

Utah Forest News

Utah Forest Landowner
Education Program Newsletter



Volume 14 Number 3

Summer 2010

The Tavaputs Ranch

It takes at least an hour-and-a-half on gravel roads to drive to Butch and Jeanie Jensen's Tavaputs Ranch, but when you get there you can see why they keep winning awards for their land stewardship.

The regional Environmental Stewardship Award hosted by the National Cattlemen's Beef Association, was recently awarded to the Jensens, which puts them in competition for a national award. In 2009, they received the Aldo Leopold Conservation Award for Utah presented by the Sand County Foundation, the Utah Farm Bureau Federation, the Utah Cattlemen's Association, and Western AgCredit, which included a \$10,000 prize.

The Jensens run a 450-head cow-calf operation and are continuing a five generation family tradition of land stewardship. Theirs is one of the last ranches that still moves its livestock the old fashioned way. The Jensens trail their livestock with horses up and down the thousands of vertical feet between

their summer range on top of the Bookcliffs and their winter range that extends far out into the San

Rafael Swell. While attending the National Cattlemen's meeting in Denver, Jeanie said a few Texas ranchers heard how they moved their cattle on horseback and expressed disbelief along with a yearning to still be doing things that way.

The Tavaputs Ranch is an incredibly beautiful place that has been enhanced by their five generations of conservation ethic, and it plainly shows. Lush Thurber fescue tops

the plateau, with magnificent stands of quaking aspen lined by Douglas-fir and true fir forests, finally giving way to pinyon and juniper woodlands thousands



The sun rises behind two aspen trees on the Tavaputs Plateau, looking over Desolation Canyon. Tavaputs is an Indian word for sunrise.

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of feet below. While the valley bottoms are dry and brown with temperatures in the mid-90's, it is moist and green on the plateau with temperatures in the refreshing 65 degree range. Summer rainstorms are common, which supports the vitality of the trees and grasses at this high elevation.

To reach the ranch, you have to climb the Bookcliffs, the imposing range east of Price which is said to be the longest escarpment in the world. One of my passengers was Richie Gardner, USU Forestry Master's student. He said it felt like we were riding on a mountain goat as we climbed the steep road in a pickup. The road climbs as dramatically as any I have seen in Utah, until it hits the top at 9,500 feet, and then the terrain abruptly flattens into a rolling plateau.

Extensive stands of quaking aspen line the plateau and many of the steep hillsides below, appearing to be some of the most vigorous in Utah. Butch says it is just too steep and remote for them to have ever done any logging on the property. He says that they did some timber harvesting on his brother's ranch in Emma Park during the 1990's and it worked out well for them. Despite having difficulties getting it cleaned up properly, it looks great now and he is very happy that they did it at a time when log values were relatively high. This was partly due to the proximity of a sawmill in Wellington which was still operating at the time.



Butch and Jeanie Jensen take a break from chores for a photograph.

Some of the aspen stands appear to be losing their vigor, with large old trees standing out in the meadows and very few younger trees coming up around them. Since aspen trees typically live less than 150 years, it can be cause for concern when the old ones

are dying and few young ones are coming up to replace them. It gave the plateau the unusual appearance of being an aspen savannah. Gardner was adept at pointing out aspen bark beetle activity in addition to the usual host of aspen diseases. Many places have excellent aspen regeneration despite the considerable elk populations. During my short visit to the ranch, I saw a herd of at least 50 elk, lots of

deer, and fresh black bear tracks outside the cabin in the morning. This is the result of the remoteness of the location and a tribute to the quality of wildlife habitat on the ranch.

Butch commented that he has seen excellent results in terms of wildlife habitat enhancement and forage production from the prescribed burns they have done, along with the occasional wildfire on the plateau. Their willingness to put considerable time and resources into the active management of the sagebrush on their land is another example of their commitment to caring about the condition of their land in the long run.

The Tavaputs Ranch is a diversified business that welcomes guests during the summer and shares its ranch-

ing expertise and knowledge of the land. The Jensens are eager to share knowledge with just about anybody who asks. They are one of several concessionaires that purchased licenses to run tours in the nearby Range Creek, which is famous for being a particularly well preserved community inhabited by Fremont Indians 1,000 years ago. During summer months, they offer hiking and horseback riding adventures. Guests can also raft Desolation Canyon, which stretches out for many miles from the front windows of the guest house and cabins. In the fall, they guide hunting trips for elk and deer.

Utah's various universities are welcome on the ranch to study the amazing landscape that the Jensens call home. They commented about the positive nature of

their relationship with USU Extension Range Specialist Roger Banner and SUU Range Professor Jim Bowns. One innovation that has paid off for them on their

winter range in the desert is to let the limited water sources act like a virtual fence to control where the cattle graze and for how long. Butch Jensen says in many years he could run considerably more cattle than he does, but that leads to overgrazing.

Instead he recom-

mends finding the number of cattle the land can handle through the lush years and the lean ones.

Common sense solutions like rotational grazing and a diversified business approach exemplify the Jensen's stewardship ethic, and demonstrate why they keep gaining deserved recognition for their efforts.

by Darren McAvoy



A mule deer buck on the Tavaputs.



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Spruce Beetles in the Cottonwood Canyons

Bark beetles have been chewing through Utah forests at an alarming pace since the early 1990's. More recently however, bark beetle populations have begun to erupt close to Salt Lake City, in the Cottonwood canyons. Ben Meyerson, Aerial Survey Technician for the USDA Forest Service's Forest Health Protection (FHP) office, started to detect increasing activity from the air in the fall of 2008. Meyerson said that he has been watching a spruce beetle epidemic continue to advance northward over that last ten years. Spruce beetles first caused extensive Engelmann spruce mortality on the Dixie National Forest and the Wasatch Plateau, then spread up to Mt. Nebo and Loafer Mountain, and past Spanish Fork. Now spruce beetles are gaining a foot-hold in American Fork and Big Cottonwood Canyons. Recent field assessments of these canyons found significant risk for a spruce beetle epidemic.

Meyerson points out that, in terms of visitor usage, forests in the Cottonwood canyons are some of the most valuable in the state. Although controlling epidemic populations of spruce beetles has proven difficult in other parts of Utah, he feels like it is important to try here because of the canyons' great scenic and economic values, as well as their value as Salt Lake City's water source. That is why he has started to 'sound the alarm.'

Meyerson and others have been working with Brighton Resort in particular to take steps to limit the impact of spruce beetles. Control measures include iden-

tifying infested trees, cutting them down, and burning them before a new generation of beetles emerges and infests additional host trees.

The likelihood of hazard trees that stands out in the mind of Scott Zeidler, Community Forester for the Division of Forestry, Fire and State Lands. "Homeowners might not see this coming. We need to get folks thinking about the potential damage to their property and lives from having lots of standing dead trees in a place where so many people come to recreate."



Darren Blackford from Forest Health Protection demonstrates spraying technique on an Engelmann Spruce.

Several agencies and organizations have come together to manage this forest disturbance: the first step was the formation of a Spruce Beetle Team. This team includes the Uinta-Wasatch-Cache National Forest, Forest Health Protection, the Division of Forestry, Fire and State Lands, people from the Cottonwood Canyons, the town of Alta, the

Big Cottonwood Community Council, Salt Lake's Watershed Division, the Utah Department of Agriculture, the Utah Community Forest Council.

Letting landowners know about the risk, and what they can do about it, is the primary objective for the Team. The team has established a website at <http://www.slcgov.com/utilities/SpruceBeetle.htm> to serve as a clearing house for information about the beetle and action that should be taken.

Other activities have included a workshop for local arborists and homeowners at the Spruces Campground in Big Cottonwood Canyon that was hosted by the Utah Community Forest Council in June of this year. The Spruce Beetle Team explained the pros and cons of management options, from doing nothing, to removing hazard trees, to protecting healthy, high value trees with insecticides. A tree identification quiz was given to participants so they could confidently distinguish host trees from non host trees, as spruce beetles only infest spruce trees.

Instructors Liz Hebertson and Darren Blackford from FHP discussed spruce beetle biology and ecology and appropriate spruce beetle

management practices. They also demonstrated how to properly spray high value trees with the insecticide carbaryl, and explained that this treatment can only be practically done on a limited number of trees, not the entire forest. The spray permitting process was explained by Tracie Kirkham with the Salt Lake City Watershed Division, who emphasized that no trees within 100 feet of any streams or surface water can be sprayed, minimizing the chances of the insecticide drifting into the water supply.

Zeidler expects that the spruce beetle will continue to kill more trees in the Cottonwood canyons, and that

the pockets of tree mortality will gain exponentially in size each year. He also noted that mountain pine beetles are infesting limber pine up on the ridges.

Residents and visitors of the Cottonwood canyons will likely be seeing more trees dying in years to come and

will want to know if anything can be done to control the beetle. If it were possible to remove and/or treat every bark beetle-infested tree before a new generation emerged to attack additional trees, there might be a chance of holding off the epidemic that many expect to see. But, with the variety of property ownerships, steep and inaccessible slopes, watershed concerns, and economic limitations, this goal is not feasible. Effective and environmentally viable treatment

alternatives for minimizing threats to high value trees, however, do exist. For more information regarding these alternatives, contact the Division of Forestry, Fire and State Lands, FHP, or USU Extension.

For a more thorough discussion of the ecology behind beetle invasions, see the Summer 2003 issue of the UFN for the article "Understanding Forest Disturbances: How Did We Get Here?" available on our website at <http://extension.usu.edu/forestry/Reading/UFNIndex.htm>.

by Darren McAvoy



Liz Hebertson from Forest Health Protection instructs workshop participants on spruce beetle identification in Big Cottonwood Canyon.

Study Advances Knowledge of Ponderosa Pine

At an April meeting of the Utah Chapter of the Society of American Foresters, held in Salt Lake City in conjunction with the national Bureau of Land Management (BLM) Foresters meeting, BLM Forester Doug Page presented findings from ongoing studies of ponderosa pine he is conducting with colleagues from the BLM and the USDA Forest Service. Page's talk, *Ponderosa Pine Genetics: A West-Wide Study of Isolated Populations of Ponderosa Pine*, provided new insights into differing genetics between ponderosa populations in the West, and how foresters working with ponderosa might react to changing temperature and precipitation patterns in the region.

Ponderosa is widely distributed across western North America and foresters have traditionally treated all ponderosa as if it was the same, whether it was growing along the coast of the Pacific Northwest or deep inland in the Southwest. More recently, we differentiated between northern and southern varieties. Page and his colleagues have found however, that there is a much more complex and diverse pattern of genetic variety on the landscape than ever imagined.



The study found that isolated stands of ponderosa pine, such as this one in Utah's Wah Wah Mountains, are more genetically diverse than larger stands.

The genetic study of ponderosa pine began in 2005 and since then, rounds of studies have taken place in 2007, and 2008/2009, and continue into 2010.

They resulted in the first documented transition zone between Northern Plateau and Southwest varieties of ponderosa, just north of Las Vegas, Nevada. Genetic relationships were also discovered between ponderosa in parts of the Great Basin of Nevada to ponderosa in the Bighorn Range of Wyoming — not a finding that most foresters or botanists would have suspected.

Perhaps the most surprising finding of the study is its conclusion that isolated stands of ponderosa are more genetically diverse than the large and physically connected stands found in some regions of the West. This comes as a surprise because, typically, small and disconnected populations of organisms are generally thought of as lacking genetic diversity. This is important because a population with greater genetic diversity is generally thought of as being more stable and more resilient when under attack from insects, diseases, or changes in climate.

Another surprising finding of the study is that

ponderosa sampled in Utah's Wah Wah Mountains, near Milford, are more genetically similar to ponderosa sampled in Wenatchee, Washington, than to closer ponderosa in the Southwest. The Wah Wah Ponderosa, by the way, are the oldest known ponderosa in the world, approaching 1,000 years in age (See Utah Forest News Winter 2008.)

Due to the significance of these findings, sampling is continuing to determine the genetic movement of ponderosa over time. Scientists have documented movement and adaptation of ponderosa pine over a 12,000-year period. By understanding the genetic migration of ponderosa over many centuries, and tying that to our understanding of how the climate has changed over the same time period, scientists and managers should be able to better adapt to future changes in climactic conditions by creating strategies based on this knowledge.

This information can help managers decide which

stands of ponderosa are more genetically diverse, thereby allowing them to focus their management efforts on stands that need protection from wildland fire and succession. It can even help direct managers to assist ponderosa migration patterns on the landscape by planting specific genetic types in appropriate locations. Finally, this knowledge can help to identify local native gene pools for seed collection and planting programs.

Page's entire presentation can be viewed under the News tab on the Intermountain Society of American Foresters website <http://www.usu.edu/saf/>. Page's cooperators include Bob Means, BLM Wyoming Forestry Program Lead, Valerie Hipkins, USDA Forest Service at the National Forest Genetics Electrophoresis Lab, and a host of BLM foresters who have volunteered their time to collect samples. Page is the Southwest Utah Zone Forester for the BLM. He can be reached at doug_page@blm.gov.

by Darren McAvoy

For more information regarding any of the information presented in this newsletter, please call Darren McAvoy at Utah State University, 435-797-0560, write to him at 5230 Old Main Hill, Logan, UT 84322-5230, or email darren.mcavoy@usu.edu.

To get on our list for email delivery of this newsletter go to <http://extension.usu.edu/forestry/subscribe.html>. For back issues visit <http://extension.usu.edu/forestry/reading/ufnindex.htm>

The Utah State University Forestry Extension website, found at <http://extension.usu.edu/forestry>, is an excellent source of technical forestry information for woodland owners. Check the "What's New" section periodically for new postings.

State of Utah Division of Forestry, Fire and State Lands (DFF&SL) service foresters for your area can be contacted by calling 801-538-5555.

Ideas and written contributions to this newsletter are encouraged. Send your contributions or comments to the return address above or call 435-797-0560, or email darren.mcavoy@usu.edu.



Forest Landowner Education Program
 College of Natural Resources
 5230 Old Main Hill
 Logan, UT 84322-5230

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 This newsletter is partially supported by USDA Forest Service State and Private Forestry.

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COMING EVENTS

Restoring the West Conference: Managing Plant and Animal Conflicts, October 26 & 27, 2010
 USU Campus, Logan, Utah, Landowner registration discount available. For more information, or to view past conferences, visit www.restoringthewest.org.

Society of American Foresters National Convention, Albuquerque, New Mexico, October 27-31, 2010

Small Log Conference, Coeur d'Alene, Idaho, March 23-25, 2011.



From this summer, a mountain mahogany on the Tavaputs Plateau. The reproductive structure of mountain mahogany includes an hairy, corkscrew shaped plume, which gives the tree an off-white color for part of the summer.