calculator. Environ. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. Study NOR-5-191 File Rep. No. 3. 7 p.

Alexander, M.E. 1982. Bibliography of wildfire case histories and studies. Environ. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. Study NOR-5-191 File Rep. No. 4. 7 p. [last revised July 1990].

Van Wagner, C.E.; Alexander, M.E.; Lawson, B.D.; Stocks, B.J. 1982. Proposed extension of the Canadian Forest Fire Danger Rating System. Can. For. Serv. Fire Danger Group. 12 p.

Alexander, M.E. (compiler & editor). 1983. Proceedings of the first Western Region Fire Weather Committee scientific and technical seminar (Mar. 22, 1983, Edmonton, Alta.). Environ. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. 11 p.

Alexander, M.E. 1984. A system of fire danger rating for the provincial parks of Alberta's prairie region: an interim manual. Environ. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. Study NOR-5-191 File Rep. No. 6. 45 p. + Appendices.

Alexander, M.E.; Lee, B.S.; Lee, C.Y. 1984. Hourly calculation of the Fine Fuel Moisture Code, Initial Spread Index, and Fire Weather Index with the Texas Instruments model 59 hand-held calculator. Agric. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. Study NOR-5-191 File Rep. No. 7. 17 p.

Hirsch, K.G.; Alexander, M.E. 1984. Analysis of the relationship between the Cladonia Fire Hazard Index and the Fine Fuel Moisture Code. Environ. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. File Rep. No. 8. 20 p.

Van Nest, T.A.; Alexander, M.E. 1984. Measurement and description of fuels in natural forest stands. Alta. For. Serv., Edmonton, AB. 30 p.

Alexander, M.E. (compiler & editor). 1985. Proceedings of the second Western Region Fire Weather Committee scientific and technical seminar (Mar. 6, 1984, Edmonton, Alta.). Govt. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. 29 p.

Alexander, M.E. (compiler & editor). 1985. Proceedings of the first Central Region Fire Weather Committee scientific and technical seminar (Apr. 17, 1984, Winnipeg, Man.). Govt. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. 26 p.

Alexander, M.E. (compiler & editor). 1985. Proceedings of the second Central Region Fire Weather Committee scientific and technical seminar (Apr. 17, 1985, Winnipeg, Man.). Govt. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, AB. 31 p.

Alexander, M.E. 1986. Bibliography on the Canadian Forest Fire Danger Rating System: 1969-1985. Govt. Can., Can. For. Serv., West. and North. Reg., North. For. Cent., Edmonton, AB. Study NOR-5-05 (NOR-5-191) File Rep. No. 12. 30 p.

Alexander, M.E. 1986. Fire area and perimeter length tables for Canadian Forest Fire Behavior Prediction System fuel types. Govt. Can., Can. For. Serv., West. and North. Reg., North. For. Cent., Edmonton, AB. Study NOR-5-05 (NOR-5-191) File Rep. No. 13. 20 p.

Alexander, M.E. (compiler & editor). 1986. Proceedings of the third Western Region Fire Weather Committee scientific and technical seminar (Feb. 4, 1986, Edmonton, Alta.). Govt. Can., Can. For. Serv., North. For. Cent., Edmonton, AB. 49 p.

Alexander, M.E. (compiler & editor). 1986. Proceedings of the third Central Region Fire Weather Committee scientific and technical seminar (Apr. 3, 1986, Winnipeg, Man.). Govt. Can., Can. For. Serv., North. For. Cent., Edmonton, AB. 62 p.

Alexander, M.E.; McAlpine, R.S. 1987. Canadian Forest Fire Behavior Prediction (FBP) System field reference. Govt. Can., Can. For. Serv., North. For. Cent., Edmonton, AB. Study NOR-5-05 (NOR-5-191) File Rep. No. 17. 91 p.

Stocks, B.J.; Lawson, B.D.; Alexander, M.E.; McAlpine, R.S.; Lynham, T.J.; Van Wagner, C.E. 1987. A strategic and operational plan for forest fire danger rating research and development in Canada, 1987-1992. Can. For. Serv. Fire Danger Group. 22 p.

Alexander, M.E.; Stocks, B.J. 1987. Status of the Canadian Forest Fire Danger Rating System (CFFDRS) ... a progress report by the CFS Fire Danger Group. Can. For. Serv., Fire Danger Group. 76 p.

Alexander, M.E. 1990. Crown fire initiation and spread: experience in Canadian forests and relevance to Australian exotic pine plantations. Paper presented at Australian Forestry Council Research Working Group No. 6 - Fire Management Research Workshop Plantation Fire Management: Opportunities for Research (July 3-4, 1990, Victor Harbour, SA, Australia). 19 p.

Alexander, M.E. 1991. Forest and rural fire danger rating in New Zealand. New Zealand Fire Serv. Comm., Rural Fire Div., Wellington, New Zealand. 70 p.

Alexander, M.E. 1991. Videotape documentation of the high-intensity fire behaviour experiments in *Pinus pinaster*, Iffley Block, Western Australia, March 1991. PAL Videotape (2 hr, 5 min). [Deposited with the National Film Lending Collection, National Library of Australia, Canberra, ACT, Australia]

Alexander, M.E. (compiler & editor). 1991. Proceedings of the fourth Western Region Fire Weather Committee Scientific and Technical Seminar (Mar. 1, 1988, Edmonton, AB). For. Can., Northwest Reg., North. For. Cent., Edmonton, AB. 40 p.

Alexander, M.E. 1991. Fire behaviour in Canadian pine plantations in relation to two Australian fire danger indexes. Paper presented at Bureau of Meteorology and Australian Disaster College sponsored Fire Weather Workshop (June 16-20, 1991, Mount Macedon, VIC, Australia). 12 p.

Alexander, M.E.; Stocks, B.J.; Lawson, B.D.; McAlpine, R.S. 1991. Crown fire initiation and spread. Unpubl. Ms. 75 p.

Alexander, M.E. 1992. The Toolara No. 7 wildfire of 22.9.91 in SE Queensland: an analysis of crown fire potential in relation to the fire environment. Appendix II in Swampy Fire No. 7, Toolara State Forest, 22.9.91. Qld. For. Serv., Brisbane, QLD, Australia. 4 p.

Alexander, M.E.; Pearce, H.G. 1992. Guidelines for investigation and documentation of wildfires in exotic pine plantations. Paper presented at Australian Forestry Council Research Working Group No. 6 - Fire Management Research meeting (Dec. 9, 1992, Creswick, VIC, Australia). 10 p.

De Groot, W.J.; Alexander, M.E. 1994. Developing prescriptions for prescribed fires. Pages 153-201 in Alberta's Prescribed Burn Manual for the Forest Protection Area of the Province. Alta. Environ. Prot., Edmonton, AB.

Poulin, S.; Alexander, M.E.; Osesky, T.; Maczek, P. (eds.). 1994. 1994 supplement to: Canadian Committee on Forest Fire Management 1987 Glossary of Forest Fire Management Terms (Fourth Edition). Can. Comm. For. Fire Manage., Winnipeg, MB. 8 p.

Alexander, M.E.; Van Test, T.A. 1995. National fire behavior training. Paper presented at Canadian Interagency Forest Fire Centre (CIFFC)/Canadian Committee on Forest Fire Management (CCFFM) Fourth Annual Joint Meeting (Nov. 21-24, 1995, Edmonton, AB). 6 p.

Murphy, P.J.; Alexander, M.E.; Stocks, B.J. 1996. The Canadian fire record. Invited paper presented at the National Workshop on Wildland Fire Activity in Canada (April 1-4, 1996, Edmonton, AB). 6 p.

Alexander, M.E. 1996. Wildland fire behavior researcher's perspective on protective fire shelter. Paper presented at the First Western North American Fire Shelter Meeting (Sept. 25-27, 1996, Bragg Creek, AB). 6 p.

Alexander, M.E.; Van Nest, T.A. 1996. An update on national fire behavior training. Paper presented at Canadian Interagency Forest Fire Centre (CIFFC)/Canadian Committee on Forest Fire Management (CCFFM) Fifth Annual Joint Meeting (Nov. 19-22, Winnipeg, MB). 6 p.

Alexander, M.E.; Stocks, B.J. 1997. Fire behavior potential in spruce beetle-killed spruce forests, Kenai Peninsula, Alaska. Can. For. Serv., North. For. Cent., Edmonton, AB. Report prepared for Alaska Department of Natural Resources, Division of Forestry. 15 p.

Alexander, M.E. 1999. Fire behavior and impact analysis of the Garnet Fire, July 22-24, 1994. Can. For. Serv., North. For. Cent., Edmonton, AB. Expert Witness Report prepared for the British Columbia Ministry of Attorney General, Legal Services Branch, Victoria, BC. 18 p. + Appendices.

Van Nest, T.A.; Alexander, M.E. 1999. Systems for rating fire danger and predicting fire behavior used in Canada. Invited paper presented at the National Interagency Fire Behavior Workshop (Mar. 1-5, 1999, Phoenix, AZ). 13 p.

Alexander, M.E.; Cole, F.V. 2001. Rating fire danger & potential fire behavior in Alaska. Pages 15-18 in Handy-Dandy Alaska Fire Suppression Field Handbook. USDI Bureau Land Manage., Alaska Fire Serv., Fort Wainwright, AK. Publ. BLM-AK-AE-93-025-9218-326 Rev June 2001.

Taylor, S.W.; Alexander, M.E. 2001. An urgent need for a new forest fire research vision: forest fire danger rating at the millennium. Prepared for Canadian Forest Service S&T Forum in Ottawa, November 2001 (revised June 2004). 4 p.

Alexander, M.E. 2006. Alberta prescribed burning fuel sampling handbook. For. Eng. Res. Instit. Can., Wildland Fire Operations Res. Group, Hinton, AB. 45 p.

Christensen, N.L. (chair); Alexander, M.E.; Benson, N.C.; Brown, T.J.; Cortner, H.J.; Omi, P.N.; Schmidt, R.G.; Shlisky, A.; Swallow, S.K. 2007. U.S. Forest Service R&D

wildland fire external peer review. Report submitted to USDA Forest Service Research and Development, Washington, DC. 25 p.

Alexander, M.E. 2010. Feasibility study for the setting up of a global wildland fire danger rating system. Study Report for Contract No. P200915719ALEX Submitted to European Commission, Joint Research Centre, Institute of Environment and Sustainability, Land Management and Natural Hazards Unit, Ispra, Italy. 75 p.

Alexander, M.E. 2012. CANADA, EH?: Clarifying the Development and Structure of the Canadian Forest Fire Danger Rating System. Addendum to JFSP Fire Science Brief 67. 2 p. ([http://www.firescience.gov/projects/briefs/05-4-2-18\\_FSBrief67.pdf](http://www.firescience.gov/projects/briefs/05-4-2-18_FSBrief67.pdf))

Alexander, M.E.; Cruz, M.G.; Vaillant, N.M.; Peterson, D.L. 2013. Crown fire behavior characteristics and prediction in conifer forests: a state-of-knowledge synthesis. Joint Fire Science Program, Boise, Idaho. JFSP 09-S-03-1 Final Report. 39 p. ([http://www.fs.fed.us/wwetac/projects/PDFs/CrownFireSynthesis\\_JFSPFinalProjectReport.pdf](http://www.fs.fed.us/wwetac/projects/PDFs/CrownFireSynthesis_JFSPFinalProjectReport.pdf))

Alexander, M.E. 2013. Interactive comment on “Overview of a prescribed burning experiment within a boreal forest in Finland” by A. Virkkula et al. Atmospheric Chemistry and Physics Discussion 13: C8941-C8942.

### **Web-based Essays and Presentations**

Alexander, M.E.; Stam, J.C. 2001. Alaska wildland firefighter safety alert - fuel conditions in spruce beetle-killed forests. Alaska Fire Service website <http://fire.ak.blm.gov/unique/docs/misc/salert.asp>  
[reprinted as Wildfire Safety Tip 3 by the Canadian Interagency Forest Fire Centre, Winnipeg, MB]

Alexander, M.E. 2003. Wildland fire behavior research at the Northern Forestry Centre. Poster paper presented at the XII World Forestry Congress, September 21-28, 2003, Quebec City, QC. (<http://wildfirelessons.net/documents/Alexander-2003.pdf>)

Alexander, M.E. 2003. Understanding fire behavior — the key to effective fuels management. Invited Keynote Address presented at the Forest Engineering Research Institute of Canada–Wildland Fire Operations Research Group Sponsored Fuel Management Workshop, October 6–8, 2003, Hinton, AB. (<http://wildfire.fpinnovations.ca/91/WorkshopPresentation1.htm>)

Taylor, S.W.; Alexander, M.E. 2003. Considerations in developing a national forest fire danger rating system. 8 p. (<http://www.fao.org/DOCREP/ARTICLE/WFC/XII/0726-B1.HTM>)

Alexander, M.E. 2003. Fire behavior as it relates to firefighter safety. Paper presented at the 7th International Wildland Fire Safety Summit, November 18-20, 2003, Toronto, Ontario. 7 p.

(<http://www.iawfonline.org/summit/2003presentations/2003%20presentations.shtml>)

Alexander, M.E. 2003. Fire behavior as it relates to firefighter safety: seven key points for discussion. Based on a revised paper presented at the 7th International Wildland Fire Safety Summit, November 18-20, 2003, Toronto, Ontario. 6 p.

([http://www.wildlandfire.com/docs/2003\\_n\\_before/alexander.htm](http://www.wildlandfire.com/docs/2003_n_before/alexander.htm))

Alexander, M.E.; Thomas, D.A. 2004. Wildland fire behavior case studies and analyses. Invited presentation at the S-590 Advanced Fire Behavior Interpretation Course, National Advanced Resource Technology Center, Marana, AZ.

(<http://wildfirelessons.net/documents/Alexander-Thomas-2004.pdf>)

Alexander, M.E. 2004. Can wildland conflagrations be stopped? Forest Engineering Research Institute of Canada, Wildland Fire Operations Research Group, Hinton, AB. 4 p.

([https://www.frames.gov/documents/catalog/alexander\\_2004.pdf](https://www.frames.gov/documents/catalog/alexander_2004.pdf))

Alexander, M.E. 2004. Limitations on accuracy of wildland fire behavior predictions. Forest Engineering Research Institute of Canada, Wildland Fire Operations Research Group, Hinton, AB

(<http://fire.feric.ca/other/LimitationsonAccuracyofWildlandFireBehaviorPredictions.htm>)

Alexander, M.E. 2004. A comment on models and modelling in fire/fuel management. Forest Engineering Research Institute of Canada, Wildland Fire Operations Research Group, Hinton, AB.

(<http://fire.feric.ca/other/AcommentonModelsandModellinginFire.htm>)

Alexander, M.E. 2005. Wildland fire and drought: Searching for practical solutions. Invited presentation at Joint Session of 19th Annual Interior West Fire Council Conference & 6th American Meteorological Society Symposium on Fire and Forest Meteorology, Oct. 25-27, 2005, Canmore, AB.

([http://fire.feric.ca/Conference/DroughtAndWildlandFireForPracticalSolutions\\_files/frame.htm](http://fire.feric.ca/Conference/DroughtAndWildlandFireForPracticalSolutions_files/frame.htm))

Alexander, M.E. 2005. Latest developments in crown fire behavior prediction. Invited presentation at 19th Annual Interior West Fire Council Conference, Oct. 25-27, 2005, Canmore, AB.

([http://fire.feric.ca/Conference/2005IWFCMartyAlexander\\_files/frame.htm](http://fire.feric.ca/Conference/2005IWFCMartyAlexander_files/frame.htm))

Alexander, M.E. 2005. Fuel management in relation to wildland fire prevention: A new and/or old concept? Forest Engineering Research Institute of Canada, Wildland Fire Operations Research Group, Hinton, AB. 3 p.

([https://www.frames.gov/documents/catalog/alexander\\_2005.pdf](https://www.frames.gov/documents/catalog/alexander_2005.pdf))

Alexander, M.E. 2005. Fire behavior considerations ... for safe and productive fire suppression. Invited Keynote Address presented at the Forest Engineering Research Institute of Canada–Wildland Fire Operations Research Group Sponsored Workshop on Heavy Equipment and Fireline Construction – The Past, Present and Future, Mar. 15-16, 2005, Hinton, AB.

(<http://wildfire.fpinnovations.ca/44/36432005.asp>)

Alexander, M.E. 2006. Stand structure modification to reduce fire potential: Simulation vs. reality. Forest Engineering Research Institute of Canada, Wildland Fire Operations Research Group. Hinton, AB. 5 p.

([https://www.frames.gov/documents/catalog/alexander\\_2006d.pdf](https://www.frames.gov/documents/catalog/alexander_2006d.pdf))

Alexander, M.E.; Baxter, G.J.; Hsieh, R. 2006. Software under development for predicting the effectiveness of grassland firebreaks. Forest Engineering Research Institute, Wildland Fire Operations Research Group, Hinton, AB. Microsoft Access Software. Version 3.0.

(<http://fire.feric.ca/36202003/GrassFirebreakBreaching.htm>)

Alexander, M.E. 2008. Application of the CFFDRS for initial attack preparedness. Invited presentation at Alaska Division of Forestry Fire Preparedness Workshop, 2 Apr. 2008, Fairbanks, AK.

([https://www.frames.gov/documents/catalog/alexander\\_20080402\\_presentation.pdf](https://www.frames.gov/documents/catalog/alexander_20080402_presentation.pdf))

Alexander, M.E. 2008. Considerations in applying the CFFDRS to restricting firing operations. Invited presentation at Alaska Fire Service Military Zone Meeting, Fort Wainwright, AK, 3 Apr. 2008, Fort Wainwright, AK.

([https://www.frames.gov/documents/catalog/alexander\\_20080403\\_presentation.pdf](https://www.frames.gov/documents/catalog/alexander_20080403_presentation.pdf))

Alexander, M.E. 2008. A primer on the Canadian Forest Fire Danger Rating System (CFFDRS). Invited presentation at Alaska Division of Forestry Spring Operations Meeting, 4 Apr. 2008, Fairbanks, AK.

([https://www.frames.gov/documents/catalog/alexander\\_20080404\\_presentation.pdf](https://www.frames.gov/documents/catalog/alexander_20080404_presentation.pdf))

Alexander, M.E. 2008. Some random thoughts on fire behavior research and operational fire behavior considerations. Invited Keynote Address at 4th Plenary Fire Paradox Meeting, June 9-13, 2008, Chania, Crete, Greece.

([http://www.fireparadox.org/scientific/document\\_0.html?PHPSESSID=158cb7c3ec91059ab65a91f6899f873d](http://www.fireparadox.org/scientific/document_0.html?PHPSESSID=158cb7c3ec91059ab65a91f6899f873d))

([http://wildfirelessons.net/documents/M\\_E\\_Alexander\\_Keynote\\_Address\\_4th\\_Plenary\\_Meeting.pdf](http://wildfirelessons.net/documents/M_E_Alexander_Keynote_Address_4th_Plenary_Meeting.pdf) )

Alexander, M.E. 2008. History and legacy of fire danger rating in wildland fire management. Invited Keynote Address at WMO International Workshop on Advances in Operational Weather Systems and Fire Danger Rating, 14-16 July 2008, Edmonton, AB.

(<http://www.wamis.org/agm/meetings/wofire08/S1-Alexander.pdf>)

Alexander, M.E. 2008. Forest fire protection and management in Nova Scotia: Reflecting on the past, the present, and the future. Invited Banquet Address at the 60th Anniversary of the Subenacadie Fire Control Centre, 5 Nov. 2008, Halifax, NS.

(<http://www.wildfirelessons.net/documents/ReflectingOnFireMngmtInNovaScotia-MAlexander.pdf>)

Alexander, M.E. 2009. Are wildland-urban interface fire disasters avoidable? Invited Keynote Address at New Brunswick Association of Fire Chiefs 32nd Annual Convention, May 23-25, 2009, Moncton, NB.

(<http://www.wildfirelessons.net/documents/AreWUIFireDisastersAvoidable-MAlexander.pdf>)

Alexander, M.E. 2009. Some pragmatic thoughts on the prediction of spotting in wildland fires. Invited presentation at the MITACS/GEOIDE Conference on Forest Fire Modelling, June 22-23, 2009, Hinton, AB.

([http://www.math.ualberta.ca/~forestfire/MITACS\\_GEOIDE\\_Conference\\_2009/Martin\\_Alexander.pdf](http://www.math.ualberta.ca/~forestfire/MITACS_GEOIDE_Conference_2009/Martin_Alexander.pdf))

Alexander, M.E. 2009. Living with fire in the boreal forest. Invited presentation at the 13th Annual General Meeting of Partners in Protection, Oct. 14-16, 2009, Jasper, AB.

(<https://www.frames.gov/catalog/11153>)

Alexander, M.E.; Volney, J. 2009. Natural disturbances in Canada's boreal forest. Natural Resources Canada, Canadian Forest Service, Ottawa, ON. Video.

(<https://www.youtube.com/watch?v=bH1yAOHlmnE>)

Alexander, M.E. 2010. Wildland fire suppression related fatalities in Canada, 1941-2010.

(<http://www.wildlandfire.com/docs/2011/canada/WildlandFireSuppressionRelatedFatalities-in-Canada-1941-2010-by-ME-Alexander.pdf>)

Alexander, M.E.; Taylor, S.W. 2010. The contributions of *The Forestry Chronicle* to wildland fire management in Canada. Poster paper presented at the Wildland Fire 2010 Conference, 5-7 October 2010, Kitchener/Waterloo, ON.

(<http://www.wildlandfirecanada.ca/Presentations/Posters/P42.pdf>)

Cruz, M.G.; Alexander, M.E. 2010. Crown fires. Pages 30-46 in VI Short Course on Fire Behaviour, 13-14 November 2010, Coimbra, Portugal. Association for the Development of Industrial Aerodynamics, Forest Fire Research Centre, Coimbra, Portugal.

([https://www.frames.gov/documents/catalog/cruz\\_and\\_alexander\\_2010.pdf](https://www.frames.gov/documents/catalog/cruz_and_alexander_2010.pdf))

Alexander, M.E. 2011. A global look at crown fires in conifer forests.

(<http://wildfireworld.org/2011/01/a-global-look-at-crown-fires-in-conifer-forests/>)

Alexander, M.E. 2011. How much time does it take for a wildland firefighter to reach a safety zone? Invited essay for *Wildfire Science* website.

([http://neil.dev3.webenabled.net/expert-opinion/malexander\\_may6](http://neil.dev3.webenabled.net/expert-opinion/malexander_may6))



Alexander, M.E. 2011. What kind of fire behavior is required to open serotinous cones of jack pine and lodgepole pine? Renewable Resources Departmental Seminar Series, University of Alberta, Edmonton, Alberta, October 20, 2011.

(<http://vimeo.com/31571028>)

Alexander, M.E. 2012. “NOT ON MY WATCH !” A Personal Perspective on Wildland Fire Safety, Invited presentation at the National Rural Fire Authority’s Annual Regional Rural Fire Committee Chairpersons Conference, 11-13 June 2012, Rotorua, New Zealand.

(<http://www.nrfa.org.nz/Event%20and%20training%20materials/Marty%20Alexander%20Presentation.pdf> )

Alexander, M.E. 2012. Invited Keynote Address: Wildland Fire Research’s Raison d’être. Pages 6-43 in Rural Fire Research Workshop Proceedings – Celebrating 20 Years of Rural Fire Research in NZ, 14-15 June 2012, Rotorua, New Zealand. SCION Rural Fire Research Group, Christchurch, New Zealand.

([http://www.scionresearch.com/\\_data/assets/pdf\\_file/0011/38684/2012-workshop-proceedings\\_June-2012-web-Quality-3.pdf](http://www.scionresearch.com/_data/assets/pdf_file/0011/38684/2012-workshop-proceedings_June-2012-web-Quality-3.pdf))

Alexander, M.E. 2012. The Science and Art Behind Fire Danger Ratings: An Historical and International Perspective, Invited presentation in the Australian Bushfire Cooperative Research Centre Professional Development Event Series, June 18, 2012, Sydney, New South Wales. (<https://www.youtube.com/watch?v=9fv06afrvoo>)

Alexander, M.E. 2012. On Linking the Impacts and Effects of Wildland Fires to Their Behavior”, Invited presentation in the Quinney College of Natural Resources Seminar Series, Utah State University, Logan, UT, October 31, 2012.

([https://www.frames.gov/documents/catalog/alexander\\_2012\\_usu\\_seminar.pdf](https://www.frames.gov/documents/catalog/alexander_2012_usu_seminar.pdf))

Jenkins, M.J.; Page, W.G.; Alexander, M.E. 2012. Diurnal variation in foliar moisture content of lodgepole pine in the red stage of mountain pine beetle attack. Oral presentation at the 5th International Fire Ecology and Management Congress, 3-8 December 2012, Portland, OR. Association of Fire Ecology, Redlands, CA.

([http://www.usu.edu/forestry/disturbance/bark-beetles-fuels-fire/PPT/2012\\_AFE\\_Jenkins\\_portland.ppsx](http://www.usu.edu/forestry/disturbance/bark-beetles-fuels-fire/PPT/2012_AFE_Jenkins_portland.ppsx))

Alexander, M.E. 2013. Wildfire’s resistance to control in mountain pine beetle-attacked lodgepole pine forests. Renewable Resources Departmental Seminar Series, University of Alberta, Edmonton, AB, October 17, 2013.

(<http://www.youtube.com/watch?v=n-UcFWaeCc0>)

Cruz, M.G.; Alexander, M.E. 2013. Error associated with rate of fire spread predictions. Presentation made at the CSIRO Bushfire Behaviour Science Symposium, 14-16 October 2013, Canberra, ACT.

([https://www.youtube.com/watch?v=X\\_9rarOY0gw](https://www.youtube.com/watch?v=X_9rarOY0gw))

Alexander, M.E. 2014. Wildland fire case study development. Invited presentation at the Forest Fuels Management Workshop, 14-16 January 2014, Hinton, AB

(<http://wildfire.fpinnovations.ca/151/Presentations/01161000-MartyAlexander-WildlandFireCaseStudyDevelopment.pdf>)

Ou, A.A.; Alexander, M.E.; Ashton, A.J.; McLoughlin, N.R. 2014. An example of extreme fire behavior associated with a dry cold front passage: the 2012 Zama Wildfire Complex in northwestern Alberta. Oral presentation at the 2014 Wildland Fire Canada Conference, 7-9 October 2014, Halifax, NS

([https://www.ualberta.ca/~wildfire/Wildland\\_Fire\\_Canada/2014\\_files/AOu.pdf](https://www.ualberta.ca/~wildfire/Wildland_Fire_Canada/2014_files/AOu.pdf))

Alexander, M.; Bon, D.; Elliott, S.; Finn, D.; Hicks, D.; Johnson, K. 2014. A review of the Wildland Fire Behaviour Specialist Course 1995-2014. Oral presentation at the 2014 Wildland Fire Canada Conference, 7-9 October 2014, Halifax, NS

([https://www.ualberta.ca/~wildfire/Wildland\\_Fire\\_Canada/2014\\_files/KJohnson.pdf](https://www.ualberta.ca/~wildfire/Wildland_Fire_Canada/2014_files/KJohnson.pdf))

Hicks, D.; Alexander, M.; Elliott, S.; Finn, D.; Bon, D. 2014. Class photo from the Canadian Wildland Fire Behaviour Specialist Courses – S590. Poster presentation at the 2014 Wildland Fire Canada Conference, 7-9 October 2014, Halifax, NS

([https://www.ualberta.ca/~wildfire/Wildland\\_Fire\\_Canada/2014\\_files/Dana.pdf](https://www.ualberta.ca/~wildfire/Wildland_Fire_Canada/2014_files/Dana.pdf))

Alexander, M.E. 2014. Overseas use of CFFDRS. Alaska Fire Science Consortium, CFFDRS in Alaska Summit, 28-30 October 2014, Fairbanks, Alaska.

([https://www.frames.gov/documents/catalog/alexander\\_2014\\_overseas-use-cffdrs.pdf](https://www.frames.gov/documents/catalog/alexander_2014_overseas-use-cffdrs.pdf))

Alexander, M.E. 2014. Crown fire behavior in conifer forests synthesis. Alaska Fire Science Consortium, CFFDRS in Alaska Summit, 28-30 October 2014, Fairbanks, Alaska.

([https://www.frames.gov/documents/catalog/alexander\\_2014\\_crown-fire-synthesis.pdf](https://www.frames.gov/documents/catalog/alexander_2014_crown-fire-synthesis.pdf))

Alexander, M.E.; Cruz, M.G. 2015. Crown fire behavior in conifer forests. Wildland Fire Lessons Learned Center Monthly Webinar Series, 7 May 2015.

(<https://www.youtube.com/watch?v=HVgUUVC-dZI&feature=youtu.be>)

Cruz, M.; Sullivan, A.; Plucinski, M.; Hurley, R.; Alexander, M. 2018. Cropland fire reconstruction course. BNHCRC/AFAC Webinar, 5 December 2018, Melbourne, Victoria. (<https://youtu.be/mVeJqDxTkb8>)

(<https://www.bnhcrc.com.au/files/afac-webinar-cropland-fire-reconstruction>)

## **Software Programs**

Alexander, M.E.; Baxter, G.J.; Hsieh, R. 2006. Software for predicting effectiveness of grassland firebreaks. FPInnovations Wildfire Operations Research, Hinton, AB.

(<http://wildfire.fpinnovations.ca/67/GrassFirebreakBreachingWriteUp.htm>)

Cruz, M.G.; Lopes, A.M.G.; Alexander, M.E. 2006. CFIS: Simulation of crown fire initiation and spread. Associação para o Desenvolvimento da Aerodinâmica Industrial, Coimbra, Portugal and Forest Engineering Research Institute, Wildland Fire Operations Research Group, Hinton, AB. Visual Basic Software. Version 3.0.  
(<http://www2.dem.uc.pt/antonio.gameiro/ficheiros/CFIS.exe>)

Cruz, M.G.; Alexander, M.E. 2013. Cruz, Alexander and Wakimoto (2003) Canopy Fuel Stratum Characteristics Calculator. Version 1.1. (<https://www.frames.gov/cfis>)

## WEBSITES

Applied Wildland Fire Behavior Research & Development:  
[https://www.frames.gov/applied\\_fire\\_behavior](https://www.frames.gov/applied_fire_behavior)

Crown Fire Initiation and Spread (CFIS) Software System:  
<https://www.frames.gov/cfis>

International Crown Fire Modelling Experiment (ICFME):  
<https://www.frames.gov/icfme>

Applying the Canadian Forest Fire Danger Rating System (CFFDRS) to Alaskan Ecosystems:  
<https://www.frames.gov/cffdrs>

Crown Fire Behavior Characteristics and Prediction in Conifer Forests: A State of Knowledge Synthesis:  
<https://www.fs.fed.us/wwetac/brief/CrownFireSynthesis.php>

Fire on Earth: An Introduction  
<http://bcs.wiley.com/he-bcs/Books?action=index&bcsId=8578&itemId=1119953561>

Google Scholar Citations – Martin E. Alexander  
<http://scholar.google.ca/citations?user=lWI0qKUAAA&hl=en>

BONFIRE – gloBal-scale analysis and mOdelliNg of FIRE behaviour potential  
<https://www.researchgate.net/project/BONFIRE-gloBal-scale-analysis-and-mOdelliNg-of-FIRE-behaviour-potential-PTDC-AAG-MAA-2656-2014>



*... further major advances in combating wildfire are unlikely to be achieved simply by continued application of the traditional methods. What is required is a more fundamental approach that can be applied at the design stage ... Such an approach requires a detailed understanding of fire behavior ... Drysdale (2011: 1) - An Introduction to Fire Dynamics (Third edition)*