

Northwest Connections

Whitebark Pine Monitoring Project

The Whitebark Pine is experiencing tough times due to the cumulative effects of White Pine Blister Rust, Mountain Pine Beetle attacks, and the results from the lack of fire on the landscape. Due to this combination of factors, many of these stands are converting from Whitebark Pine stands to Subalpine Fir/Spruce Stands.

The Swan Range has been particularly hard hit with some areas experiencing over 90% mortality. It appears that many of the trees that survived the White Pine Blister Rust attacks have since succumbed to the Mountain Pine Beetle.



Located in the Swan Range, this photo of the Warrior Mountain area was taken in 1986. Although a number of older dead snags can be seen there are still a number of healthy Whitebark Pine scattered about the area.



The same area in 2002 has no surviving Whitebark Pine. The only live trees in this photo are Subalpine Fir.

Although not immune to the disease and insect attacks, the Mission Range appears to have a higher level of surviving Whitebark Pine with pockets of reasonably healthy looking trees.

Eagle Lake / Lindy Peak area
in the Mission Mountains. 1971



Same area in October 2002



There is a symbiotic relationship between the Whitebark Pine and the Clark's nutcracker in which each mutually benefit the other. The Whitebark Pine seeds provide the high-energy food source that the Clark's nutcracker depends on while research has shown that the Clark's nutcracker is the primary reason behind the majority of new Whitebark Pine seedling establishment. This process is due to seed dispersal from the caching habits of the Clark's nutcracker. This bird will dislodge the heavy seeds from the cone and carry these seeds to another area and cache them. Any unused seeds may germinate and grow into a new Whitebark Pine tree.



Above Necklace Lakes in the Swan Range. Whitebark Pine seedlings growing from Clark's nutcracker cache sites. 1998.

The lack of Whitebark Pine and the food source that it has historically provided is seriously impacting the habits and numbers of such wildlife as the grizzly bear, Clark's nutcracker, and red squirrel. Observations from local people note that the Clark's nutcracker does not seem as numerous as in the past. Grizzly bears, who used to spend their falls in the high country feeding on the Whitebark Pine 'nuts', are now found down in the valleys searching for an alternate food source. This resulting change in habit has led to increasing bear/human conflicts.

Long time Ronan area resident, outfitter, and visitor to the Mission Range, Bud Cheff Sr. in his book, Indian Trails and Grizzly Tales stated, "Over the same time that I've noticed that the limber (Whitebark) pine was not producing nuts, we've observed the decline of the grizzly, and those that are around are not as large and as fat as they had been in years past. I believe that most, or at least a large number of these bears have died in hibernation, for the simple reason that without these nuts, they were unable to put on enough fat to be able to survive the winters." "I am very concerned about the disappearance of the limber (Whitebark) pine nut. They are the first of the plant life that I have seen go and as I ride through these beautiful mountains that once were so lush and are now fast changing, with many of the plants and trees looking sick or dying, I am saddened. I am also afraid as I view these changes – if the plant life goes, so will we, and all other animal life. We should be very concerned."



An area near Lion Creek Pass showing the cumulative effects from White Pine Blister Rust, Mountain Pine Beetle, and lack of fire. This stand is converting from Whitebark Pine to Subalpine Fir. 1998 photo.

Northwest Connections, in collaboration with the Swan Ecosystem Center and the U. S. Forest Service, has been involved with Whitebark Pine monitoring in both the Swan Mountain Range and the Mission Mountain Range for the past seven years. These efforts have involved installing and monitoring of permanent Whitebark Pine survey plots, as well as doing comparative visual analysis from past and present photos of specific areas.

Photo from Hemlock Point area in the Mission Mountains. 1980.



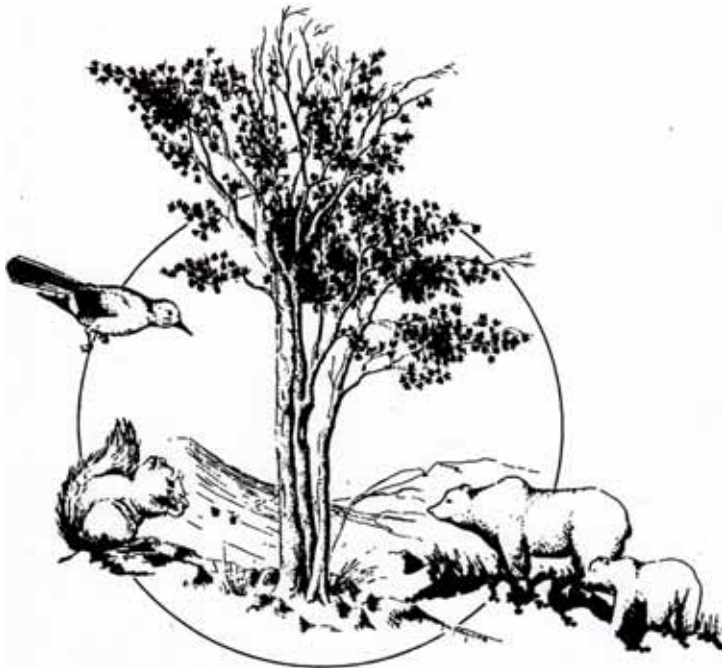
The same area in 2002.



Slated for early summer of 2003 the Northwest Connection's Wildlands Volunteer Corps, consisting of 6 to 8 high school aged students and 2 to 3 staff members, will work on a USFS volunteer Whitebark Pine planting/monitoring project in the Swan Range. The project will consist of planting 2000 Whitebark Pine seedlings in a prescribed burn area along the trail into Birch Lake. Afterwards, the group will conduct Whitebark Pine monitoring surveys in the Crater Lake area.

Also in 2003, both the summer Northwest Connections Alpine Field Studies Course and the fall Northwest Connections Landscape and Livelihood Course will be involved in the on-going Whitebark Pine monitoring efforts.

Northwest Connections feels that there is definitely a need for future work in the area of Whitebark Pine monitoring and restoration. Education, public awareness, monitoring efforts, along with proactive management practices such as the reintroduction of fire to the landscape while simultaneously protecting existing healthy Whitebark Pine trees, clipping encroaching competition, and planting White bark pine seedlings are needed in the restoration effort. Northwest Connections hopes to continue its active role in the Whitebark Pine issue with the various agencies and organizations.



Reference Materials

Whitebark Pine Ecology

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Grizzly Connections

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“Relationships Between Whitebark Pine Cone Production and Fall Grizzly Bear Movements” – Blanchard, 1990.

Restoration

“ A Whitebark Pine Editorial: Restoring Whitebark Pine Ecosystems – Is It Worth the Effort?” Nutcracker Notes – Keane, 1998.