

84. Specimen Creek (Sawyer and Stillman 1977a)

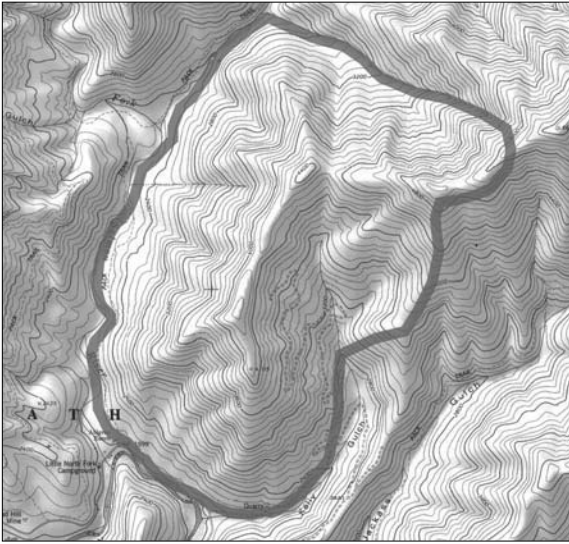


Figure 167—
Specimen Creek
ecological survey
area

Location

This study area (dropped from RNA consideration in 1984) is on the Klamath National Forest. It lies about 4 miles (6 km) NW. of Sawyer's Bar. It includes portions of sects. 12 and 13 T40N, R12W and sect. 7 T40N, R13W MDBM (41°19'N., 123°10'W.), USGS Sawyers Bar quad (fig. 167). Ecological subsection – Forks of Salmon (M261Ap).

Target Element

Pacific Douglas-Fir (*Pseudotsuga menziesii*)

Distinctive Features

Typical Interior Klamath Douglas-Fir/Hardwood Forest: The Douglas-fir-dominated forest at Specimen Creek is representative of the most interior phase of the Douglas-fir/hardwood forest in the Klamath Mountains ecological section. It is a climax

vegetation with Douglas-fir regeneration in gaps and partial shade, unlike the most coastal Douglas-fir forests, which are largely seral to western hemlock and other coastal species. There is no tanoak (*Lithocarpus densiflorus*); Pacific madrone (*Arbutus menziesii*) is not as important as in more westerly forests; giant chinquapin (*Chrysopsis chrysophylla*) is restricted to localized mesic sites; and several other species indicative of more mesic coastal conditions are lacking.

Physical Characteristics

The area includes about 600 acres (243 ha). Elevations range from 2100 to 4400 ft (640-1341 m). The area is composed of W.- and SW.-facing slopes on a ridge bounded by the Little North Fork of the Salmon River, the North Fork of the Salmon River, Kelly Gulch, and a small tributary of Specimen Creek. Slopes range from nearly level alluvial terraces to steep (60-100 percent) upper slopes. The majority of the area is steeply sloping.

Mesozoic granitics occur at low elevations with pre-Cretaceous meta-volcanics on the upper slopes and ridgetop areas. Soils are generally thin and rocky with some exposed rock on the upper slopes. Some of the SW.- exposures have lithosolic scree with little vegetation. Climate is similar to that of much of the central Klamath Mountains ecological section, with an estimated annual precipitation of 50-55 inches (1270-1397 mm). Mean daily temperatures at Sawyer's Bar range from 38-40 °F (3-4 °C) in the coldest months to 72-75 °F (22-24 °C) during the warmest summer months.

Association Types

Relevés were sampled to construct an association table, and point-center quarter method was employed to estimate density and basal cover. Sizes of associations are not given.

Douglas-Fir/*Adenocaulon bicolor* (82420): This association (fig. 168) is divided into three topographic categories: terraces, lower slopes, and steep slopes. It also is divided into two phases based on releve analysis: The Douglas-fir/*Linnaea* and Douglas-fir/*Chimaphila menziesii* phases.

1. The Douglas-fir/*Linnaea* phase is characterized as relatively herb-rich and mesic, occupying the terraces and lower slopes. This phase also has characteristic patches of the subcanopy trees, Pacific yew (*Taxus brevifolia*) and giant chinquapin on the most mesic exposures. The point-centered quarter

samples in portions of this phase (low slope stands) are the densest and highest cover of any in the area (669 trees/ha, 162.5 m²/ha). However, the terrace stands, which also largely fall into this phase, show the least density and basal area (464 trees/ha, and 104 m²/ha).

Sixteen species of shrubs and 38 species of herbs are included in the seven relevés taken in the Douglas-fir/*Linnaea* phase. Among the most important are *Berberis nervosa*, *Symphoricarpos* sp., *Corylus cornuta*, *Rosa gymnocarpa*, *Toxicodendron diversilobum*, *Trillium ovatum*, *Viola sempervirens*, *Whipplea modesta*, *Viola glabella*, *Lupinus latifolius*, *Lathyrus polyphyllus*, *Adenocaulon bicolor*, *Fragaria californica*, *Osmorhiza chilensis*, *Disporum hookeri*, *Trientalis latifolia*, *Galium triflorum*, *Chimaphila umbellata*, *Vancouveria hexandra*, *Melica* sp., *Vicia californica*, *Pteridium aquilinum*, *Hieracium albiflorum*, and *Campanula prenanthoides*.

2. The Douglas-fir/*Chimaphila menziesii* phase is drier than the *Linnaea* phase. Here, ponderosa pine (*Pinus ponderosa*) and sugar pine (*P. lambertiana*) become more important than in the previous phase in a canopy dominated by Douglas-fir. On the upper slope plots, both pine species together account for 17 trees/ha and 10.3 m²/ha, whereas Douglas-fir accounts for 267 trees/ha and 121 m²/ha. Pacific madrone is relatively more common in the understory than in the previous phase (57/ha, 3 m²/ha), and many of the more mesophilic herbs do not occur. In the Douglas-fir/*Chimaphila* phase, 15 species of shrubs and 34 species of herbs were tallied on 11 relevés. These include *Symphoricarpos* sp., *Corylus cornuta*, *Rosa gymnocarpa*, *Toxicodendron diversilobum*, *Disporum hookeri*, *Trientalis latifolia*, *Pyrola picta*, *Pteridium aquilinum*, *Campanula prenanthoides*, *Hieracium albiflorum*, and *Arnica discoidea*.

Productivity (measured by mean radial growth increment, cored at breast height) for the steep-slope portions of the Douglas-fir/*Adenocaulon* forest appears higher (17.5 years/inch, n=9) than the average for terrace areas (24.9 years/inch, n=10).

Ponderosa Pine/Canyon Live Oak (*Quercus chrysolepis*) (84110, 81320): This forest occurs on the most xeric slopes. It typically has a more open canopy and herb-poor understory than the previous association. This association also has two phases.

1. The ponderosa pine/*Arctostaphylos manzanita* phase occurs on mid- and upper SW-facing slopes with relatively well-developed soils. The canopy is codominated by ponderosa pine (16.2 m²/ha), sugar pine (7.8 m²/ha), and Douglas-fir (10.3 m²/ha). Herb and shrub cover is often less than 10 percent with the following species most common: *Ceanothus integerrimus*, *Toxicodendron diversilobum*, *Iris purdyi*, *Hieracium albiflorum*, *Galium californicum*, *Carex* sp., and *Polystichum imbricans*.

2. The canyon live oak/*Polystichum imbricans* phase occurs on the driest ridges and rock outcrops. Although canyon live oak is not a member of the canopy, it is dominant. Here ponderosa pine, sugar pine, and Douglas-fir comprise a total basal area of only 18.8 m²/ha, while canyon live oak makes up 61 m²/ha. The density of canyon live oak



Figure 168—Specimen Creek, slopes of the Specimen Creek study area. The major tree in these *Pseudotsuga menziesii* / *Adenocaulon bicolor* forests is Douglas-fir. (1976)

averages 973 trees/ha, or 82 percent relative density. Productivity of Douglas-fir is lower than that of the terrace stands (29.7 years/inch). The most common shrub is *Toxicodendron diversilobum* (of only three species listed for the relevés), and the most common of the eight species of herbs listed for the relevés are *Galium californicum*, *Polystichum imbricans*, and *Festuca idahoensis*.

Plant Diversity

One hundred eighty-nine taxa of vascular plants are listed.

Conflicting impacts

The area has been dropped from candidate RNA status (with Bridge Creek chosen to replace it) and is presently under multiple-use management. Before it was dropped, the authors noted several conflicts, including the need for enlargement of the original boundaries to include other slope aspects, the potential impact of trail use adjacent to the terrace stands along the Little North Fork of the Salmon River, and the high degree of insect damage to the Douglas-fir forest.