

International Association of Wildland Fire

Contents

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Severe, large-scale bushfire threatens metapopulation function of quokka (<i>Setonix brachyurus</i>) in south-western Australia <i>Karlene Bain, Merril Halley and Adrian Wayne</i> <i>International Journal of Wildland Fire</i> 32 , 1175–1186	This research assesses changes to the characteristics of common UK peatland PyC (charcoal) types when exposed at the peat surface over a year. The experiment was set up to simulate a post-wildfire degradation scenario. Early degradation phases and latter stabilisation were observed.
Vegetation-derived pyrogenic carbon degradation and stabilisation in UK peatlands Oscar J. Kennedy-Blundell, Emma L. Shuttleworth, James J. Rothwell and Gareth D. Clay International Journal of Wildland Fire 32 , 1187–1199	We propose a new method to estimate burned area of wildfires. Using fire detections from multiple types of satellites, burned area can be estimated reasonably well when compared with burned area measurements from aircraft. This method worked well for large and small wildfires when tested on a variety of wildfires.
Fire on a tropical floodplain a fine-scale fire history of coastal floodplains in the Northern Territory, Australia Robin Leppitt, Jay Evans, Luke Einoder, Peter M. Kyne, John C. Z. Woinarski and Stephen T. Garnett International Journal of Wildland Fire 32 , 1200–1211	Fire plays a critical role in shaping ecosystems in northern Australia, but little is known about how fire impacts local flood- plains. Our study examines the similarities and differences between floodplain burning and the much more well researched savanna burning in the region, to better inform floodplain fire management.
Calculating fire danger of cured grasslands in temperate climates – the elements of the Grassland Fire Index (GLFI) <i>KP. Wittich, C. Böttcher, P. Stammer and M. Herbst</i> <i>International Journal of Wildland Fire</i> 32 , 1212–1225	The Grassland Fire Index monitoring system developed by the German Meteorological Service for application to Central European climates is described. It focuses on the calculation of fuel moisture as the key element of the characteristics of fire behaviour rate of spread and fire intensity.
Evaluating the Drought Code for lowland taiga of Interior Alaska using eddy covariance measurements Eric A. Miller, Hiroki Iwata, Masahito Ueyama, Yoshinobu Harazono, Hideki Kobayashi, Hiroki Ikawa, Robert Busey, Go Iwahana and Eugénie S. Euskirchen International Journal of Wildland Fire 32 , 1226–1243	We benchmarked the performance of a commonly used wildfire danger rating model against the balance of cumulative seasonal precipitation and evaporation obtained by eddy covariance mea- surements in boreal taiga forests on permafrost soil. The index was found to overpredict drought by a factor greater than six.
Heading and backing fire behaviours mediate the influence of fuels on wildfire energy Joseph D. Birch, Matthew B. Dickinson, Alicia Reiner, Eric E. Knapp, Scott N. Dailey, Carol Ewell, James A. Lutz and Jessica R. Miesel International Journal of Wildland Fire 32 , 1244–1261	We used a unique pre-, current-, and post-wildfire dataset to inves- tigate which fuels and topography influence wildfire behaviour. We found that forest floor biomass was the primary driver of wildfire energy and had greater consumption under heading fires, relative to backing fires.
Assessment of wildland firefighter opinions and experiences related to incident medical providers <i>Mark Hoffman, Valerie Moody, Viktor E. Bovbjerg, Isabella Callis</i> <i>and Zachary Snauer</i> <i>International Journal of Wildland Fire</i> 32 , 1262–1268	The issues of trust, respect and access to care in wildland fire medical units has not been previously investigated. The results of this paper indicate wildland firefighters respect and trust medical personnel but there are perceived differences in access to care for some firefighters.
Exploring the impact of airtanker drops on in-stand temperature and relative humidity <i>Melanie Wheatley, Anne Cotton-Gagnon, Jonathan Boucher,</i> <i>B. Mike Wotton, Colin B. McFayden, Natasha Jurko and</i> <i>Jason Robinson</i> <i>International Journal of Wildland Fire</i> 32 , 1269–1276	We explored the effects of airtanker drops on understorey conditions characterised by an increase in relative humidity and decrease in temperature. This micrometeorological environment had a limited effect on fine fuel moisture, but when combined with wetting from an airtanker might prevent surface fires.



Quokka joey being returned to its mother's pouch by Karlene Bain during post-fire population monitoring in the southern forests of Western Australia. See Bain *et al.* pp. 1175–1186. Image taken by Roslyn Burnside.