

The Importance of Gene Conservation in the USDA Forest Service¹

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Abstract

Aldo Leopold once said “to keep every cog and wheel is the first precaution of intelligent tinkering.” The USDA Forest Service has embarked on a long-term effort to do just that. Our gene conservation efforts in forest trees are a modest beginning to this urgent need. In the early 2000s, the Forest Health Protection Program and its partners in the National Forest System and Research and Development Deputy Areas of the Forest Service initiated seed collections in several five-needle pine species that were succumbing to white pine blister rust and bark beetle attacks at accelerated rates. We began with a simple plan to start small and try to build momentum over time. We held a number of important meetings, one in particular at the Dorena Genetic Resource Center, where we laid out principles for a potential gene conservation effort. The efforts of the Conservation Assessment and Prioritization of Forest Trees under Risk of Extirpation (CAPTURE) group who have led this endeavor, are also presenting at this workshop.

This paper will discuss the value and importance of gene conservation work. Given the rapid changes we are witnessing in our environment, this work takes on a new urgency. Climate change, invasive species and other vectors of change will catapult us into uncharted territory. I will talk about the challenges we face as an agency and in the forest community at-large to ensure ample and resilient forests in the 21st century. Hopefully, this discussion will help set the stage for adapting to and mitigating the challenges that await us in the very near future.

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