# Effects of prescribed fire on the spatial structure of butterfly habitat in South Puget Sound prairies

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Research Question: How do weather and fuel conditions during prescribed fires influence post-burn vegetation structure in butterfly habitat?

By burning in cooler and more humid conditions than normal prescriptions, it is likely that the area of low-severity and unburned patches will increase, providing a greater chance of survival for diapausing butterfly larvae.

At the same time, we may be able to influence post-burn structure of vegetation when we conduct fires in these cooler and more humid conditions, by creating a mosaic of mixed fire severities which may increase spatial heterogeneity.

A mix of tall and low vegetation is important in butterfly habitat, because it creates a variety of microclimates that can help to buffer populations against environmental stochasticity.

Butterflies also need patches of bare, open, or very low areas spatially distributed throughout their habitat for basking and oviposition access to plant bases.

Photo by Adam Martin

This research will help to determine if these structural characteristics are affected by the implementation of prescribed fires in different conditions, including temperature, relative humidity, and fuel moisture.

Questions? Contact Kathryn Hill at kch24@uw.edu.
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