

67. Preacher Meadows (Sawyer and others 1978, Cheng 1996c)

Location

This established RNA is on the Shasta-Trinity National Forest. The whole area is included within the Trinity Alps Wilderness and lies about 6 miles (10 km) W. of Trinity Center. It consists of sects. 17 and 20 T36N, R8W MDBM (40°58'N, 122°48'W), USGS Covington Mill quad (*fig. 135*). Ecological subsection – Sodic Claypan Terraces (M261Aj) and Eastern Klamath Mountains (M261Ai).

Target Element

Mixed Conifer Forest

Distinctive Features

Ultrabasic Mixed Coniferous Forest: As the predominant forest type in the area, the ultrabasic mixed coniferous forest in the RNA is typical, both in composition and quality, of forests throughout much of the ultramafic terrain at mid-elevations of the E. Klamath Mountains ecological section. Its uniformity of cover and openness are results of the overriding influence of the substrate on vegetation.

Rare Flora: Two species (*Cypripedium californicum* and *Darlingtonia californica*) are on List 4 of CNPS.

Ceanothus Diversity: The following species and apparent hybrids are listed: *Ceanothus cordulatus*, *C. cuneatus*, *C. integerrimus*, *C. prostratus*, *C. pumilus*, *C. velutinus*, *C. prostratus* x *pumilus*, *C. velutinus* x *prostratus*. This diversity of congeners may be useful for systematic and hybridization studies.

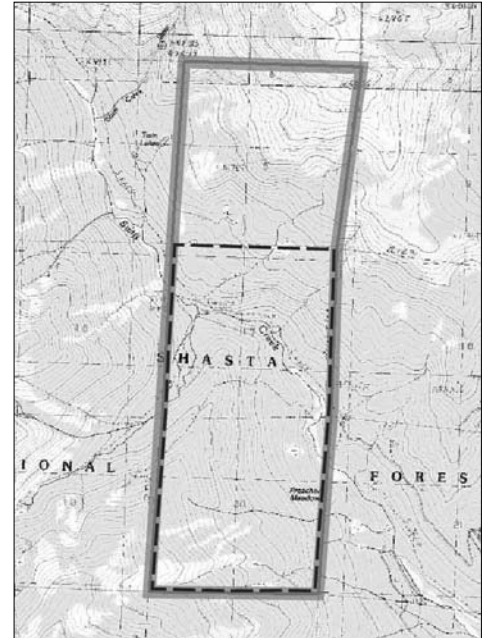
Physical Characteristics

The surveyed area covers 600 acres (243 ha), but the established RNA is 1850 acres (749 ha). Elevations range from 3800 to 5800 ft (1158-1768 m) in the study area and from 3800 to 6835 ft (1158-2083 m) in the RNA. Topography is moderate to steep (30-95 percent slopes) with SE.- and E.-facing slopes predominating and some NW.- and SW.-facing slopes. Swift Creek has carved a gorge 90 ft (27 m) deep in one area, and meadowy and forested flats and benches occur above the creek in other areas. The area is underlain by ultrabasic intrusives (primarily peridotite) with moraines and other glacial deposits occurring along the canyons and at higher elevations. Talus slopes are common. Soils are shallow, and one slide area is mentioned. Climatological records for nearby Trinity Dam indicate annual precipitation of about 38 inches (965 mm), with average annual high temperatures of 100.8 °F (38.2 °C) and lows of 15.5 °F (-9.2 °C).

Association Types

After analysis of 31 releves, the forested regions of this survey area are all classified as one type. Density and basal area cover are determined by sampling thirty 0.1-acre (0.04-ha) plots. Acreage of each type is based on ecological survey.

Douglas-Fir (*Pseudotsuga menziesii*)/*Quercus vaccinifolia* (84180): 540 acres (219 ha). Uniformity of composition in this forest is striking on all slope aspects and elevations sampled. Canopy cover averages 30-40 percent with Douglas-fir dominant in most of the area. A few of the highest sites have sugar pine (*Pinus lambertiana*) and white fir (*Abies concolor*) dominant with some Shasta red fir



**Figure 135—
Preacher
Meadows RNA**

Dashed line =
Ecological study
area Solid gray line
= RNA Boundary

(*Abies magnifica* var. *shastensis*) and western white pine (*Pinus monticola*) (fig. 136). At lower elevations and mesic sites, incense-cedar (*Libocedrus decurrens*) codominates with Douglas-fir. Ponderosa pine (*Pinus ponderosa*) is also abundant at lower elevations, particularly on SW.-facing aspects or flats. White fir is the predominant reproducer. The high fire frequency (most dominants have scars) may be the reason for relatively low density of mature white fir.

Sampling indicates an average density of 313 trees/ha and a basal area average of 50.0 m²/ha. A high productivity bench area in the NE. corner of sect. 17 has densities of 470 trees/ha with average basal area of 99.9 m²/ha. A site index curve based on 10 Douglas-fir trees suggests modest site quality for the area.

The shrub layer is well developed, averaging 80-100 percent cover, with *Quercus vaccinifolia* comprising 95-100 percent of the shrubs. Driest sites also tend to have *Ceanothus prostratus*. Along streams, *Rhododendron occidentale* is the dominant shrub (80-100 percent relative cover) occurring with *Ribes roezlii*, *Rhamnus purshiana*, and *Spiraea densiflora*. Herbs are sparse (about 5 percent cover) throughout this association, the most common being *Polygala cornuta*.

Meadows (45100, 51120): 60 acres (24 ha). Three distinctive meadow phases occur locally:

Dry meadows occur on vernal wet sites, drying later in the season. They are characterized by *Danthonia unispicata*, *Sisyrinchium bellum*, *Lotus purshianus*, *Dichelostemma* (*Brodiaea*) *multiflorum*, and *Calochortus nudus*.

Moist meadows occur on sites that are wet through much of the season, but dry late in the summer. They include such species as *Hastingsia* (*Schoenolirion*) *alba*, *Deschampsia caespitosa*, *Helenium bigelovii*, and *Danthonia californica*.

Perennially wet meadows occur along the margins of small creeks and in seeps; they contain such species as *Darlingtonia californica*, *Mimulus guttatus*, *Juncus* spp., *Carex* spp., *Narthecium californicum*, and occasionally *Cypripedium californicum*.

Plant Diversity

One hundred sixty-four taxa are listed.

Conflicting Impacts

Although the Granite Creek and Swift Creek trails pass through the area and are well-used, most if not all recreation users are traveling upstream to higher-elevation sites in the wilderness area. There is little or no impact away from the trails in the RNA except at one small campsite at a bridge crossing in the central portion of sect. 17.

Figure 136—Preacher Meadows, uneven-aged ponderosa pine – sugar pine – fir stand at 1463 m (4800 ft) elevation in Preacher Meadows RNA, NW1/4 S17 (W. Oliver 1977)

