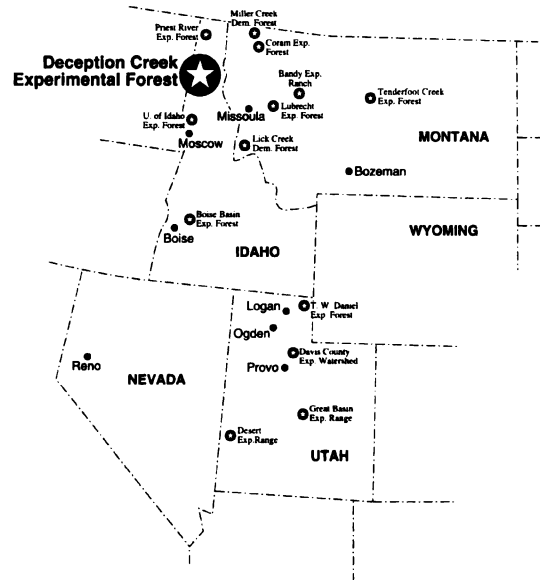


Deception Creek Experimental Forest

Theresa B. Jain and Russell T. Graham

Deception Creek Experimental Forest is in one of the most productive forests in the Rocky Mountains. When the forest was established in 1933, large, old-age western white pine (*Pinus monticola*) were important for producing lumber products. The forest, located in the Coeur d'Alene Mountains, is in the heart of the western white pine forest type. Therefore, research at Deception Creek Experimental Forest focused on the ecology and silviculture of western white pine and its associated species.



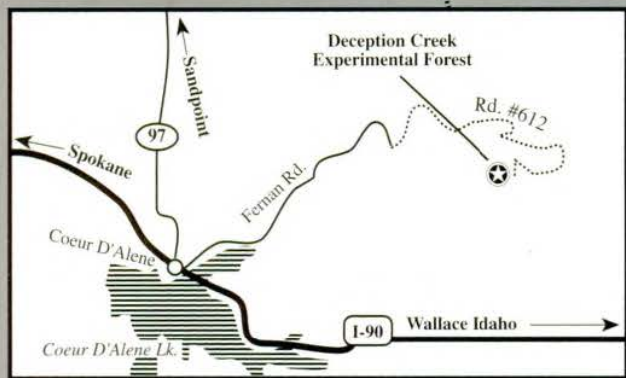
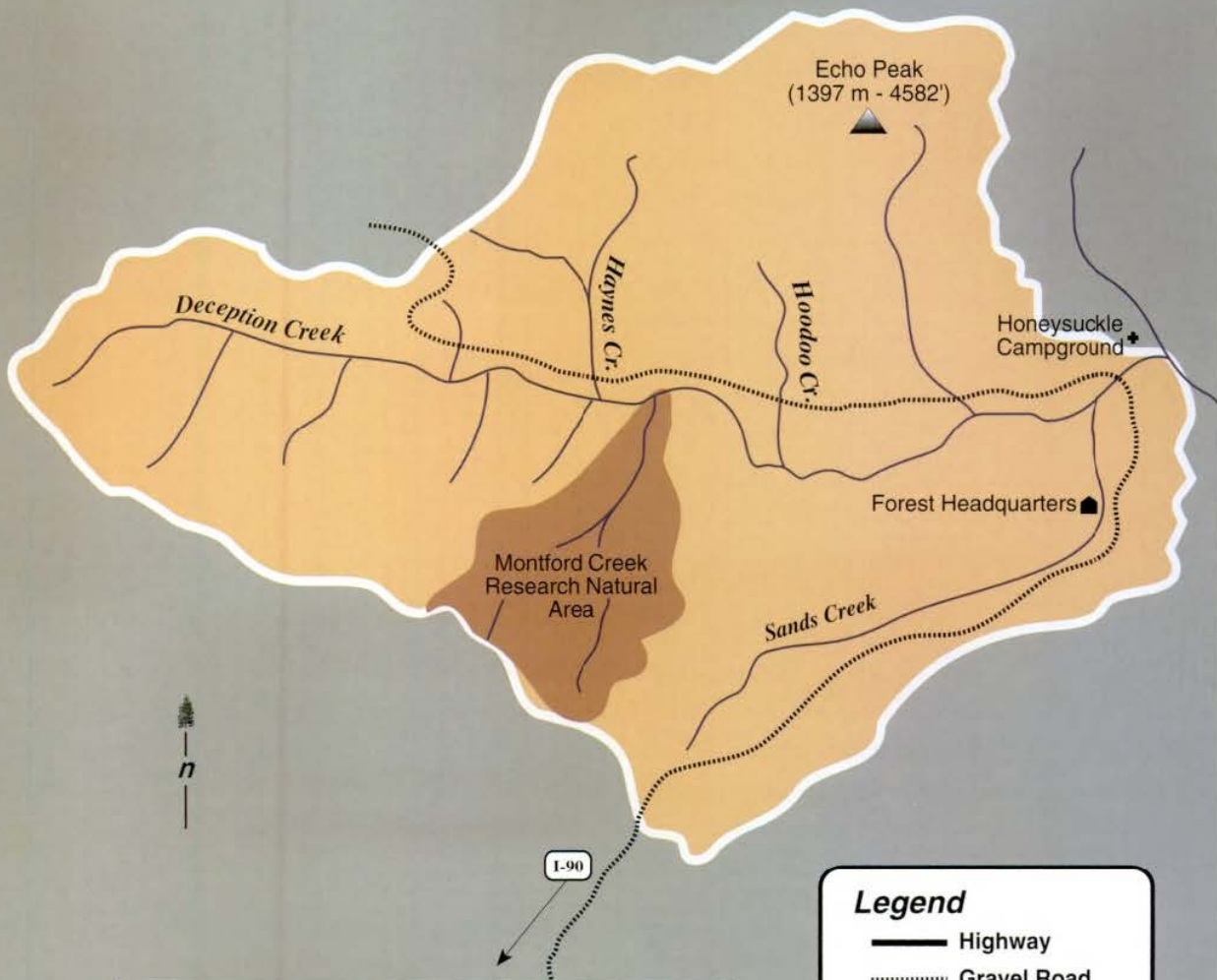
Since the 1940's western white pine on the forest has decreased due to white pine blister rust (*Cronartium ribicola*). However, regeneration, vigor, growth, and genetic studies on western white pine and other species have continued. Research has also included site preparation, fire effects, insects and disease, and watershed studies. The legacy of past research and high forest productivity has created a diverse and lush forest, making Deception Creek Experimental Forest an ideal location for conducting research.

The forest includes the entire Deception Creek drainage, a tributary of the North Fork of the Coeur d'Alene River in northern Idaho. Deception Creek Experimental Forest is located approximately 32 km (20 miles) northeast of Coeur d'Alene, Idaho, on the Fernan Ranger District of the Idaho Panhandle National Forests. The area encompasses 1,425 ha (3,520 acres) with elevations ranging from 840 to 1,400 m (2,800 to 4,600 ft). Deception Creek and many other small drainages influence the forest's topography by creating predominantly north- and south-facing slopes with slope angles ranging from 35 to 80 percent.

Climate

Weather at Deception Creek Experimental Forest is influenced by the maritime climate of the Pacific Coast. Summers are short, autumns and winters are cloudy. The precipitation is enhanced by the mountainous topography and the forced uplift of moist air that contributes to the average annual precipitation of 1,397 mm (55 inches). The high precipitation is

Deception Creek Experimental Forest



Legend

- Highway
- Gravel Road
- Watercourse
- Flume
- ▲ Peak
- Headquarters
- ⌒ Lookout
- ≡ Lake or Bog

one km
one mile



Headquarters compound for Deception Creek Experimental Forest in the 1940's.

greater than the average precipitation of 660 to 1,067 mm (26 to 42 inches) in other northern Idaho locations. Annual snow fall averages 4,064 mm (160 inches) accounting for 25 percent of the total precipitation. The average mean annual temperature is 6 °C (42 °F).

Soils

The rich and productive soils at Deception Creek Experimental Forest are primarily Typic Vitrandepts, which are volcanic ash above beltian metasediments. The depth of the volcanic ash varies depending on aspect and slope. For example, the ash cap may be up to 1.5 m (5 ft) deep on gentle north-facing slopes, while the ash cap may only be 0.1 to 0.3 m (0.6 to 1.0 ft) on steep southwest-facing slopes.

Main Communities

Two major habitat types occur on Deception Creek Experimental Forest. Most of the forest (80 percent) is a western hemlock/queencup beadlilly (*Tsuga heterophylla*/*Clintonia uniflora*) habitat type. The other major habitat type is grand fir (*Abies grandis*)/queencup beadlilly. In addition, there are small areas of western redcedar/devil's club (*Thuja plicata*/*Oplopanax horridum*), and grand fir/beargrass (*Xerophyllum tenax*). Major tree species include grand fir, western hemlock, Douglas-fir (*Pseudotsuga menziesii*), western larch (*Larix occidentalis*), and western white pine. There is also a minor component of Engelmann spruce (*Picea engelmannii*), lodgepole pine (*Pinus contorta*), western redcedar, and ponderosa pine (*Pinus ponderosa*). The majority (60 percent) of Deception Creek Experimental

Forest is old-age forest with dense canopies and sparse understories, 20 percent mid-age forest, and 20 percent young-age forest with a high shrub component of alder, ceanothus, and willow species (*Alnus*, *Ceanothus*, and *Salix* species).

The different aged forests (10 to over 200 years), vegetative structures, soils, climate, and past studies at Deception Creek Experimental Forest make it an ideal location for conducting research. Undisturbed areas include the Montford Creek Research Natural Area, which is 118 ha (292 acres) and has western white pine and western hemlock 200 years and older. Deception Creek Experimental Forest is close to Coeur d'Alene and has an extensive road system making most sites accessible.

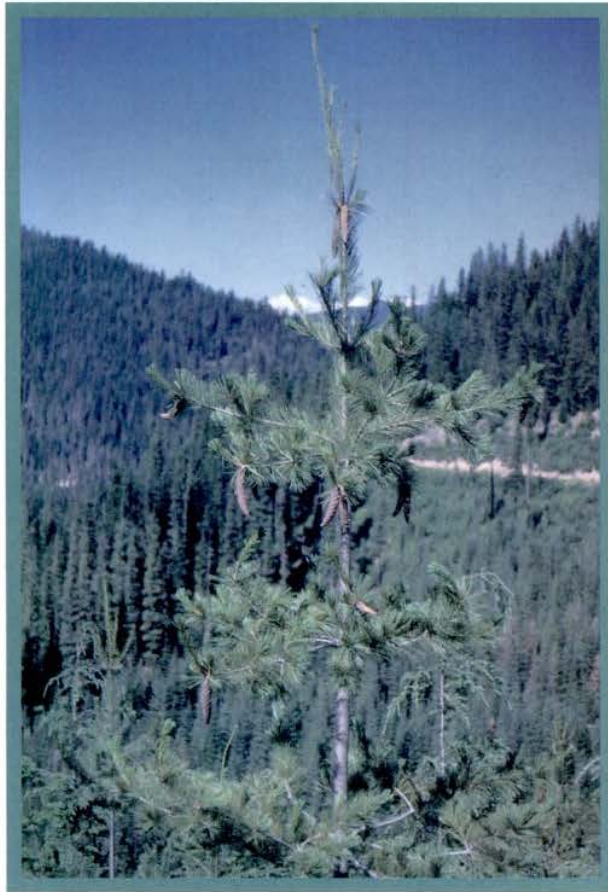
Examples of Research

Deception Creek Experimental Forest was originally established as a center for conducting silviculture research. Therefore, research on the forest concentrated on applying both uneven-age and even-age silviculture systems for managing this forest type. Studies emphasized regeneration methods and subsequent effects on establishment, composition, and growth of natural and artificial regeneration. These studies not only observed western white pine but included the many other species found in this forest type.

Deception Creek Experimental Forest also has a wealth of insect and disease, long-term soil productivity, and fire research. Growth and yield plots on the forest monitor forest



Silvicultural treatments, which include individual tree selection for uneven-age management, have been tested on Deception Creek Experimental Forest.



Healthy, blister rust-free western white pine, like this one, produce many sought-after cones for genetics studies in the research effort to re-invigorate thousands of acres of diseased forests in the West.

productivity and changes in species composition. Genetic studies of rust-resistant western white pine started in the mid-1950's and continues today. However, vegetation is not the only forest component studied at Deception Creek Experimental Forest. For example, small mammal populations were studied within the Montford Creek Natural Area and adjacent disturbed sites.

Currently, research on Deception Creek Experimental Forest involves studies on how forest management affects ecosystem structures and functions. Clearcuts will probably be used much less in future forest management. Therefore, variations in both even-age and uneven-age silviculture systems are being studied. Other studies on the forest include fire effects on sedimentation and soil nutrients, management effects on overstory and under-story species composition, growth and yield, forest genetics, and root disease.

The accessibility of the forest and proximity to Coeur d'Alene makes Deception Creek Experimental Forest an ideal demonstration site for showing forest managers, educators, and students a wide variety of forest structures and ages caused by a variety of silviculture treatments. Different silviculture studies show visitors what alternatives and options are available for forest management. In addition, these studies have shown what important ecological aspects should be considered if society chooses to maintain these ecosystems.

Facilities and Administration

The research headquarters is located along Sands Creek. Currently a bunkhouse and trailer pads are on the forest. Water is presently hauled to the compound, and electricity is supplied by generators. Most of the research conducted at Deception Creek Experimental Forest occurs during the summer.

The Fernan Ranger District of the Idaho Panhandle National Forests is responsible for fire control, road maintenance, and timber sale preparation and administration. A research forester on the Silviculture and Genetics Research Work Unit manages the forest. Funding for operating Deception Creek Experimental Forest is provided by that work unit.

Location

Deception Creek Experimental Forest is approximately 35 km (22 miles) northeast of Coeur d'Alene, Idaho. Take the Fernan Road from I-90 to Forest Road #612 to the Sands Creek drainage.

Suggested Reading

- Boyd, R.J. 1969. Some case histories of natural regeneration in the western white pine type. Res. Pap. INT-63. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Research Station. 24 p.
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- Wellner, C.A.; Foiles, M.W. 1951. What to see and where to find it on the Deception Creek Experimental Forest: a field research center of the Northern Rocky Mountain Forest and Range Experiment Station. Misc. Pub. No. 2. Missoula, MT: U.S. Department of Agriculture, Forest Service, Northern Rocky Mountain Forest and Range Experiment Station. 74 p.

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