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Contents	Volume 14	Number 2	2005
Global fire activity from two years of MODIS data <i>Ivan Csiszar, Lynn Denis, Louis Giglio, Christopher O. Justice and Jenny Hewson</i>	117–130		Space-borne observations from the MODIS sensor were used to analyse spatial and temporal dynamics of fire occurrences. The yearly global total fire counts observed in 2001 and 2002 differed by less than 3%, but in several regions significant differences were found between the two years in the extent and timing of burning.
Examining fire behavior in mesquite–acacia shrublands <i>Tamara J. Streeks, M. Keith Owens and Steve G. Whisenant</i>	131–140		We evaluated two current fire behavior systems (BEHAVE and the CSIRO fire spread and fire danger calculator) and three models developed for shrublands to determine how well they predicted rate of spread and flame length during three summer fires within mesquite–acacia shrublands. The geospatial relationship between fuel characteristics and fire characteristics (net heat and fire temperature) was also investigated.
Numerical study of a crown fire spreading toward a fuel break using a multiphase physical model <i>Jean-Luc Dupuy and Dominique Morvan</i>	141–151		The propagation of a wildfire through a Mediterranean pine stand was simulated using a multiphase physical model of fire behaviour. This model was based on a detailed description of the physics of a forest fire. The numerical results showed the ability of this approach to simulate the propagation of a crown fire and to test the efficiency of a fuel break with success.
Fuel load, humus consumption and humus moisture dynamics in Central European Scots pine stands <i>Marco Hille and Jan den Ouden</i>	153–159		This paper deals with the consumption of Scots pine humus by fire under different moisture and fuel load scenarios. Factors that influence humus moisture in the field, such as field layer vegetation type and overstorey crown structure, are reviewed. Current litter, fuel and humus loads in Central European pine stands are assessed.
Calibrating the Fine Fuel Moisture Code for grass ignition potential in Sumatra, Indonesia <i>William J. de Groot, Wardati and Yonghe Wang</i>	161–168		A fire management tool was developed to predict grass fire occurrence in South-east Asia. An existing fire danger model was calibrated using grass moisture and ignition studies from Sumatra, Indonesia. The calibrated model was compared to satellite-detected hot spots in South-east Asia. Eighty-six percent of historical hot spots occurred in the extreme (73%) and high (13%) categories of the fire danger model, indicating that the model can be used as a reliable predictor of fire starts at the landscape level.
An index for tracking sheltered forest floor moisture within the Canadian Forest Fire Weather Index System <i>B. M. Wotton, B. J. Stocks and D. L. Martell</i>	169–182		A model of duff moisture in very sheltered locations of a pine stand (where lightning strikes tend to ignite the forest floor) is developed through destructive forest floor sampling. The model is similar to the Duff Moisture Code of the Canadian Forest Fire Weather Index System; however, uses a different drying rate and a new throughfall function.

Evaluation of log and branch barriers as post-fire rehabilitation treatments in a Mediterranean pine forest in Greece Yannis Raftoyannis and Ioannis Spanos	183–188	After a severe fire in a <i>Pinus brutia</i> Ten. forest near Thessaloniki, Greece, the construction of log and branch barriers, as post-fire rehabilitation treatments, was not proved to be effective in post-fire ecosystem recovery. The slope orientation affected the revegetation process and it was more successful in the north slopes.
Comparison of burn severity assessments using Differenced Normalized Burn Ratio and ground data Allison E. Cocke, Peter Z. Fulé and Joseph E. Crouse	189–198	Remote sensing is efficient for assessing burn severity but accuracy is poorly understood. We used data from pre-fire permanent plots and post-fire composite burn index plots to show that the Differenced Normalized Burn Ratio was relatively accurate for comprehensive assessment, especially for more severely burned sites.
Effects of the fire retardant Phos-Chek on vegetation in eastern Australian heathlands Tina Bell, Kevin Tolhurst and Michael Wouters	199–211	This study investigates the effects of a fire retardant on heathland vegetation in eastern Australia. A single application of retardant did not change species composition or projected foliage cover of the major life forms of native vegetation but it did tend to enhance weed invasion.