

I. Adorni (Cheng 1997a, Sawyer 1981a)



Figure 3—Adorni RNA

Location

This established RNA is on the Six Rivers National Forest. It lies about 3 miles (5 km) N. of Weitchpec, Humboldt County, covering portions of sects. 25 and 26 T10N, R4E HBM (41°14'N., 123°41'W.), USGS Weitchpec quad (fig. 3). Ecological subsections – Gasquet Mountain Ultramafics (M261Ab) and Eastern Franciscan (M261Ba).

Target Element

Port Orford-Cedar (*Chamaecyparis lawsoniana*)

Distinctive Features

Port Orford-Cedar (POC): This species is restricted to the Klamath Mountains and the adjacent S. Oregon Coast Ranges. Throughout much of its range it is threatened by root rot disease (*Phytophthora lateralis*), and suitable areas for protection are needed. The area is representative of the low-elevation, mesic portion of the W. Klamath Mountains. In comparison with Upper Goose Creek (#91), however, it is less mesic, and such species as *Rhododendron macrophyllum*, western hemlock (*Tsuga heterophylla*), and giant chinquapin (*Chrysolepis chrysophylla*) are rare or absent. POC is more widespread in the forest away from drainage bottoms than at Upper Goose Creek. In comparison to Cedar Basin (#15), L.E. Horton (#50), and Rock Creek Butte (#70) candidate RNAs, Adorni is a warmer, less montane environment largely without ultramafic substrate. POC in Adorni is less restricted to stream courses than those in Cedar Basin, L.E. Horton, and Rock Creek Butte.

Rare Plants: *Erythronium citrinum* and *Lilium rubescens* are members of CNPS List 4 species.

Large Tanoak (*Lithocarpus densiflorus*): A small area in the SW. part of the site has several exceptionally large specimens of tanoak. The largest individuals reach 4 ft (1.2 m) dbh and heights of 170 ft (52 m).

Physical Characteristics

The area covers 700 acres (283 ha) and is drained by Aikens Creek, a tributary of the Klamath River. Topography is steep (30-70 percent slopes) with few terraces and typically abrupt ridges, particularly in the lower E. portion. Active slumping occurs along both of the major streams. Elevations range from 620 to 2580 ft (189-786 m).

The area is underlain by phyllites, schists, and outcroppings of sheared black slate, all part of the Upper Galice formation. There are also small outcroppings of Josephine Peridotite (serpentinite). Soils are primarily of the Sheetiron series with about 20 percent Hugo series. Precipitation is estimated at 70 inches/year (1778 mm/year), concentrated between November and March. Snow falls commonly during this period but does not accumulate. High temperatures in the 80s and 90s °F (about 27-32 °C) are expected in the summer, whereas winter average lows are in the low 30s °F (about 0 °C).

Association Types

Thirty releves are compiled to form association tables that suggest two types of forest occur in the area. Sizes of associations are not indicated.

The target element, Port Orford-cedar, is found in all areas of the RNA. It was not designated as a distinct vegetation type because of the overall dominance of Douglas-fir and tanoak. Keeler-Wolf (1990c) mapped the distribution of Port Orford-cedar; it is 209 acres (85 ha).

Douglas-Fir/*Goodyera oblongifolia* (81100): This association is typical of the two-storied Douglas-fir-hardwood forest of the Klamath Mountains ecological section (fig. 4). A canopy of Douglas-fir (138 trees/ha) and Port Orford-cedar (109 trees/ha) overlies a subcanopy of tanoak (198 trees/ha), Pacific madrone (*Arbutus menziesii*, 40 trees/ha), and California bay (*Umbellularia californica*, 10 trees/ha). Total basal area for this forest averages 149 m²/ha with Douglas-fir comprising 52 percent; Port Orford-cedar, 25 percent; and Pacific madrone, 15 percent of the cover. All trees are reproducing in these uneven-aged stands. The dense understory is dominated by *Vaccinium ovatum* and patches of *Gaultheria shallon*. Herbs include *Goodyera oblongifolia*, *Trillium ovatum*, *Oxalis oregana*, *Clintonia uniflora*, and *Hierochloa occidentalis*. In all, 22 species of shrubs and 22 species of herbs are noted in the releves.

The Douglas-fir/*Goodyera oblongifolia* forest has deeper and less rocky soils with steeper and more unstable slopes than the tanoak/*Rhamnus* type. One active slump (Holland 61510) is being colonized by white alder (*Alnus rhombifolia*), tanoak, Douglas-fir, and Port Orford-cedar. Much of the Douglas-fir/*Goodyera* forest in the sample was selectively logged in 1965. This disturbed area shows a heterogeneous mix of species, depending on the degree of disturbance. *Ceanothus velutinus* and white alder are common with dense *Vaccinium ovatum* and reproductions of Douglas-fir, Pacific madrone, and tanoak.

Tanoak/*Rhamnus californica* (81400): This is a more open forest, differing primarily in structure from the previous type. Trees have higher average density (674/ha), but lower average basal area (65 m²/ha), than the Douglas-fir/*Goodyera oblongifolia* type. Tanoak has the highest relative densities (35 percent) followed in order by Pacific madrone (22 percent), Douglas-fir (18 percent), sugar pine (*Pinus lambertiana*) (12 percent), Port Orford-cedar (5 percent), and incense-cedar (*Libocedrus decurrens*) (5 percent). Douglas-fir has the highest relative cover (37 percent) followed by sugar pine (24 percent), tanoak (12 percent), madrone (12 percent), Port Orford-cedar (10 percent), incense-cedar (4 percent), and canyon live oak (*Quercus chrysolepis*) (2 percent). This forest is less productive than the previous type because it contains slower growing Port Orford-cedar. The understory is more xeric than the other forest, with *Rhamnus californica*, *Arctostaphylos manzanita*, *Toxicodendron diversilobum*, and *Xerophyllum tenax* common (11 shrub and 18 herb species encountered on releves).

Both forest types appear to be climax with compositional and structural differences related to soil depth, slope steepness, and aspect.

Plant Diversity

One hundred thirty-three taxa of vascular plants are listed.

Conflicting Impacts

Road building associated with clear-cutting upstream from the area threatens the Port Orford-cedar through potential root rot invasion, but the disease was not present in the area as of 1988. A portion of the western third of the area was logged in the 1960s; however, the operation was selective enough so that large continuous areas were not affected.

Figure 4—Adorni,
general structure of
Douglas-fir/*Goodyera*
oblongifolia forest type
in Adorni RNA.
(1988)

