Crown fires in conifer forests of the world:
Do you have something to contribute or would like to know about something?

Miguel G. Cruz
CSIRO Ecosystem Sciences and CSIRO Climate Adaptation Flagship - Bushfire Dynamics and Applications, GPO Box 284, Canberra, ACT 2601, Australia, miguel.cruz@csiro.au

Martin E. Alexander
University of Alberta, Department of Renewable Resources & Alberta School of Forest Science and Management, Edmonton, AB, T6G 2H1, Canada, mea2@telus.net

Nicole M. Vaillant
USDA Forest Service, Pacific Northwest Research Station, Western Wildland Environmental Threat Assessment Center, 1200 Franklin Way, Sparks, NV, 89431, USA, nvaillant@fs.fed.us

David L. Peterson
USDA Forest Service, Pacific Northwest Research Station, Pacific Wildland Fire Sciences Laboratory, 400 N 34th Street, Suite 201, Seattle, WA 98103, USA, peterson@fs.fed.us

Abstract
We are presently engaged in a project supported by the U.S. Joint Fire Science Program aimed at synthesizing the currently available information on crown fire behaviour in conifer forests (e.g., the onset of crowning, type of crown fire and the associated spread rate and fireline intensity) in relation to the wildland fire environment (i.e. fuels, weather and topography) (Alexander 2011a). While the focus is on the coniferous forests of the United States and adjacent areas of Canada, the synthesis is intended to be global in nature (Alexander 2011b) and is intended for multiple audiences ranging from the general public to college students to fire and land managers to university professors and other researchers.

In addition to summarizing the existing scientific and technical literature on the subject, project members are also actively seeking assistance from individuals in the form of field observations of crown fires and related experiences as well as still pictures and video footage in both natural forest stands and industrial plantations (Fig. 1). Information from all regions of the world would be appreciated, including Mexico, South Africa, Australasia, Europe, Central and and South America, Europe and Asia. Feel free to contact any member of the project team.

Finally, we are interested in hearing from you as to your opinions on the subject of crown fires and any specific questions and/or research needs/knowledge gaps that you would like to see addressed or discussed in this crown fire synthesis project (Alexander et al. 2010). The Forest Fire Management Group (2007) in Australia have for example done an excellent job of enunciating many of their concerns regarding the implications of crown fires in softwood plantations.

Our project website is: http://www.fs.fed.us/wwetac/projects/alexander.html

Keywords: crown fire initiation, crown fire phenomenology, crown fire potential, crown fire rate of spread, crowning, extreme fire behaviour, knowledge gaps, research needs.

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References

Figure 1 – Active crowning associated with the major run of the Billo Road Fire in New South Wales, Australia, on 10 December 2006 as described by Cruz and Plucinski (2007). The stand height of this 15-year-old radiata pine (Pinus radiata) fuel complex is ~18 m. Photo by S. Cathcart, National Parks and Wildlife Service of New South Wales.