

THE SETTING AND HISTORICAL BACKGROUND

Revised from Gruell and others (1982)

In much of forested North America, there is little reliable information on changes in vegetation over long periods. An exception is the Lick Creek drainage on the Bitterroot National Forest in west-central Montana, thanks to the foresight of USDA Forest Service personnel who have photographically recorded vegetation over the 88 years between 1909 and 1997. This photographic series provides a unique opportunity to visually interpret changes in a ponderosa pine/inland Douglas-fir forest. Changes depicted also allow an evaluation of how resource uses and activities have been influenced by logging and exclusion of fire. Similar changes have occurred over much of the ponderosa pine/Douglas-fir type in the Inland West, where shade-tolerant Douglas-fir would represent the potential climax were it not for disturbances such as fire and logging.

The photo study is near Lick Creek (latitude 46°5' N., longitude 114°15' W.), site of a 1906 ponderosa pine timber sale on National Forest lands. This area is 13 air miles southwest of Hamilton, MT, at elevations between 4,300 and 4,600 ft (fig. 1). The terrain is mostly 10 to 30 percent slopes except for localized northerly and southerly slopes of up to 70 percent. Soils are derived from granitic parent materials and are shallow to moderately deep. Some poorly drained areas and clay soils exist at the lowest elevations.

Weather data recorded 5 air miles southeast of the study area at Darby, MT (elevation 3,887 ft) suggest that the mean annual precipitation at Lick Creek is about 20 inches (USDA Soil Conservation Service 1977). Approximately 50 percent of this falls in the form of snow.

Because many years have passed since the original timber sale, records concerning USDA Forest Service participants are sketchy. Some of the people who are known to have been involved include Elers Koch, forest inspector and Bitterroot Forest Supervisor from 1906 to 1908; Wilford W. White, sale administrator and Bitterroot Forest Supervisor from 1909 to 1921; John Preston, Acting Deputy Forest Supervisor; Ranger Than Wilkerson; Earl Tanner; E. C. Clifford; Claget Sanders, the scaler; and "lumberman" C. J. Gregory. Gifford Pinchot, the first Chief of the USDA Forest

Service, provided direction for this sale (Koch 1998). In a letter to Pinchot, Elers Koch (1937) wrote: "I consider this area [Lick Creek] one of the most satisfactory timber sale operations in the Region, and feel that your personal instruction in the early stages of the timber marking was largely responsible for the present splendid condition of the sale area." The Big Blackfoot Milling Company, a subsidiary of the Anaconda Copper Mining Company, purchased the timber and did the logging according to USDA Forest Service specifications. The company had a virtual monopoly in logging private lands in the Bitterroot Valley and expected no competition in bidding for the Forest Service sale; but unexpectedly an Idaho outfit, Hitt and Melquist, outbid them (Koch 1998). Later, the company bought the contract from Hitt and Melquist at considerable profit to the original bidder.

Because of the importance of the Lick Creek sale, a Washington Office photographer, W. J. Lubkin, was sent west to document the logging activity in 1909. Lubkin obtained excellent photos by using a 6.5 by 8.5 inch (17 by 22 cm) view box camera and glass plates. The camera points were not permanently marked because this was not part of the assignment. Fortunately, in November 1925, K. D. Swan, photographer for the USDA Forest Service Northern Region, accompanied W. W. White on a trip to the Lick Creek area to see if the camera points could be located. Swan (1968) recalled how White was able to locate the original photo points:

The quest was extremely fascinating. White had a good memory and was able to spot, in a general way, the locations we were after. Peculiar stumps and logs were a great help. Just when we might seem baffled in the search for a particular spot, something would show up to give us a key. The clue might be the bark pattern on a ponderosa pine, or perhaps a forked trunk.

The camera we were using duplicated the one used for the original pictures, and when a spot was once found it was a simple matter to adjust the outfit so that the image on the ground glass would coincide with the print we were holding. It was an exciting game, and we felt it was more fun than work.

In 1938, the temporary camera points located in 1925 were permanently marked with brass caps by Forest Supervisor G. M. Brandborg and Ranger C. Shockley

(fig. 1). The original photographs were repeated in 1925, 1927, and 1937 to 1938 by K. D. Swan. He was followed by USDA Forest Service employees W. E. Steuerwald, 1948, 1958; Wyman Schmidt, 1968; and

William Reich, 1979. Most of the retake photographs were made with 4 by 5 inch Crown Graphic cameras. Dennis Simmerman took the photographs in 1989 and 1997, using a Mamiya RB67 camera.

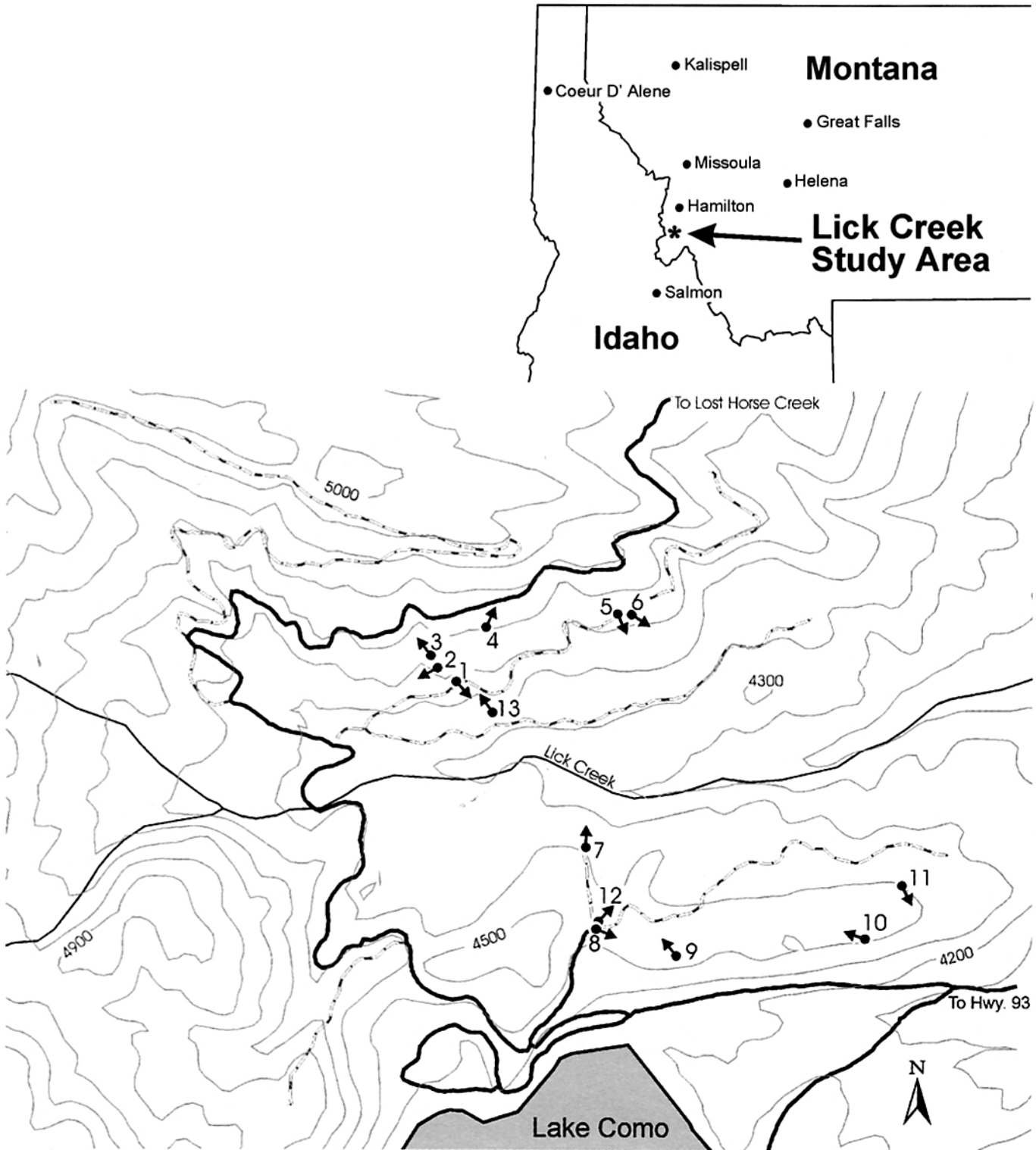


Figure 1—Lick Creek study area showing locations of photopoints.