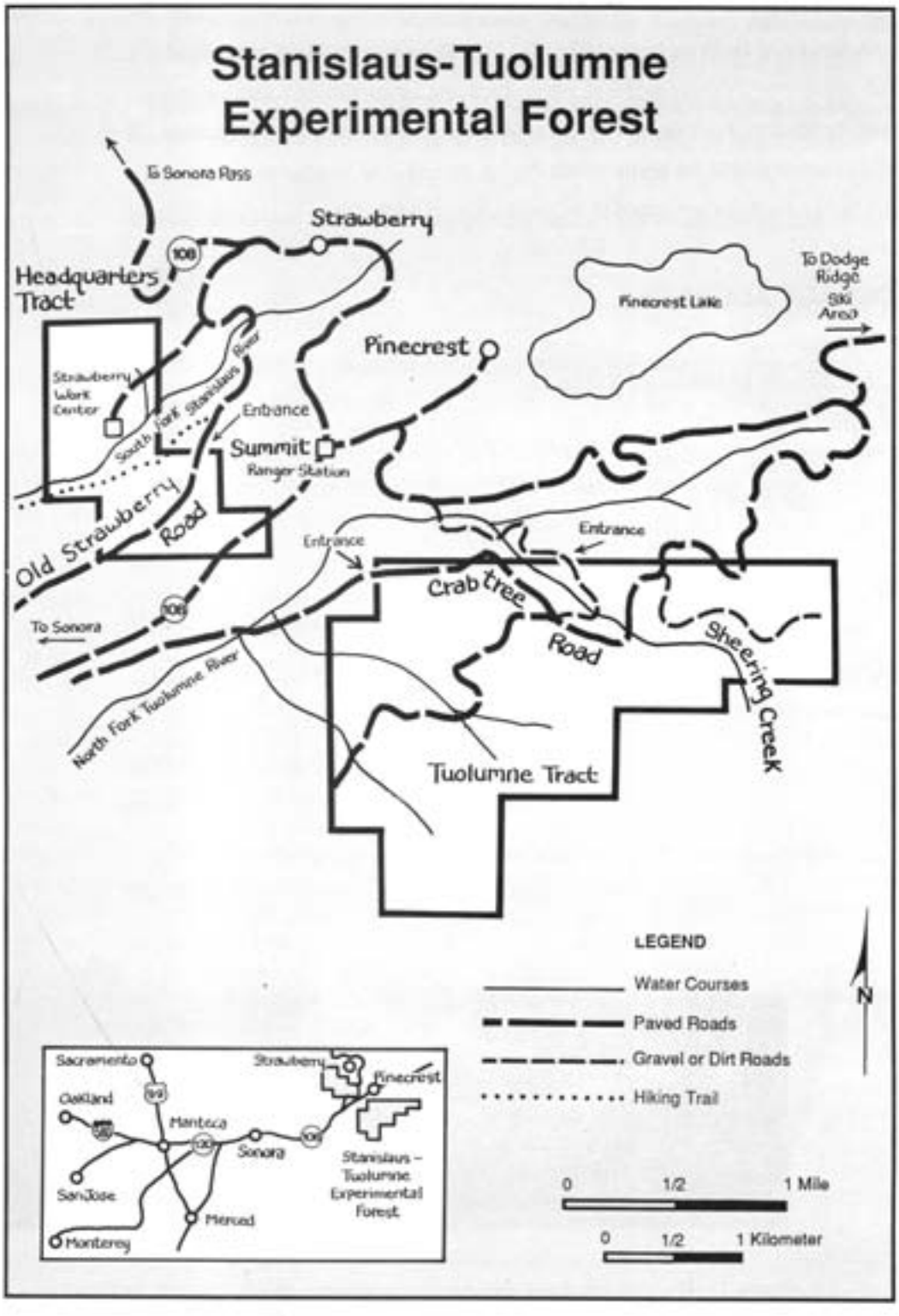
Stanislaus-Tuolumne
Experimental Forest
To Sonora Pass
Strawberry
108
Headquarters
Tract
Pinecrest Lake
To Dodge
Ridge
Ski
Area
Pinecrest
Strawberry
Work
Center
South Fork Stanislaus River
Entrance
Summit
Ranger Station
Old Strawberry
Road
Entrance
Entrance
Crab tree
Road
Sheering Creek
To Sonora
108
North Fork Tuolumne River
Tuolumne Tract
LEGEND
Water Courses
Paved Roads
Gravel or Dirt Roads
Hiking Trail
N
Sacramento
Strawberry
Pinecrest
Oakland
Manteca
Sonora
Stanislaus -
Tuolumne
Experimental
Forest
San Jose
Merced
Monterey
0
1/2
1 Mile
0
1/2
1 Kilometer

STANISLAUS-TUOLUMNE
Experimental Forest

The Stanislaus-Tuolumne Experimental Forest was formally designated on December 6, 1943, as a place for field studies and for demonstration of forest management practices in the Sierra Nevada mixed-conifer type. The Forest was selected, specifically, as typical of the high quality stands of the middle west slope of the Sierra Nevada.

Early research included studies on reproduction, planting, pruning, slash disposal, and lumber recovery. More recent studies involved climate, insects, mistletoe, harvest cutting, site preparation, herbicides, and root rots.

The Experimental Forest of about 600 hectares consists of two tracts. The Headquarters Tract, which straddles the South Fork of the Stanislaus River *(fig. 14)*, contains about 80 hectares. The Tuolumne Tract, which lies on the lower slope of Dodge Ridge on the south side of the North Fork of the Tuolumne River, contains about 520 hectares. About 57 hectares of the Headquarters Tract were logged in 1927 by the selection system. And 262 hectares of the Tuolumne Tract were harvested in 1948 and 1949 to convert old-growth to managed stands.

Figure 14—The Headquarters Tract of the Stanislaus-Tuolumne Experimental Forest is bisected by the South Fork of the Stanislaus River.

Obtaining adequate reproduction of sugar pine *(Pinus lambertiana* Dougl.) by natural seeding and planting was stressed by seedtree cuttings and small clearcuttings. Several plantations, areas of natural young-growth, and large blocks of diverse species and age classes that virtually are uncut, provide great potential for silvicultural and ecological research in this important and complex forest type *(fig. 15)*. This research potential was recognized by the United Nations Educational, Scientific and Cultural Organization's Program on Man and the Biosphere, which formally recognized the Forest as part of an international network of Biosphere Reserves in 1977.

***Figure 15**—Large blocks of diverse species and age classes on the Stanislaus-Tuolumne Experimental Forest provide great potential for silvicultural and ecological research.*

CLIMATE

The climate is characterized by warm, dry summers and cold, wet winters. Annual precipitation averages 940 millimeters, more than half falling as snow between December 1 and March 31. Snow, in exceptional winters, may accumulate to depths over 3 meters. Some drifts persist until about May 20. Little precipitation falls during June through September. Air temperatures during the year usually range from -23°C to 35°C. Average monthly minimum and maximum air temperatures range from -7°C and 7°C for January to 6°C and 27°C for July. The growing season is about 112 days.

SOILS

Moderately deep, sandy to fine sandy loam soils of the Holland Series are widespread in the Experimental Forest. The soils are residual, derived from granite or diorite. On the higher slopes and ridges, soils from the lava caps are shallow and support poor tree growth. Overall, however, site quality is high. Site Index is estimated to be about 110 (Meyer 1938).

MAIN COMMUNITIES

The forest cover type on 546 hectares is Sierra Nevada Mixed Conifer (SAF 243), although it can be considered a variant because Douglas-fir *(Pseudotsuga menziesii* [Mirb.] Franco var. *menziesii)* is absent and Jeffrey pine *(Pinus jeffreyi* Grev. & Balf) is present (Eyre 1980). The Red Fir Forest Cover Type (SAF 207) covers 61 hectares.

DATA BASES

Climatological measurements including air and soil temperatures, relative humidity, barometric pressure, wind velocity, cloudiness, precipitation, and soil moisture were recorded at five sites. Beginning in 1932 and 1933, records were kept for 30 years at one site, 19 years at another site, and 11 years at the other three sites.[7] Trees in the Tuolumne Tract have been inventoried by stand-condition classes within 1-hectare divisions.[7]

Topographic maps and detailed maps of vegetation and ground conditions (each tree, boulder, downed log, and shrub) were prepared in the early 1930's on about 15 3-hectare plots.[7] The Stanislaus National Forest has mapped the soils to the family level.[8] This soil survey supersedes a more detailed survey conducted by University of California, Berkeley, students in 1942.[7]

EXAMPLES OF RESEARCH

- Population dynamics of dwarf mistletoe
- Control methods, and physiological effects of disease and insect pests on conifers.

[7]Data on file at the Pacific Southwest Research Station, Redding, Calif.
[8]Available from the Stanislaus National Forest, Sonora, Calif.

FACILITIES

The Stanislaus-Tuolumne Experimental Forest has no facilities. Temporary office space and equipment storage may be available at the Summit Ranger Station, Stanislaus National Forest, adjacent to the Experimental Forest. Food and lodging can be obtained in the communities of Pinecrest and Strawberry. Pinecrest is a large summer and winter recreation area, with resorts, campgrounds, organization camps, summer homes, swimming, boating, fishing, and hunting. Dodge Ridge Ski Area is nearby. Strawberry is a smaller summer-home and resort community.

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LOCATION

The Experimental Forest's two tracts (lat. 38°03′N., long. 119°57′W.) lie within T. 4 N., R. 18 E., MDM. The Headquarters Tract, 1.6 kilometers south of Strawberry, and the Tuolumne Tract, 1.6 kilometers south of Pinecrest, are 51 road kilometers east of Sonora, Tuolumne County (see map). Elevations range from 1590 to 1950 meters.

The Forest can be reached via State Route 108, an all-weather road. The road network within the Forest is unpaved except for Crabtree Road (4N26). None is maintained during the winter to avoid conflict with designated cross-country ski trails.