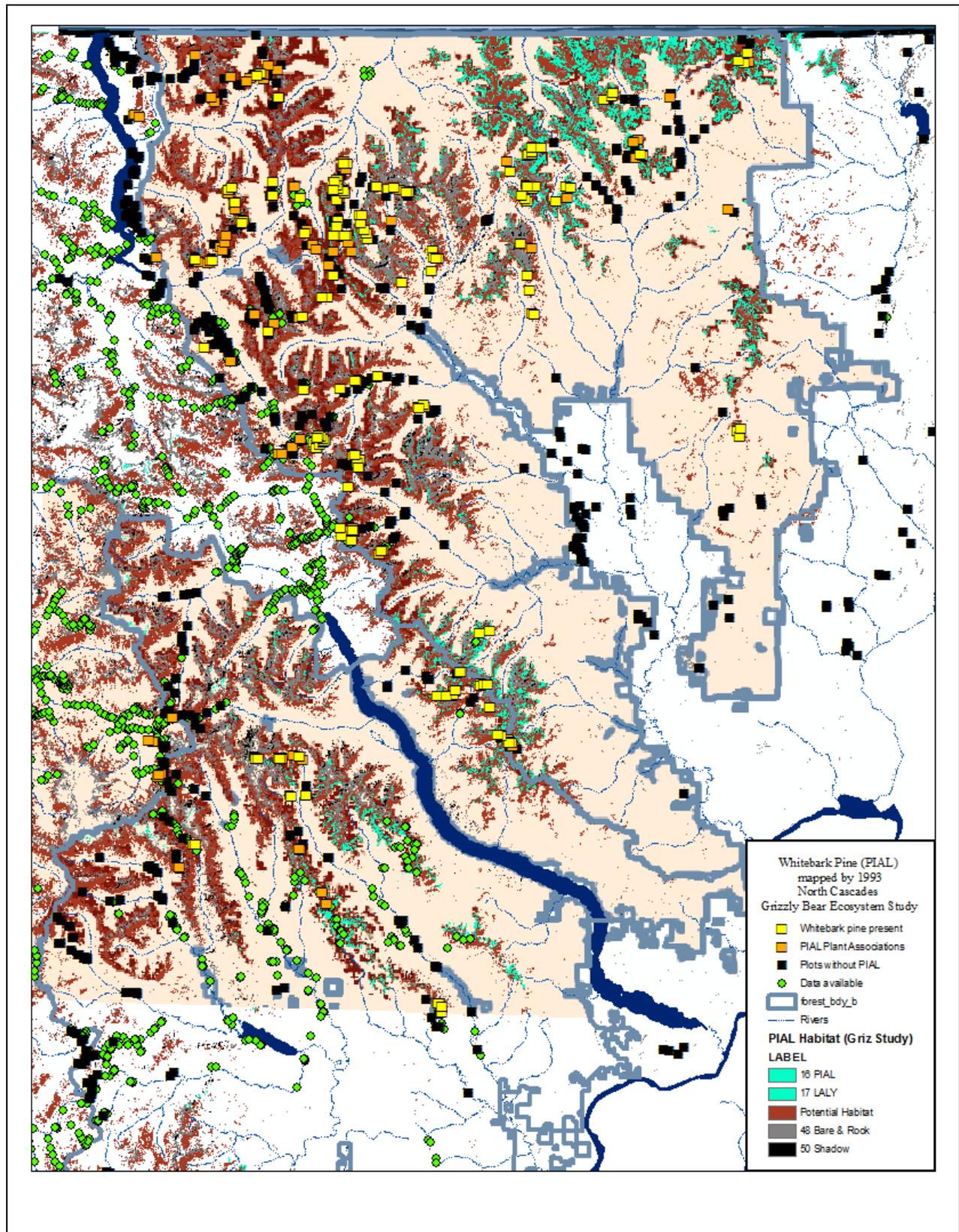


Whitebark Pine in the North Cascades



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An analysis of data from the North Cascades Grizzly Bear Ecosystem Management Study, 1993.

This map displays locations of whitebark pine (*Pinus albicaulis*) mapped using ecology plot data from the North Cascades Grizzly Bear Ecosystem Management Project (NCGBEMP), combined with modeled habitat data from the Forest Service Whitebark Pine Strategy. In 1993, the National Forest completed the NCGBEMP. This was a multi-agency cooperative project led by the Washington Department of Fish and Wildlife (WDFW) and the Okanogan National Forest (ONF). The goal of the project was to determine the extent of habitat capable of supporting grizzly bears across the North Cascades north of Snoqualmie Pass.

This project was completed using the first geographic information system (GIS) developed and installed on the Methow District of the Forest Service.

A report on the findings was published by Almack and others (1993). The ecology data was subsequently categorized into plant associations using multidimensional analysis and a key to the plant associations was developed (Wooten and Morrison 2005).

The project is unique in several ways. It is the only ecology analysis of high elevation areas in the eastern North Cascades; it is the only GIS covering the North Cascades that has been statistically verified to >85% accuracy; it is the only GIS based on actual, rather than potential vegetation; and it is the only GIS that was based on sampling spectral units, in addition to sampling vegetation stands.

The map shows three representations of whitebark pine (PIAL). Yellow squares show actual locations of whitebark pine mapped in field plots. Orange-colored squares show plant associations that are allied with whitebark pine, but which did not contain whitebark pine. Bright blue pixels in the background image show the location of high elevation PIAL plant associations as well as the allied alpine larch (LALY) plant association. Black squares depict plots without whitebark pine. Green circles depict plots that have not yet been analyzed yet.

The map shows that there are two geographic assemblages of whitebark pine plant associations in the North Cascades: drier habitats in the eastern Pasayten Wilderness and moister habitats associated subalpine meadows in the rest of the Cascades.

References

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- Wooten, George, P. Morrison. 2005. Classification Of Vascular Plant Communities Of The North Cascades Using Discreet Space Boundary Analysis. Published by Floradora Company: <http://www.okanogan1.com/ecology/eco-ncas>