

## 98.Yurok (Taylor 1982)

### Location

This established RNA is on an isolated holding of the Six Rivers National Forest, Del Norte County. It occurs on the Yurok Experimental Forest, which lies just E. of Highway 101 about 4 miles (6 km) NW. of the town of Klamath near the mouth of Klamath River. The area lies within portions of sects. 21 and 28 T14N, R1E HBM (41°35'N., 124°05'W.), USGS Requa quad (fig. 194). Ecological subsection - Northern Franciscan (263Ab).

### Target Element

Coast Redwood (*Sequoia sempervirens*)

### Distinctive Features

This is the only Forest Service RNA in California representing the coast redwood forest. The RNA was established in 1976 and is now one of only three Federal Research Natural Areas designated specifically for coast redwood forest, the most productive forest type known in the world (Franklin 1988). The great biomass of this forest at Yurok compares favorably with other values obtained for mature redwood forest. The RNA's proximity to the experimental forest and to electrical and dormitory facilities will facilitate detailed long-term research on redwood-related projects.

### Physical Characteristics

The RNA covers about 150 acres (61 ha) on the coastal front of the N. Coast Ranges, about 2 miles (3 km) inland from the Pacific Ocean. High Prairie Creek flows through the area, forming a shallow valley. Exposures are primarily SW. and E. with a large area of valley bottom flat. Elevations range from less than 40 ft (12 m) along the Creek to 920 ft (280 m) at the N. end of the RNA.

Rocks are Franciscan assemblage soft sediments and metasediments, and soil development is good with unweathered parent material reached at about 4 ft (1.2 m). Typical soils are sandy loams with moderate fertility and include the Melbourne series and an undescribed alluvial series. Climate is humid-coastal with much fog during the relatively dry summer months. Annual precipitation is estimated to average 87 inches (2210 mm). The mean annual temperature is about 53 °F (11.5 °C).

### Association Types

The coast redwood forest was sampled with one hundred points (point center-quarter method, with 10 points / transect). Areal extent of the associations is not given.

Coast Redwood-*Polystichum munitum* (82320, 82310): This is the most common vegetation type of the RNA (fig. 195). It occurs on upland soils and is uniform in species composition. Redwood is clearly dominant, with western hemlock (*Tsuga heterophylla*) the only other constant tree associate. Douglas-firs (*Pseudotsuga menziesii*) are occasional as outliers or following habitat disturbance. Other occasional seral species include red alder (*Alnus oregona*), grand fir (*Abies grandis*), tanoak (*Lithocarpus densiflorus*), and bigleaf maple (*Acer macrophyllum*). Total canopy cover is 80-100 percent. Average basal area of coast redwood is 231 m<sup>2</sup>/ha (94 percent relative basal area). Relative basal area of Douglas-fir and western hemlock is less than 10 percent in most stands. Stem density averages about 200/ha, with coast redwood comprising 23 percent of the stems. Some

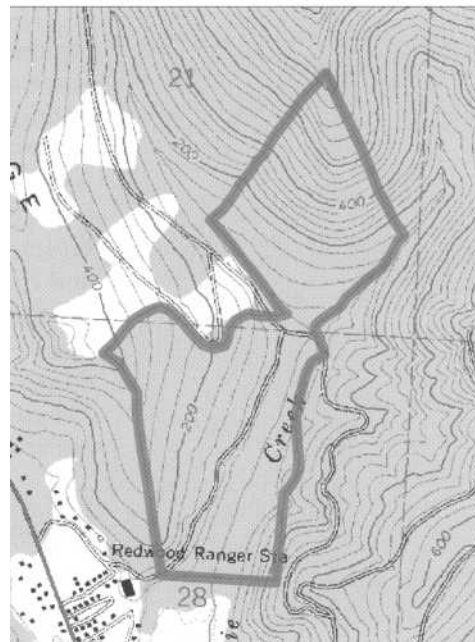


Figure 194—YurokRNA

transects have high densities of sapling and pole-size seral tree species. Total wood volume from a cruise plot within the RNA is very high (4500 m<sup>3</sup>/ha). Tree heights for coast redwood regularly exceed 250 ft (76 m).

The shrub understory is well developed in some stands, with 6-8 species represented, and poorly developed in others. The dominant shrub in all stands is *Vaccinium ovatum*, with *V. parvifolium*, *Gaultheria shallon*, and *Ribes sanguineum* as important codominants. *Rubus spectabilis*, *R. parviflorus*, *Corylus cornuta* var. *californica*, and *Sambucus callicarpa* are more typical of disturbed areas (e.g., windfalls).

Herbs of the understory are few, with *Polystichum munitum* dominant. Other typical species include *Vancouveria planipetala*, *Oxalis oregana*, *Viola sempervirens*, and *Hierochloa occidentalis*.

Total shrub and herb cover is often >80 percent. Shrubs and herbs exhibit a mosaic distribution. Where *Vaccinium ovatum* is dominant, there is a tendency for other species to be less common. Where dense shrub cover occurs without *V. ovatum*, a fairly rich herb layer develops. *Oxalis oregana* and *Chimaphila umbellata* are typical of areas of low shrub cover, often in dense shade of the canopy.

**Red Alder-Rubus *spectabilis* (61130, 81A00):** This type occurs along the alluvial soils adjacent to High Prairie Creek. Trees are primarily red alder and bigleaf maple in about equal proportions. Port Orford-cedar (*Chamaecyparis lawsoniana*) is a subdominant. Shrub understory is dense and dominated by deciduous species such as *Rubus spectabilis*, *R. parviflorus*, *Sambucus callicarpa*, and *Menziesia ferruginea*. Herbaceous cover is mostly dominated by *Polystichum munitum*, *Blechnum spicant*, *Equisetum laevigatum*, and *Epilobium angustifolium*. Other characteristic species include *Salix lasiolepis*, *Myrica californica*, *Polypodium scouleri*, and *Mimulus dentatus*. *Polypodium scouleri* and *P. glycyrrhiza* often occur as epiphytes on mossy bigleaf maple trunks.

Figure I 95-Yurok, redwood overstory and the dense, lush understory vegetation in the Yurok RNA. (around 1976)



### **Plant Diversity**

Eighty-two species are listed. Only about thirty-six species occur in the undisturbed forest; the additional species are mostly from disturbed habitats.

### **Conflicting Impact**

A gravel road runs along the valley bottom within the RNA, and the area is surrounded by variously managed lands within the Yurok Experimental Forest. The small area of the undisturbed forest may not be sufficient for extensive studies.