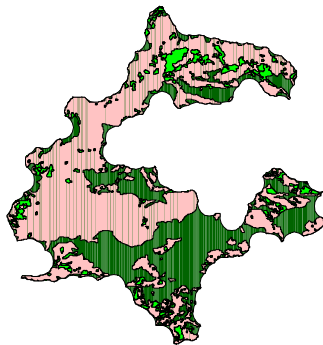


# Are Wildfire Patterns in West-Central Alberta and Saskatchewan Identical?

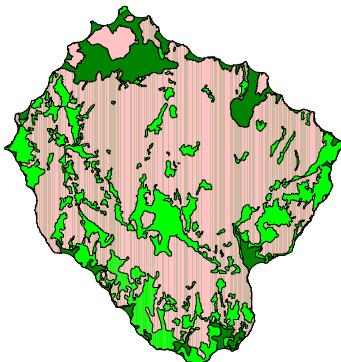
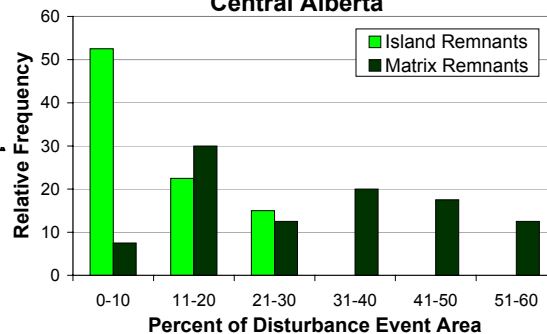
No. Although total residual levels are similarly distributed (see Quicknote #41), the type of residual varies. West-central Alberta wildfires are dominated by matrix remnants (Quicknote #22), while Saskatchewan wildfires are dominated by island remnants (Quicknote #18). On average, island remnants (light green the figure below) in WC Alberta wildfires account for 12% of the

disturbance event area, compared to 26% for matrix remnants (in dark green). For wildfires in Saskatchewan the relative contribution is reversed; 24% as island remnants, and just 12% as matrix remnants.

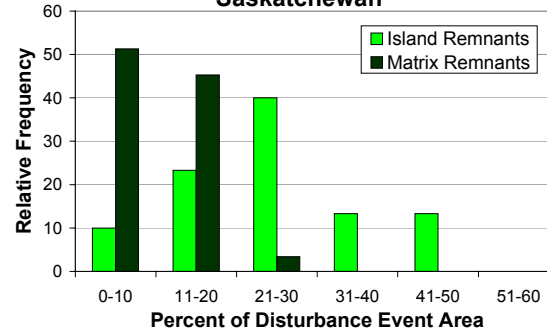
This distinction is not just semantic. Recall that matrix remnants by definition always survive perfectly intact while island remnants (in both locations) are mostly partially disturbed. So another way of differentiating the patterns in this case is that Saskatchewan wildfires have significantly more partially disturbed residuals.



Wildfire Remnant Summary for West Central Alberta



Wildfire Remnant Summary for Saskatchewan



The most obvious explanation for the pattern differences noted here is that the fires are being influenced by fuel-type. Saskatchewan forests have significantly higher levels of hardwood and mixedwood stands compared to landscapes in west-central Alberta. Hardwoods are not only less flammable, but also less adapted to survival from fire than conifers. So mixedwood landscapes are in theory more likely to result in significant areas of partial mortality.

However there exist other possible explanations for this phenomenon. For example, the more complex topography of the Alberta foothills may be creating conditions that facilitate more discrete burn patterns, perhaps through secondary effects on wind. Another possibility is that the local weather burning conditions are more variable (from day to day, or even hour to hour) over the life of wildfires in Saskatchewan relative to wildfires in west-central Alberta

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