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Contents	Volume 16	Issue 5	2007
<p>A numerical study of flame geometry and potential for crown fire initiation for a wildfire propagating through shrub fuel Dominique Morvan <i>International Journal of Wildland Fire</i> 16, 511–518</p>		<p>The behaviour of a surface fire propagating through understorey vegetation and the conditions of ignition at the base of the canopy, are studied using a numerical model based on the resolution of the physical equations governing the state of the coupled system formed by the vegetation and the surrounding atmosphere.</p>	
<p>The contribution of fire research to fire management: a critical review of a long-term experiment in the Kruger National Park, South Africa Brian W. van Wilgen, Navashni Govender and Harry C. Biggs <i>International Journal of Wildland Fire</i> 16, 519–530</p>		<p>This paper reviews an ongoing 50-year fire experiment in an African savanna national park, and especially its influence on management, against a backdrop of changing paradigms in fire ecology. The experiment had little direct influence on management, but the basic understanding gained is crucial, albeit indirectly, for ongoing adaptive management.</p>	
<p>Fuel and fire characteristics in savanna–woodland of West Africa in relation to grazing and dominant grass type Patrice Savadogo, Didier Zida, Louis Sawadogo, Daniel Tiveau, Mulualet Tigabu and Per Christer Odén <i>International Journal of Wildland Fire</i> 16, 531–539</p>		<p>The current management policy of state forests in the savanna–woodlands of Burkina Faso allows prescribed early burning but prohibits grazing. The main result was that moderate levels of grazing reduced fire severity and could thus be a potential tool for fire management.</p>	
<p>Interannual variations of area burnt in Tasmanian bushfires: relationships with climate and predictability Neville Nicholls and Christopher Lucas <i>International Journal of Wildland Fire</i> 16, 540–546</p>		<p>The area of Tasmania burnt each year is related to coincident summer rainfall and to earlier values of variables associated with the El Niño–Southern Oscillation, and is therefore to some extent predictable. A small, long-term decline in area burnt reflects a small increase in summer rainfall.</p>	
<p>The role of extinction on the re-ignition potential of wood-based embers in bushfires Behdad Moghtaderi, Tri Poespowati, Eric M. Kennedy and Bogdan Z. Dlugogorski <i>International Journal of Wildland Fire</i> 16, 547–555</p>		<p>This paper is an attempt to shed some light on the role of embers in the spread of bushfires. The paper particularly focuses on the impact of the re-ignition phenomenon in initiation of spotfires. This is achieved through a theoretical analysis of the re-ignition phenomenon.</p>	
<p>The spatial and temporal distribution of fires on Sakhalin Island, Russia V. I. Kharuk, E. S. Kasischke and O. E. Yakubailik <i>International Journal of Wildland Fire</i> 16, 556–562</p>		<p>Using a combination of information derived from analysis of satellite data and historical fire records, the spatial and temporal characteristics of burned area on Sakhalin Island in the Russian Far East were analysed.</p>	
<p>Evaluation of FARSITE simulator in Mediterranean maquis Bachisio Arca, P. Duce, M. Laconi, G. Pellizzaro, M. Salis and D. Spano <i>International Journal of Wildland Fire</i> 16, 563–572</p>		<p>This paper evaluates the capabilities of FARSITE in simulating fire spread and behaviour of wildfire events occurring in Mediterranean vegetation. A custom fuel model designed and developed for maquis vegetation improved model accuracy by removing some limitations of standard fuel models. In addition, simulated values of rate of spread obtained using different fuel models in different weather conditions were analysed.</p>	
<p>Post-fire stimulation of soil biogenic emission of CO₂ in a sandy soil of a Mediterranean shrubland Angelo Fierro, Flora Angela Rutigliano, Anna De Marco, Simona Castaldi and Amalia Virzo De Santo <i>International Journal of Wildland Fire</i> 16, 573–583</p>		<p>This study confirms the role of fire in increasing soil organic matter mineralisation and CO₂ effluxes from soil. Soil CO₂ emissions stimulated in burned soils appeared to be associated with high soil moisture content. The microbial biomass of burned soil is more active in carbon mineralisation; most probably fire could decrease the efficiency of soil microflora at conserving C.</p>	

<p>Assessing the impact of stand-level harvests on the flammability of forest landscapes Cristian D. Palma, Wenbin Cui, David L. Martell, Dario Robak and Andres Weintraub <i>International Journal of Wildland Fire</i> 16, 584–592</p>	<p>This paper describes a methodology for assessing the extent to which harvesting a forest stand will reduce the flammability of a landscape and thereby protect all the stands on that landscape. We describe how we applied our methodology to a 12 964-ha forested area in Alberta, Canada, and the results we observed.</p>
<p>Estimating direct carbon emissions from Canadian wildland fires William J. de Groot, Robert Landry, Werner A. Kurz, Kerry R. Anderson, Peter Englefield, Robert H. Fraser, Ronald J. Hall, Ed Banfield, Donald A. Raymond, Vincent Decker, Tim J. Lynham and Janet M. Pritchard <i>International Journal of Wildland Fire</i> 16, 593–606</p>	<p>A procedure to estimate direct carbon emissions from Canadian wildland fires is presented. Emission estimates are based on spatially explicit fire behaviour. The procedure was tested in a large fire pilot study, and a framework to adapt the procedure for national annual reporting is described.</p>
<p>Historical fire regime shifts related to climate teleconnections in the Waswanipi area, central Quebec, Canada Héloïse Le Goff, Mike D. Flannigan, Yves Bergeron and Martin P. Girardin <i>International Journal of Wildland Fire</i> 16, 607–618</p>	<p>High and low periods of fire activity in the study area are associated with distinct combinations of climate index regimes. As these regimes can be anticipated, this fire–climate relationship allows to better anticipate future periods of high and low fire risk at the regional level.</p>
<p>Modelling the effects of landscape fuel treatments on fire growth and behaviour in a Mediterranean landscape (eastern Spain) Beatriz Duguy, José Antonio Alloza, Achim Röder, Ramón Vallejo and Francisco Pastor <i>International Journal of Wildland Fire</i> 16, 619–632</p>	<p>This paper presents the parameterisation of the fire growth model FARSITE for a Mediterranean fire-prone landscape. Simulations of several fuel scenarios and/or firebreak networks provided new insights into the spatial relations between fuel spatial distribution and fire propagation and behaviour. Coupling appropriate landscape-level fuel treatments with low-impact firebreak networks appears as the best strategy for limiting fire spread and intensity.</p>
<p>Seasonal variations of live moisture content and ignitability in shrubs of the Mediterranean Basin G. Pellizzaro, P. Duce, A. Ventura and P. Zara <i>International Journal of Wildland Fire</i> 16, 633–641</p>	<p>In this work the critical role of moisture content in determining live fine fuel ignitability (time to ignition) in Mediterranean vegetation was confirmed. In addition, species with high ignitability throughout the year and species with ignitability values, which were low in winter and high in summer were identified. Significant differences in ignitability among species were also observed.</p>
<p>Allometric equations for crown fuel biomass of Aleppo pine (<i>Pinus halepensis</i> Mill.) in Greece I. D. Mitsopoulos and A. P. Dimitrakopoulos <i>International Journal of Wildland Fire</i> 16, 642–647</p>	<p>Regression models that estimate the aerial fuel load from diameter at breast height at tree level are presented for Aleppo pine (<i>Pinus halepensis</i> Mill.), in order to assess crown fuel hazard, to evaluate fuel treatments and to predict crown fire behavior and effects in Aleppo pine stands.</p>