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CONTENTS



**Abstract.** In order to evaluate a proposed tree diagnostic technique employing infrared cameras, research was conducted to evaluate the effect of internal voids on surface temperature using a thermal photographic instrument. Three axial cylindrical voids of increasing size (Void A, 327 $cm^3$; Void B, 745 $cm^3$; Void C, 1159 $cm^3$) were introduced mechanically in 45 cm long stem sections and exposed to direct sunlight. Subsequently, infrared images were collected from two diametrically opposed sides of the stem sections at regular 30-minute intervals over 150 minutes. The collected images were evaluated visually to compare stem features with observed temperature anomalies, and temperature data was extracted from a vertical transect in the infrared images. The data extracted were compared against a control stem section without defects to determine the independent and combined effects of void size and internal position on surface temperature. Mean relative temperature revealed a significant temperature change in the stems containing mechanical voids compared to the control stem. Significant increases in mean relative temperature were recorded on the stems containing Void A and Void B compared to the control. However, there was no significant change in mean relative temperature on the stem section containing Void C.
**Key Words.** Infrared Camera; Internal Defects; *Syzygium grande.*



**Abstract.** In rapidly developing countries such as Malaysia, the importance of urban greenspaces is recognized, but due to rapid industrialization and urbanization, maintaining and developing greenspace is a major challenge. This paper analyzes the status of urban greenspace policy, planning, and management in Malaysia. For this purpose, information was collected about urban greenspaces and their governance, planning, and management, both at the national level and in six representative case cities in the most urbanized part of Malaysia, the Klang Valley. Data was compiled by means of a literature review, document analysis, and expert interviews with municipal officers in the selected cities. Results show the greenspace discourse in Malaysia has shifted its focus from one dominated by beautification to one concentrated on regarding greenspace as an essential part of the urban infrastructure. In spite of similarities in municipal greenspace management organization and legislation, each city has its own approach in terms of prioritized greenspace functions, greenspace planning, and collaboration with different actors and stakeholders. A shift is occurring toward greater involvement of nongovernment actors in governance and management. Challenges related to maintaining multifunctional greenspaces in a time of rapid economic development and urbanization call for better implementation of policy and legislation, and of balancing national visions with local needs.
**Key Words.** Environmental Governance; Greenspace Policies; Green Structure; Urban Greening; Urban Greenspace.



**Abstract.** The success of urban forest management is frequently predicated upon achieving absolute canopy cover targets. This two-dimensional view of the urban forest does not provide a comprehensive assessment of urban forest stewardship in a community and does not account for an area's potential to support a forest canopy. A comprehensive set of performance-based criteria and indicators concerning the community's vegetation resource, community framework and resource management approach is described. This set of broadly based measures provides a more useful tool for the evaluation of urban forest management success and strategic management planning.
**Key Words.** Canopy Cover; Municipal Planning; Relative Canopy Cover; Sustainability; Urban Forest Planning; Urban Forestry.

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**Abstract.** Using a survey conducted in Alabama, U.S., this study investigates the attitudes of urban residents toward urban trees and how they would like to support urban tree programs. An ordered logistic model and ordinary least square regression were applied in the analyses. It is found, in general, that people prefer to have trees on their property and in their community for all gender, age, race, income, and other family background, but individuals with higher education had a tendency to like more trees. The most desirable amenity of trees is the improved appearance. The potential risks and hazards would discourage them from having trees in their communities. It is found that each person's voluntary willingness to donate is significantly less than the amount that he or she feels everyone should contribute to support the programs (e.g., taxation). The awareness of the presence of a tree agency and service can significantly increase the amount of donation a person is willing to make. While private donation is widely agreed upon as an important source of support, using alcohol and tobacco taxes as funding for financing urban tree programs receives more support than the idea of using corporate income tax and property tax. The results indicate that the citizen willingness to support urban forestry are affected by various factors, therefore, a holistic approach is needed to promote city tree programs.
**Key Words.** Green Infrastructure; Ordered Logistic Model; Public Participation; Taxation; Willingness to Pay.



**Abstract.** Untreated firewood has the potential to harbor insects or pathogens lethal to trees in urban and natural forest ecosystems. Campers at 15 campgrounds in seven Colorado, U.S., State Parks and 30 campgrounds in 13 National Parks in Arizona, Colorado, Nevada, Utah, and Wyoming were surveyed in 2007-09 to determine camper home states, firewood presence, firewood state origins and risks of firewood harboring pests. Sixty-six percent of Colorado State Park campers had firewood but only 4% had firewood brought from out-of-state origins. Sixty percent of National Park campers had firewood and 39% had firewood from out of state, equating to 329,919 campers potentially bringing out-of-state firewood in one year to surveyed parks. Forty-one percent of out-of-state firewood was brought by campers from nonneighboring states, indicating long distance transport of firewood occurs. Of all firewood present in National Parks, 32% was purchased inside the park, 25% was purchased outside the park and 17% was from camper residences. Fifty-three percent of firewood had evidence of previous insect presence and 39% had fungal infestation. Camper movement of untreated firewood has the potential to be a high risk pathway for distribution of live tree pests throughout North America, and educational and mitigation actions should be implemented.
**Key Words.** Campgrounds; Exotic Pests; Firewood; Invasive Pests; National Parks; Pathway Risk Analysis; State Parks; Unprocessed Wood; Urban Pests.



**Abstract.** Cables are commonly installed to reduce the risk of failure of branches or co-dominants, but there are few empirical data to describe their performance. In contrast, the withdrawal resistance of lag screws in timber connections has been studied more carefully and is related to the shank diameter and threaded length of the lag, as well as the specific gravity of the wood. J-lags of three diameters were installed in three species and withdrawal resistance was measured immediately and up to four years after installation. Since only three fully installed J-lags were withdrawn, J-lags were also partially installed in two species. Growth of trees around the "J" of J-lags increased their withdrawal resistance, and the withdrawal resistance of partially installed lags generally followed prediction equations developed for lag screws used in timber connections. Withdrawal resistance of J-lags did not exceed cable tensions previously measured and simulated.
**Key Words.** Cabling; Decay; J-lag; Tree Support Systems; Withdrawal Resistance.