

71. Rough Gulch (Yolla Bolla) (Taylor 1975a, Taylor 1975b)

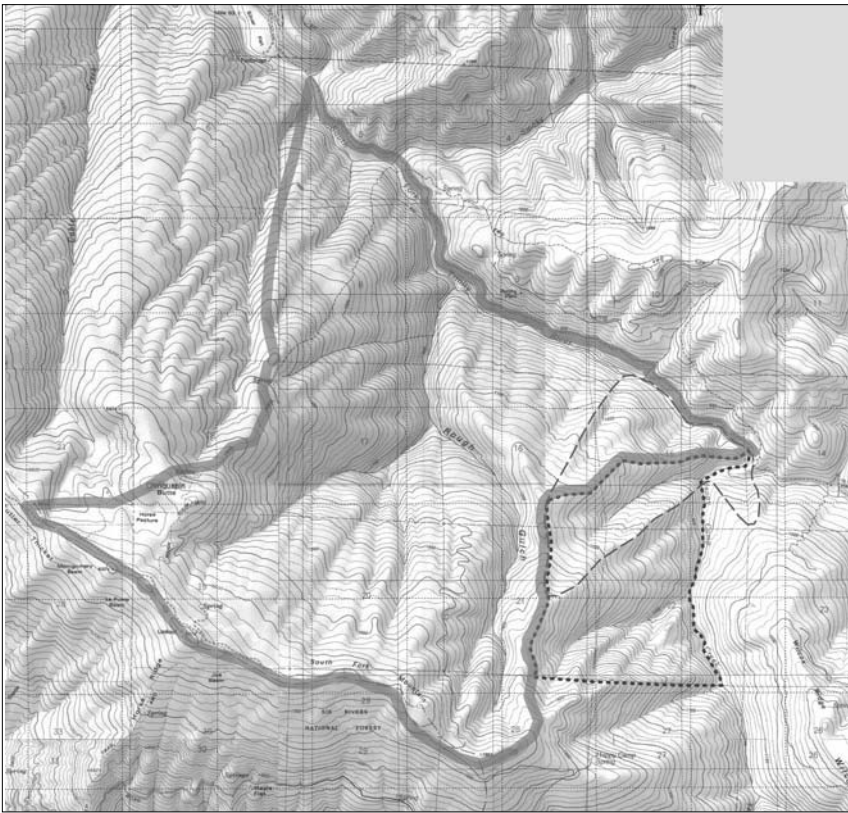


Figure 143—Rough Gulch rRNA and South Fork Mountain cRNA (Yolla Bolla)

Dashed line=South Fork Mountain Study Area;
Dotted line= proposed South Fork Mountain RNA;
Solid gray line = proposed and recommended Rough Gulch RNA.

Location

The Yolla Bolla ecological survey area is divided into two RNA proposals, Rough Gulch (including Rough Gulch and Chinquapin Ridge) and South Fork Mountain, by the Shasta-Trinity National Forest. The forest plan recommended the establishment of Rough Gulch cRNA. The Yolla Bolla ecological survey area lies about 16 miles (26 km) SE. of Forest Glen in Trinity County, within portions of sects. 14, 15, and 16 T28N, R12W MDBM (40°17'N., 123°11'W.), USGS Pony Buck Peak quad (SW1/4 Dubakella 15' quad) (fig. 143). Ecological subsection – Eastern Franciscan (M261Ba).

Target Elements

Giant Chinquapin (*Chrysolepis chrysophylla*) and Pacific Douglas-Fir (*Pseudotsuga menziesii*)

Distinctive Features

Old-Growth Douglas-Fir Forest: The Yolla Bolla ecological survey area is within a relatively large region of productive Douglas-fir-dominated forest that includes parts of both Rough Gulch and South Fork Mountain candidate RNAs (neither of which has had a complete ecological survey). In comparison to Rough Gulch recommended RNA (rRNA), the South Fork Mountain cRNA bears some distinctions. First, it is located on a more E. aspect than the Rough Gulch rRNA. Thus, in South Fork Mountain cRNA, the importance of giant chinquapin is relatively reduced, while such species as incense-cedar (*Libocedrus decurrens*) and ponderosa pine (*Pinus ponderosa*) are relatively more important than in the Rough Gulch rRNA. The girths of individual Douglas-fir and sugar pine in South Fork Mountain cRNA are far greater than any reported from the adjacent Rough Gulch rRNA (Keeler-Wolf 1984c). The E. exposure also brings in a more xeric component with species such as canyon live oak (*Quercus chrysolepis*), California black oak (*Q. kelloggii*), and Pacific madrone (*Arbutus menziesii*) attaining greater importance than in the adjacent predominantly NE.- and N.-facing areas.

This entire area of old-growth forest on South Fork Mountain is reported to contain one of the most productive Douglas-fir forests remaining in the State (from the standpoint of board-feet per unit area) (Shasta-Trinity National Forests 1988). It is a prime example of a relatively interior type climax Douglas-fir forest and shows characteristic gap regeneration dominated by Douglas-fir with white fir (*Abies concolor*) as a subordinate reproducer except at the upper elevations (see Hennessy Ridge, #39).

Well-Studied Vegetation: Research by Taylor (1975a, b) and Keeler-Wolf (1984c, 1988b) on the forest vegetation of the South Fork Mountain forests is relatively thorough. Taylor arranged his plots and relevés in relation to moisture availability, basal area, relative dominance, density, relative density, and importance value. A number of conclusions can be drawn from these data. For example, the lowest basal area and densities of trees generally occur at the driest, most exposed (ridge crest) sites, whereas cover diversity of the relevés increases with moisture availability. Keeler-Wolf (1988b) documents the requirements for giant chinquapin subdominance in these and other forests of the Klamath Mountains ecological section. Some of his study plots are within the proposed boundaries of South Fork Mountain candidate RNA.

Riparian Vegetation and Riverine Values: The South Fork of the Trinity River forms the N. boundary of the area. It is one of the streams least disturbed by human activities in NW. California and is being considered for “wild and scenic” status by the State (Shasta-Trinity National Forests 1988). The South Fork of the Trinity River is a major salmon (*Oncorhynchus* spp.) and steelhead (*Salmo gairdneri gairdneri*) spawning stream, and it is also used by Pacific lamprey (*Lampetra tridentata*). The riparian zone has numerous well-developed white alder (*Alnus rhombifolia*) and an interior stand of red alder (*A. oregona*), both of which may attain large size along the narrow riparian fringe. The rather rare Oregon subspecies of the ruffed grouse (*Bonasa umbellus sabini*) is generally restricted to the riparian zone in the area.

Uncommon and Sensitive Fauna: Several uncommon, rare, or sensitive vertebrates are known from the area, including spotted owl (*Strix occidentalis*, State-listed species of special concern) (fig. 144), fisher (*Martes pennanti*, Forest Service-listed sensitive species), and mountain lion (*Felis concolor*).

Physical Characteristics

The area treated by Taylor covers 3212 acres (1380 ha). Elevations range from 2953 ft (900 m) at the banks of the South Fork of the Trinity River to 4495 ft (1370 m) atop the divide separating the drainages of Happy Camp Creek and Rough Gulch. Slopes average about 30° (20-50°) and face generally ENE. with smaller areas of NE., SE., E., and N. exposures.

Rocks are largely South Fork Mountain schist, a pre-Cretaceous metasediment. A few small lenses of serpentinite outcrop are found in sect. 15. Soils are generally well-drained, moderately acid, clay-loam or gravelly loam of moderate depth (1-1.5 m). They fall into the Hugo and Josephine series. Precipitation is estimated at 60 inches (1525 mm), and records at Forest Glen indicate a mean annual temperature of 52 °F (11 °C). Snow is common in winter months, but typically it does not linger for more than a few days.

Association Types

A total of 28 relevés and 18 plots ranging from 314 to 2827 m² were sampled in the one forest association. Additional vegetation sampling in this area was performed by Keeler-Wolf (1988a). Sizes of associations are not given.

Douglas-Fir/*Berberis nervosa* (82420, 81100, 45400): The entire forested portion of the area is classified as this association. Plot data for trees indicate a mean basal area of 36.2 m²/ha (range 14.5-104.7 m²/ha), with Douglas-fir comprising 71.1 percent of this value. The highest basal area for Douglas-fir on any plot is 74.5 m²/ha. Sugar pine (*Pinus lambertiana*), ponderosa pine, and white fir are the major canopy subdominants (fig. 144). Together they contribute an average relative basal area of about 8 percent. The canopy trees are 164-197 ft (50-60 m) tall with average crown cover of about 50 percent. The largest Douglas-fir individuals may be 9.8 ft (3.0 m) dbh, and the largest sugar pine may attain 11.5

ft (3.5 m) dbh. A second tree stratum is composed of the hardwoods: bigleaf maple (*Acer macrophyllum*), Pacific madrone, giant chinquapin, Pacific dogwood (*Cornus nuttallii*), canyon live oak, and California black oak reach heights of 65-82 ft (20-25 m). Giant chinquapin is the dominant member of the subcanopy and attains dbh of up to 30 inches (75 cm).

A shrub layer occurs in scattered, open patches and is dominated by *Berberis nervosa*, *Amelanchier pallida*, *Corylus cornuta* var. *californica*, *Rosa pisocarpa*, *Rubus parviflorus*, and *Toxicodendron diversilobum*. Herbs and low shrubs including *Adenocaulon bicolor*, *Chimaphila umbellata* var. *occidentalis*, *Disporum hookeri*, *Iris tenuissima*, *Lathyrus polyphyllus*, *Rubus leucodermis*, *Trientalis latifolia*, and *Xerophyllum tenax* form the fourth layer.

Six unions within the main association are identified by construction of an association table. The unions are: *Silene californica*-*Erigeron inornatus*, *Iris tenuissima*-*Xerophyllum tenax*, Giant chinquapin-*Chimaphila umbellata*, canyon live oak-*Toxicodendron diversilobum*, *Trientalis latifolia*-*Lathyrus polyphyllus*, and *Vaccinium parvifolium*-*Thelypteris oregana* (Holland 45400). The dominant young trees and saplings are Douglas-fir and white fir. Abundant evidence of past fire (ground fire with small areas of canopy destruction) indicates that fire is an important natural element in the forest.

***Carex senta*/*Peltiphyllum peltatum* (61510, 61130):** This association is confined to the riverbed below the annual flood level. Other species associated with this type include *Aralia californica*, Pacific yew (*Taxus brevifolia*), *Rhamnus purshiana*, white alder (*Alnus rhombifolia*), and red alder (*Alnus oregana*).

Plant Diversity

Ninety-five species are listed.

Conflicting Impacts

The area is being considered part of a major timber sale (as of 1988). Soils are subject to mass-wasting and are classified as high to severely sensitive (Scott and others 1980). Access at present is relatively difficult because there are no roads within 5 trail-miles (8 km) of the area. Access from the N. is limited to times of low river water level (late spring through early fall).

Figure 144—Rough Gulch and South Fork Mountain, (Yolla Bolla), a spotted owl (*Strix occidentalis*) seen in a dense stand of white fir and a few Douglas-fir saplings. This density of reproduction is typical in the study area. (1975)

