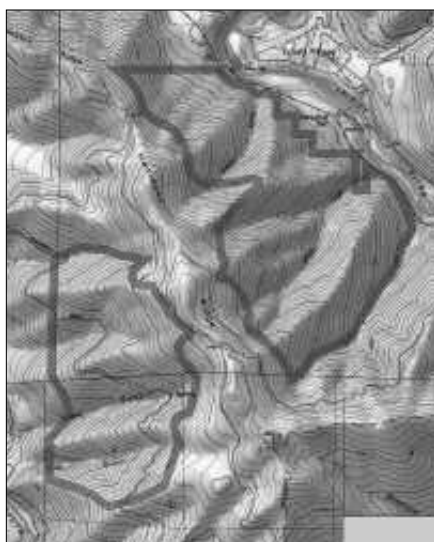


## 39. Hennessy Ridge (Thornburgh 1987)



**Figure 81—  
Hennessy Ridge  
rRNA**

### **Location**

This recommended RNA is on the Six Rivers National Forest, Trinity County, about 4 miles (6 km) SE. of the town of Salyer. It is divided into two units. The E. unit includes part of sects. 29, 30, 31, and 32 T6N, R6E HBM, and the W. unit includes part of sect. 31 T6N, R6E and sects. 5 and 6 T5N, R6E HBM (40°55'N., 123°32'W.), USGS Hennessy Peak quad (fig. 81). Ecological subsection – Western Jurassic (M261Aa).

### **Target Element**

Pacific Douglas-Fir (*Pseudotsuga menziesii*)

### **Distinctive Features**

**Variation in Forest Structure:** Analysis of a grid system of ten 0.2-acre (0.08-ha) plots indicates a high degree of irregularity in the stand structure of the local mixed Douglas-fir-hardwood forest. The clumpiness of the stand structure suggests that both hardwoods and Douglas-fir regenerated in small (<10-acre, 4-ha)

gaps. The presence of small clumps of different ages lends support to the concept that Douglas-fir-dominated forest in the Klamath Mountains ecological section is capable of maintaining its climax status by relying on relatively small stand disturbances for regeneration.

**Successional Status:** Most of the forest stands were determined to be at or near climax. Stands are all-aged and have all sizes of the dominant species: Douglas-fir, tanoak, canyon live oak (*Quercus chrysolepis*), and a small but consistent amount of sugar pine (*Pinus lambertiana*) (fig. 82). Ground fires, small areas of crown fire, and fallen tree create light gaps. Gaps of these types are the principal sources of successful tree reproduction throughout the survey area.

**Relationship to Other Areas:** Relative to other studies in the Klamath Mountains ecological section (e.g., Atzet and Wheeler 1984, Mize 1973, Bridge Creek candidate RNA), the local Hennessy Ridge Douglas-fir-hardwood forests are on the dry end of the scale, and many plant indicators of the more mesic types of Douglas-fir hardwood forest are missing from this survey area.

### **Physical Characteristics**

The E. unit includes approximately 1008 acres (408 ha) with elevations from 800 to 3020 ft (244-921 m). The W. unit includes about 772 acres (312 ha) and ranges from 1000 to 3280 ft (305-1000 m) in elevation. The two units lie on the middle and lower slopes of the W. and NE. sides of Hennessy Ridge, a prominent ridge that separates the S. Fork and main Trinity rivers. In the E. unit, small streams have deeply dissected these slopes into several draws and gulches with steep N.- and S.-facing slopes. Most slopes are extremely steep (averaging about 75 percent). The W. unit is dissected into four “gulches”; the NW. slopes are extremely steep (80 percent), while the SW. slopes are only moderately steep.

The rock type is upper Jurassic marine sedimentary and metasedimentary rock, consisting of slaty and phyllitic sandstones, shale, and minor conglomerates. Soils are skeletal, often deep, with at least 35 percent of the total volume occupied by rock fragments. The surface is typically covered with loose stones, and slumps and slope failures up to 500 ft (152 m) long are common

along the gulches. Precipitation averages 55 inches (1397 mm) annually, with most occurring from November to March. January mean minimum temperature is 32 °F (0 °C), and July maximum is about 90 °F (32 °C).

### Association Types

On the basis of 77 releves sampled, the forests are divided into three association types distinguished by the dominant reproducing hardwood tree species and characteristic shrubs.

**Douglas-Fir-Tanoak-Poison Oak Association (81100, 81400, 82420):** 1141 acres (462 ha). This forest is located on mesic sites, but also occurs on steep slopes with high surface rock cover. Typical stands have a broken canopy of old-growth Douglas-fir with occasional sugar pine, lying over a solid canopy of mixed evergreen hardwoods with a few Douglas-fir and sugar pine of mixed ages. The mid-canopy is dominated by tanoak with variable madrone and canyon live oak. Tanoaks range from seedlings to 70 inches (1.78 m) dbh. There is a fair amount of stand variability: some areas are dominated by young stands of Douglas-fir, others by large old tanoak and madrones, still others by large, old-growth Douglas-fir that makes up 70 percent canopy cover, some with higher dominance of ponderosa pine, and others with an equal mixture of young Douglas-fir and tanoak. Understory shrubs and herbs are poorly represented, with poison oak (*Toxicodendron diversilobum*) and *Whipplea modesta* most important.

**Douglas-Fir-Canyon Live Oak (81100, 82420):** 521 acres (211 ha). This forest is characterized by a two-story canopy with old-growth Douglas-fir forming a broken canopy up to 200 ft (61 m) high while the evergreen hardwoods form a lower continuous canopy up to 120 ft (37 m) high. This type occurs on the warmer, drier sites, on low-elevation S. exposures, and on steep rocky slopes. The stands are dominated by large Douglas-firs with occasional sugar or ponderosa pines. The subcanopy is usually dominated by canyon live oak; this species also dominates the seedling layer. Canyon live oak may be the only hardwood in some stands; in others, canyon live oak and tanoak may be more evenly mixed. Other species of the subcanopy are occasional pole-sized Douglas-fir, sugar pine, and ponderosa pine (*Pinus ponderosa*). The major species are typically all-sized and all-aged. Herbaceous ground cover is low and in some stands almost nonexistent. This type is considered to be among the most xeric of the Douglas-fir-hardwood associations in the Klamath Mountains ecological section.

**Douglas-Fir-Tanoak-Oregon Grape Association (82420):** 118 acres (48 ha). This is the most mesic of the three associations, occurring on the highest elevations on N.- and NE.-facing slopes. Typical stands have an upper old-growth Douglas-fir canopy over a mid-canopy of all-aged tanoak with a few Douglas-firs. The upper Douglas-fir canopy is usually denser than the upper canopy of the average stand in the Douglas-fir-tanoak-poison oak association. The understory in these stands is almost nonexistent, with only a very few Oregon grape (*Berberis nervosa*)



**Figure 82—Hennessy Ridge,** Hennessy Ridge, all-aged stand of Douglas-fir and tanoak with large madrone and seedlings of tanoak and Douglas-fir occurring in clumps; Douglas-fir – tanoak – poison oak type. (D. Thornburgh, 1987)

shrubs and clumps of sword fern occurring on the forest floor. *Chimaphila menziesii*, *Vancouveria hexandra*, and *Whipplea modesta* are the most common herbs, with a total cover of less than 2 percent.

**Riparian (61510):** Small patches and narrow stringers of riparian vegetation dominated by white alder (*Alnus rhombifolia*), *Acer circinatum*, *Woodwardia fimbriata*, *Adiantum pedatum*, and *Oxalis oregana* occur along the six small streams in the area.

### ***Plant Diversity***

Seventy taxa are listed.

### ***Conflicting Impacts***

Several recent nonnatural disturbances occurred in the area. These include installations of plastic water pipes (running from some of the creeks on the E. unit of the area to the town of Hawkins Bar), two old water ditches (in the lower portion of the E. unit), one old water ditch (in the W. unit), a county road (bisecting the W. unit), and a series of clear-cuts which lie above both units. The clear-cut blocks were logged between 1958 and 1977 and have been planted with ponderosa pine or Douglas-fir. A small, 15-acre (6-ha) clear-cut, harvested in 1957, lies within the E. boundary.