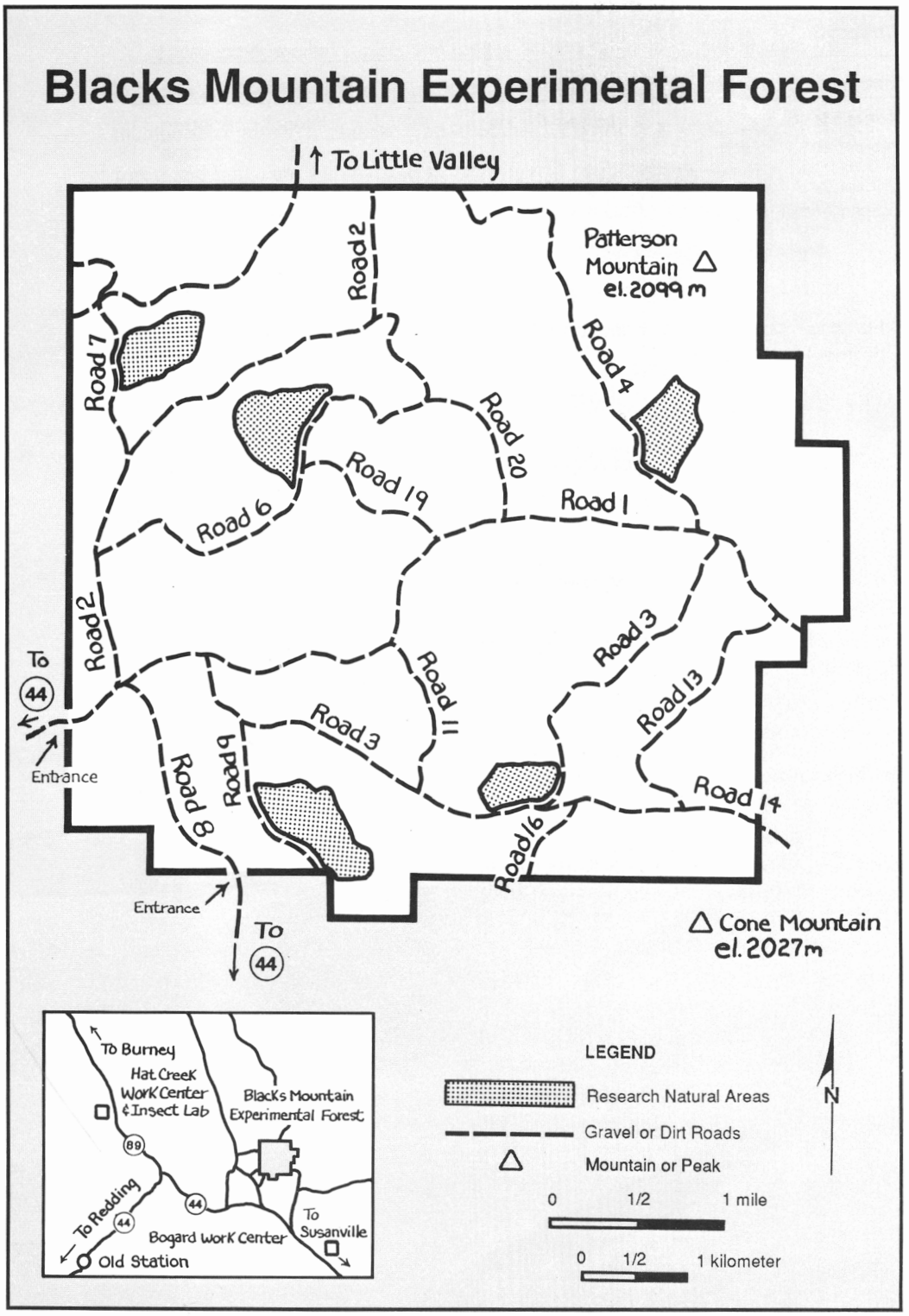
Blacks Mountain Experimental Forest
↑ To Little Valley
Road 2
Patterson Mountain △ el. 2099 m
Road 7
Road 4
Road 20
Road 19
Road 6
Road 1
Road 2
Road 3
To 44
Road 11
Road 13
Road 3
Entrance
Road 9
Road 8
Road 14
Road 16
Entrance
To 44
△ Cone Mountain el. 2027m
To Burney
Hat Creek Work Center & Insect Lab
Black's Mountain Experimental Forest
89
To Redding
44
44
To Susanville
Bogard Work Center
Old Station
LEGEND
Research Natural Areas
Gravel or Dirt Roads
Mountain or Peak
N
0 1/2 1 mile
0 1/2 1 kilometer

BLACKS MOUNTAIN
Experimental Forest

The Blacks Mountain Experimental Forest was formally designated in 1934 as the Station's principal site for management studies in the interior ponderosa pine (*Pinus ponderosa* Dougl. ex Laws. var. *ponderosa*) type. Studies going back as far as 1910 had resulted in new theories of management, silviculture, and insect control. A primary objective of the Experimental Forest was to develop these theories into a system of management and to test, demonstrate, and improve the system through continuous operation of a timber tract on a commercial scale.

Before full scale operations began, the approximately 4200-hectare forest was subdivided into 100 compartments of about 40 hectares each. An intensive road system, the first in the West specifically designed for truck hauling, was laid out such that every compartment was bordered by a road. Compartments and roads have been continuously maintained.

Early timber harvests were primarily for insect control. An insect risk-rating system developed at Blacks Mountain was tested (Salmon and Bongberg 1942). When it was demonstrated that the average cut of 35 cubic meters per hectare could be logged economically, and that the cutting reduced the annual rate of tree killing, sanitation-salvage was adopted widely. Duncan Dunning proposed the mosaic of small even-aged groups of trees (the prevailing stand structure at Blacks Mountain) rather than individual trees as the subject for management (Hallin 1954). This concept of "unit area control" was tested operationally during the 1950's. More recent cuttings have been designed to convert large areas of the forest to young-growth stands needed for future research. Today, the forest includes a wide range of stand structures and age classes from young plantations to old-growth stands (*fig. 1*) in five uncut compartments designated Research Natural Areas.

CLIMATE

The climate is characterized by warm, dry summers and cold, wet winters. Annual precipitation, mostly snow, for the period 1935 to 1953 varied from 229 to 737 millimeters and averaged 457 millimeters. About 90 percent of the precipitation falls during October through May. Air temperatures during the year usually range from -9°C to 29°C. Frost may occur in any month. Relative humidity is usually low—10 to 20 percent on summer afternoons except during storms.

SOILS

Soils supporting conifers cover about 70 percent of the forest and are members of the mixed, frigid families of Ultic Haploxeralfs and Ultic Haploxerolls. These soils are 3 to 5 feet deep over lava bedrock. Mixed, frigid Ultic Argixerolls underlay sagebrush flats. Site Index varies narrowly between 60 and 80 and averages 72 (Meyer 1938).

Figure 1—*A wide range of stand structures and age classes from young plantations to old-growth stands are found on Blacks Mountain Experimental Forest.*

MAIN COMMUNITIES

Interior Ponderosa Pine (SAF 237), which occupies 3715 hectares, is the only forest cover type on the Experimental Forest (Eyre 1980). Species composition varies within the type, however. White fir (*Abies concolor* var. *lowiana* [Gord.] Lemm.) and incense-cedar (*Libocedrus decurrens* Torr.), absent in stands within the lower portion of the basin, become increasingly abundant at higher elevations. The remaining 437 hectares are poorly drained flats occupied by sagebrush and grass.

DATA BASES

Road and topographic maps are available. In 1933 and 1934 the Experimental Forest was completely inventoried on a 1-hectare grid. Timber type maps and inventories were prepared by compartments and revised after various harvests. Computerized stem maps and inventories are available for 20-year periods on 48 8-hectare parcels. The Lassen National Forest staff has mapped the soils to the family level.[1] This survey supersedes a more detailed survey conducted by University of California, Berkeley, students in 1940.[2]

EXAMPLES OF RESEARCH

- Growth of stagnated stands after thinning
- Long-term effects of partial cutting
- Comparing even-aged and uneven-aged silvicultural systems.

FACILITIES

The Blacks Mountain Experimental Forest has no facilities. Temporary office space, equipment storage, and gasoline may be available at the Forest Service's Bogard Work Center (19 road km southeast) or Hat Creek Work Center and the Forest Insect Laboratory of the Pacific Southwest Research Station (48 road km northwest). Gasoline and food can be obtained at Old Station (32 road km west). Complete services are available in Susanville, 64 road kilometers southeast of Blacks Mountain.

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[1]Available from the Lassen National Forest, Susanville, Calif.
[2]Data on file at the Pacific Southwest Research Station, Redding, Calif.

CONTACT ADDRESS

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LOCATION

Blacks Mountain Experimental Forest (lat. 40°40′ N., long. 121°10′ W.) lies within portions of T. 33 N., R. 7 E. and T. 33 N., R. 8 E., MDM., 64 road kilometers northwest of Susanville, Lassen County (see map). About half of the Forest lies in a gently rolling basin; the remainder extends up the moderate slopes of Blacks Mountain to the north and of Patterson and Cone Mountains to the east. Elevations range from 1700 to 2100 meters.

Access to within 8 kilometers of the Experimental Forest is available all-year via State Route 44. Access to the boundary and within the Forest is available during summer and fall via an intensive system of surfaced and unsurfaced roads. None of these roads is maintained in the winter, and many may be impassable when wet.