Whitebark & limber pine restoration initiative in the “Crown”

A major initiative is just underway to restore whitebark pine and limber pine in the Crown of the Continent Ecosystem (Crown), and the Whitebark Pine Ecosystem Foundation is one of the participants in this effort. This initiative will be guided by a “High Five” Crown-wide working group. The first organizational meeting was held in Fernie, B.C., this past March, in association with the Crown Managers Partnership, a collaboration among the different governmental jurisdictions across the U.S. and Canadian boundary. The Whitebark Pine Ecosystem Foundation has long advocated for whitebark pine restoration in the Crown.

Why this region?
The Crown of the Continent, also known as the Northern Continental Divide Ecosystem, occupies about 72,000 km² (28,000 mile²) along the spine of the Rockies in northwestern Montana and adjacent areas across the Canadian border in British Columbia and Alberta. This geographic region is rich in biodiversity, with largely intact wildlands, and keystone and apex predators, including wolves and grizzly bears. But, this region also has the most rapidly declining, unhealthy, and least functional whitebark pine communities in all of North America. The limber pine populations in the Crown are also in poor condition.

Why are whitebark pine populations so precarious in the Crown?
This region sustained two major mountain pine beetle outbreaks—the first in the 1930s and 1940s and second in the 1960s and 1970s—which killed massive numbers of mature whitebark pine, leaving a legacy of weathered whitebark pine tree skeletons—the ‘ghost forests’ still standing today. Recent mountain pine beetle outbreaks have added to the losses. In 1939, Cronartium ribicola, the introduced pathogen that causes white pine blister rust, was first detected in western white pine in Glacier National Park, but the pathogen was found on Ribes spp. in the region a decade or so earlier (Mielke 1943). The Crown climate has been generally favorable for C. ribicola spore production, leading to the spread and intensification of infection by the pathogen for more than 75 years.

A recent survey of whitebark pine in the southern Canadian Rockies, including Waterton Lakes National Park, indicates an average blister rust infection level of 83% (Smith et al. 2013). This means that the majority of living whitebark pine has a poor prognosis. Whitebark pine cone production in this region is already low, and stand visitation by nutcrackers has become unreliable (McKinney et al. 2009, Barringer et al. 2012).

Management in the Crown region is complex, involving two countries and many different jurisdictions and land use designations, including tribal governments; Parks Canada, the National Park Service; the U.S. Forest Service and multiple national forests and wilderness areas; state and provincial parks and lands; and private holdings. The Crown Managers Partnership, composed of leaders or representatives from these various jurisdictions, has worked collaboratively on shared ecosystem management concerns for years. During this time, many whitebark and limber pine restoration activities have been implemented by several of these different entities, including planting seedlings, monitoring and inventory, identification of plus trees (potentially resistant to blister rust), cone collections, and burning and thinning projects. These efforts would greatly profit by an overarching conservation and restoration plan and shared resources.

This major organizational effort is in its infancy and under the leadership of Regan Nelson, of the Crown Conservation Initiative. The second organizational meeting will take place in White Fish, MT, in September along with our annual WPEF Science and Management Workshop.

References

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The passing of Senator Conrad Burns: the whitebark pine connection

Conrad Burns, an influential three-term Republican senator from Montana, died at the age of 81 on April 28, 2016. Burns led the Senate Interior Appropriations Committee and often acted in what he perceived as Montana’s best interest. In his last term, Burns became embroiled in scandal from his association with the infamous lobbyist Jack Abramoff. Jon Tester, who had been president of the Montana Senate, won Burns’ U.S. Senate seat in a fairly close election. Although Conrad Burns may have been a polarizing figure, there is an important whitebark pine connection with Conrad Burns that needs to be remembered, and for which we must express our gratitude.

During his third term, Senator Burns met with a small delegation from the Whitebark Pine Ecosystem Foundation—myself, Steve Arno, and Carl Fiedler—in Missoula on March 2, 2006. Our goal was to discuss the rapid decline in whitebark pine and how to obtain federal funding for restoration. We had Senator Burn’s full attention for an hour. When we explained that white pine blister rust was the major reason for the rapid decline in whitebark pine, the Senator expressed his disbelief. It turns out that he had been one of the many college students employed during the summer, probably in the early 1950s, to help eradicate *Ribes* spp., which was the early, and largely ineffective approach to controlling the spread of the blister rust pathogen *Cronartium ribicola*. He remarked that all these years he had assumed that white pine blister rust was “no longer a problem.” He agreed to support our effort to find funding, and I worked with his support team and spent the next year drafting several iterations of an appropriations request and enlisting the support of the Montana, Idaho, and Wyoming Congressional delegations.

But, that is only part of the story. I was charged to negotiate the appropriations request with the U.S. Forest Service, Forest Health Protection leadership. In addition, the request had to include administrative structure in the form of a technical oversight committee. We included John Schwandt, from Forest Health Protection (FHP), Region 1, as head of the technical committee. The appropriations request had strong congressional support, but to our great disappointment President Bush eliminated all “earmarks” for the 2008 fiscal year, ending this considerable effort.

Now, the rest of the story: Following the failure of the restoration earmark, Rob Mangold—then Director of Forest Health Protection—recognized the legitimate need for restoration funding and implemented the U.S. Forest Service Whitebark Pine Restoration Fund, administered in Region 1 with support from the Washington Office, as originally proposed. John Schwandt was appointed as its director. The technical oversight committee structure, as outlined in the appropriations request, was also implemented. Although funding has since declined, the Whitebark Pine Restoration Fund continues to provide the only dependable support for whitebark pine restoration projects in Region 1 and the Greater Yellowstone Area. This effort has become more critical each year as whitebark pine, highly susceptible to blister rust and decimated by the recent, large-scale outbreak of mountain pine beetles, continues to decline.

The establishment of the Whitebark Pine Restoration Fund ultimately resulted from the support and encouragement of Senator Burns.

Housekeeping and transitions

The Executive Committee and Board of Directors (BOD) have undergone several changes since the last edition of Nutcracker Notes. First of all, Treasurer Vick Applegate has recently asked to step down from his position. Vick has been a major problem-solver and go-getter during a spurt of WPEF growth and development, including the hiring of our Staff Coordinator Julee Shamhart. I will especially miss Vick’s “can-do”
attitude—he has been a pleasure to work with. But, he also has left us in very capable hands. We are fortunate to have Glenda Scott, retired U.S. Forest Service, from the Region I office, who volunteered to carry out the remainder of his term. Welcome aboard Glenda!

Board member Edie Dooley, now working in Portland, OR, has also stepped down from the board. Edie has headed our Ski Area Partnership initiative, which will be officially launched this fall, and she plans to continue this important work for the WPEF. Taking Edie’s place on the board is Melissa Early from Jackson, who was elected by the BOD to complete the remainder of Edie’s term and work and head the Education Committee.

The certification checklist can be downloaded at http://whitebarkfound.org/?page_id=1687. Hopefully, as more resorts gain certification, skiers will understand why the trees are dead, but also, will be able to identify and appreciate whitebark saplings of the next generation!

Endnote: I would like to thank those who offered encouragement and input to the design of the program including: Nora Dooley, Jeremy Amberson, Bill Shreiber, Avery Beyer, Brigid Sinram, Karl Buermeyer, Colin Maher, Melissa Early, Megan Keville, Signe Leirfallom, Michael Murry, Melissa Jenkins and Diana Tomback.