## (28) PRELIMINARY EVALUATION OF VEGETATION CHANGE ON A LARGE PRESCRIBED BURN IN ALASKA

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Abstract: Modern fire suppression has the potential to alter the natural distribution of forest cover types and age classes, which has consequences for resource management. A 21,000 ha prescribed burn to enhance wildlife habitat and secondarily reduce continuity of coniferous fuels was conducted in 1998 in the boreal forest of eastern Interior Alaska. Our objectives within the burned area were $\geq$50% topkill of trees and spatially-varying burn severity to promote regeneration of deciduous trees and shrubs by root or crown sprouting and by seed germination on mineral soil. Aerial firing with incendiary plastic spheres occurred on 21 July, with most burning accomplished within a few hours of ignition at $1.10/ha. We have begun change detection using cover types to evaluate the burn at the landscape scale. DigitalGlobe™ Quickbird imagery (2.6 m multispectral/0.6 m panchromatic) from 2002 was ortho-rectified to create a base map. Color-infrared aerial photos were digitally scanned for both pre-burn conditions (1:63,360-scale) and post-burn conditions (1:12,670-scale). Burn serverity will be mapped using Landsat imagery before and after the burn. We used eCognition© software (object-oriented analysis) to initially classify the Quickbird imagery for burn perimeter and unburned inclusions. Further ground verification of the classified cover types is planned for summer 2004 with an interest to compare classification of woody broadleaf types between Quickbird imagery and digitized aerial photographs. When vegetative classification is completed, change detection will be performed to analyze vegetation type changes. We will then incorporate a digital elevation model to examine the effect of slope, aspect, and elevation on burn severity and vegetation changes caused by the fire.

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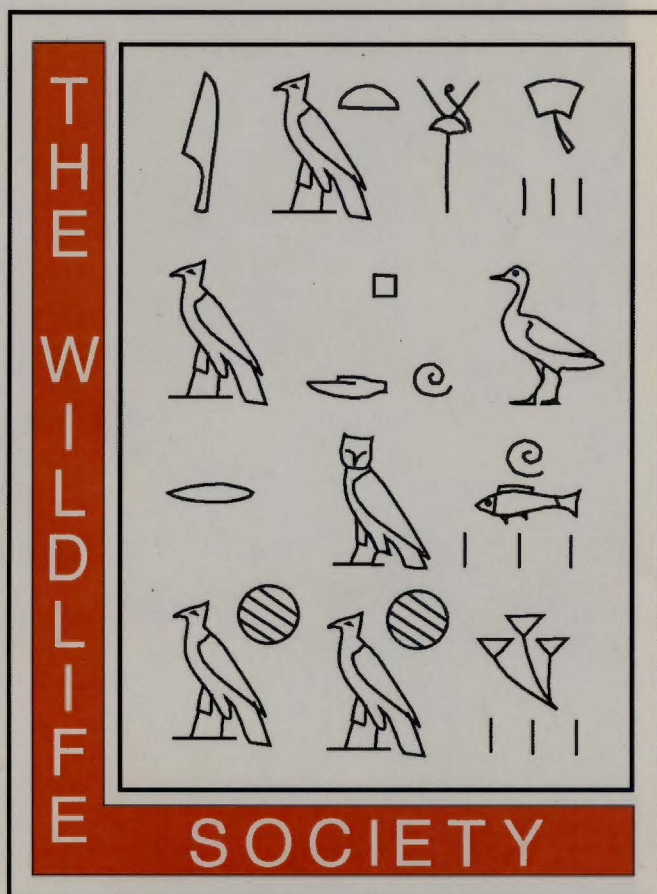
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