

International Journal of Wildland Fire

Scientific Journal of the International Association of Wildland Fire

Contents	Volume 14	Number 3	2005
Forest fire causes and extent on United States Forest Service lands <i>Scott L. Stephens</i>	213–222	Fire causes and extent on lands managed by the United States Forest Service varied significantly from 1940 to 2000. Local input is therefore important in designing ground-based solutions to address fire management challenges in the United States.	
Season of prescribed burn in ponderosa pine forests in eastern Oregon: impact on pine mortality <i>Walter G. Thies, Douglas J. Westlind and Mark Loewen</i>	223–231	Prescribed burns in the southern Blue Mountains of Oregon killed a higher proportion of ponderosa pine if conducted in the fall as compared to spring. Differences may be because fall burns are inherently more severe. Although present, black stain root disease appeared to have little impact on mortality.	
Validation of the Haines Index predicted from real-time high-resolution MM5 forecasts using rawinsonde observations over the eastern half of the USA <i>Hee-Jin In and Shiyuan Zhong</i>	233–244	To what degree can we trust model predictions of fire weather indices using real-time weather forecasting models? The present paper tries to answer this question by comparing the predicted Haines Index, a widely used fire weather index, with those derived using actual observations.	
Estimating combustion of large downed woody debris from residual white ash <i>Alistair M. S. Smith and Andrew T. Hudak</i>	245–248	The quantity of fuel burned due to the complete combustion of large downed woody debris within a southern African savanna fire is estimated by measuring the spatial density of the white ash within an aerial photograph.	
Remote classification of head and backfire types from MODIS fire radiative power and smoke plume observations <i>Alistair M. S. Smith and Martin J. Wooster</i>	249–254	A combination of visible and thermal indicators present in satellite remote sensing imagery of southern African savannah fires is used to classify fires into head and backfire types. The technique is potentially transferable to other fire prone-environments, such as temperate and boreal forests.	
Fire suppression impacts on postfire recovery of Sierra Nevada chaparral shrublands <i>Jon E. Keeley, Anne H. Pfaff and Hugh D. Safford</i>	255–265	Long-term fire exclusion could weaken the postfire response of fire-prone communities such as California chaparral. Following the 2002 McNally Fire in the southern Sierra Nevada, old chaparral with no prior recorded fire recovered as well or better than much younger chaparral stands.	
Lethal soil temperatures during burning of masticated forest residues <i>Matt D. Busse, Ken R. Hubbert, Gary O. Fiddler, Carol J. Shestak and Robert F. Powers</i>	267–276	Mastication of small trees and woody shrubs is a preferred management option to reduce fire risk at the wildland–urban interface. Controlled burning of masticated residues resulted in extensive soil heating above the lethal threshold for roots and soil organisms when fuel loads were moderate to high and soil moisture was low. The heat pulse was considerably dampened with moisture conditions reflective of early-season prescribed burns.	

<p>Influence of tree age on seed germination response to environmental factors and inhibitory substances in <i>Pinus pinaster</i></p> <p>R. Alvarez, L. Valbuena and L. Calvo</p>	277–284	<p><i>Pinus pinaster</i> is a species with high resin content and it is one of the most pyrophytic species among the Spanish conifers. As a result, fires frequently affect populations of this species. <i>Pinus pinaster</i> is an obligate seeder species and the age of the parent trees has a significant effect on mean germination time; seeds from young populations have shorter mean germination times than those from adult populations. However, age has no significant effect on total percentage germination.</p>
<p>Fire history of the San Francisco East Bay region and implications for landscape patterns</p> <p>Jon E. Keeley</p>	285–296	<p>The San Francisco East Bay counties have a fire regime dominated by anthropogenic fires and natural lightning fires are rare, occurring only a few times each decade. It is hypothesized that recent landscape changes in vegetation mosaics is the result of 20th century protection from millennia of human disturbance.</p>
<p>Effect of fire shelters on perceived fire danger: implications for risk compensation</p> <p>Curt C. Braun, Jason Fouts, N. Clayton Silver and Ted Putnam</p>	297–306	<p>Although the fire shelter is an important part of personal protective equipment when fighting wildfires, firefighters may accept greater levels of risk while carrying them. Over 50% of the participants demonstrated behavior that offset the safety gains produced by personal protective equipment. Moreover, the presence of fire shelters significantly reduced perceived hazard levels across different fire scenarios.</p>
<p>Fire history and stand structure of two ponderosa pine–mixed conifer sites: San Francisco Peaks, Arizona, USA</p> <p>Thomas A. Heinlein, Margaret M. Moore, Peter Z. Fulé and W. Wallace Covington</p>	307–320	<p>We reconstructed historical fire regimes and contemporary and historical stand structures in two stands of ponderosa pine–mixed conifer forests on the San Francisco Peaks in northern Arizona, USA. We suggest that the dramatic structural changes recorded at our study sites occurred since fire regime disruption that occurred in the late 1800s.</p>
<p>Use of the cone calorimeter to detect seasonal differences in selected combustion characteristics of ornamental vegetation</p> <p>David R. Weise, Robert H. White, Frank C. Beall and Matt Etlinger</p>	321–338	<p>Two calorimeters were used to measure combustion characteristics of plant samples at two size scales. Increasing moisture content delayed ignition and decreased heat release. Agreement between the two size scale tests was poor. The use of the cone calorimeter as a tool to establish the relative flammability rating for landscape vegetation requires additional study.</p>