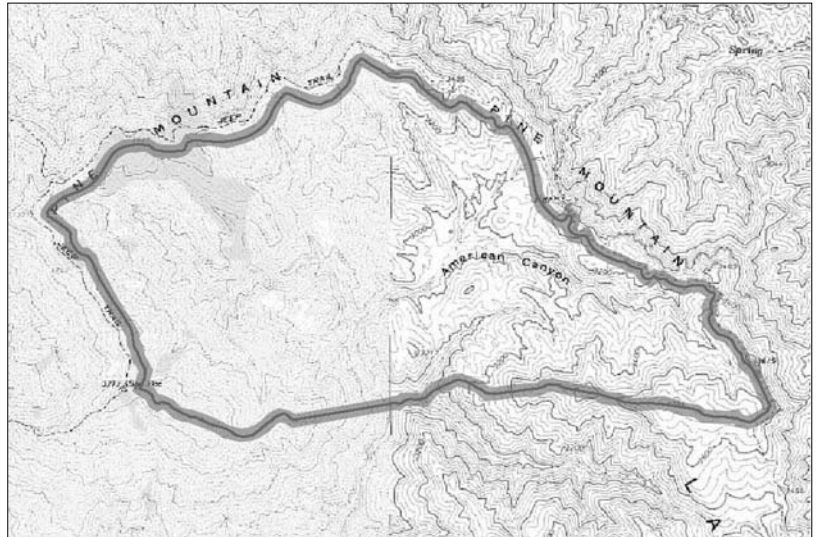


3. American Canyon (Schettler 1989, Martin 1990b)

Location

This established RNA is on Los Padres National Forest in San Luis Obispo County. It is approximately 22 air miles (35 km) E. of San Luis Obispo. The RNA lies within the Manchesa Mountain Wilderness of the Santa Lucia Ranger District. Its boundaries include sections 9 and 10 and portions of sections 14, 15, 16, and 23 of T30S, R16E MDM (35°19'N., 120°15'W.), straddling USGS Pozo Summit and La Panza quads (fig. 7). Ecological subsection – Interior Santa Lucia Range (M262Ae).



Target Elements

Coulter Pine (*Pinus coulteri*) and Northern Mixed Chaparral

Figure 7—American Canyon

Distinctive Features

This is the only RNA identified to target Coulter pine forest in the S. Coast Ranges (Central California Coast Ranges ecological section). Additionally, the pine stands provide a mixture of age, density, and serotiny for study. The RNA also contains valley needlegrass grassland, which was formerly extensive throughout the valleys of California but now is much reduced (Holland 1986).

Rare Plants: The RNA contains six CNPS listed species: *Arctostaphylos pilosula* (CNPS List 1B), *Calochortus simulans* (CNPS List 4), *C. palmeri* (CNPS List 1B), *Malacothamnus niveus* (Jepson [Hickman 1993]: *Malacothamnus jonesii*) (CNPS List 4), *Sidalcea hickmanii* (CNPS List 1B), and *Monardella macrantha* ssp. *hallii* (CNPS List 1B).

Fire History: Most of the RNA burned in 1939 except for the NW. portion, which burned in 1921. Another small fire in 1926 burned a part of the N. area.

Because Coulter pine does not self prune, its lower branches form a continuous “ladder” allowing fire to reach the tree canopy. Thus, it is vulnerable if a hot fire starts in the dense chaparral below. Prescribed burning may be necessary. Additionally, periodic fires enhance Coulter pine regeneration by breaking the cones’ serotiny.

Physical Characteristics

The area covers 1500 acres (607 ha) with an elevation range of 2800-3784 ft (854-1153 m). The RNA is situated on the S. slope of Pine Mountain, located in the La Panza Range. Its boundaries are defined to the N. by Pine Mountain. The E.-W. ridgeline between San Jose peak and peak 3784 defines its S. boundary. The RNA encompasses the uppermost watershed of American Canyon, ultimately draining into the Salinas River.

The RNA consists of conglomerates, arkosic (feldspar bearing) sandstones, and shales of the Upper Cretaceous and Lower Tertiary that were uplifted along the La Panza Fault (SW. of the RNA) during the Pleistocene epoch. All soils of the RNA lie within the Millsholm-Exchequer-Stonyford families association, which has a shallow surface layer (0-4 inches [0-10 cm]) of sandy or gravelly loam.

No permanent weather stations exist within the RNA. General climate in the region is Mediterranean. The nearest weather station is in San Luis Obispo, which is approximately 22 air miles (35 km) W. of the RNA, at 315 ft (96 m) elevation.

Temperatures at that station range from 51-59 °F (11-15 °C) between November and April, and from 61-68 °F (16-20 °C) between May and October. At San Luis Obispo, most precipitation falls from November to April, and ranges from 1 to 4 inches (30 to 100 mm) per month. Located on elevations considerably higher (2415-3467 ft [736-1057m]) than San Luis Obispo, American Canyon RNA should have lower temperatures (approximately 13-18 °F [7-10 °C] lower, based on the rate of -0.96 °C for 100-m rise in elevation) and higher precipitation.

Association Types

Coulter Pine Forest/Northern Mixed Chaparral (84140/37110): 1473 acres (596 ha). The representative area for this association type generally fits the Holland classification, although the RNA is depauperate in a few other tree species normally found as associates.

This association occurs on all slopes; however, most slopes in the RNA are S.-facing. Coulter pine ranges from a few scattered individual trees to dense stands that suppress the undergrowth. Saplings are found in all but the densest stands. A typical stand contains 379 trees/acre (936 trees/ha) and has a basal area of 0.44 ft²/acre (0.1 m²/ha) and a 77 percent shrub cover. The bulk of the pines were 30-35 years old due to regeneration after the 1939 fire. However, an older stand of trees (125-145 years old) occurs on an E.-facing slope of the RNA where most of the trees survived the 1939 fire. Here, tree density is lower (98 trees/acre [242 trees/ha]), while basal area and shrub cover increase (137 ft²/acre [31.4 m²/ha] and 96 percent cover).

Pine is completely missing from 20-25 percent of the area incorporating the association type, leaving only chaparral present. The chaparral cover varies with slope, aspect, and soil depth, predictably densest on N.- and E.-facing slopes. Overall cover ranges from 50 to 98 percent. Most of the chaparral is mature (50 years old), having last burned in 1939, and is generally species poor. Species here include *Adenostoma fasciculatum*, *Arctostaphylos glandulosa*, *A. glauca*, *Quercus dumosa*, *Q. wislizenii* var. *frutescens*, *Ceanothus cuneatus*, *C. oliganthus* var. *sorediatus*, *C. foliosus*, *Cercocarpus betuloides*, and *C. montanus* var. *blanchae*. *Pedicularis densiflorus* is the most common forb under the chaparral shrubs.

Central Coast Live Oak Riparian Forest (61220): 15 acres (6 ha). The survey was conducted in the second and third years of a drought; therefore, the stream conditions observed could be different from wetter years.

This association type exists as mostly narrow corridors restricted in width by steep topography. The association is also found on some steep, N.-facing slopes where shade and greater humidity help extend the community. Associated species include *Quercus agrifolia*, *Q. chrysolepis*, *Q. wislizenii*, *Calochortus palmeri* (CNPS List 1B), *Arnica discoidea* var. *alata*,

Figure 8—
American
Canyon, potrero
grassland near the
center of American
Canyon RNA.
Coulter pines at
this site are among
the largest in the
RNA. (1988)



Castilleja stenantha, *Centaureum exaltatum*, *Delphinium nudicaule*, *Heterocodon rariflorum*, *Horkelia bolanderi*, *Leptodactylon californicum*, *Monardella macrantha*, *Populus fremontii*, *P. trichocarpa*, *Psoralea orbicularis*, and *Zigadenus venenosus*.

Valley Needlegrass Grassland (42110): 12 acres (5 ha). This association type (fig. 8) is restricted to small potreros that are mostly less than 1 acre (0.4 ha). It does not entirely fit in this Holland type description, as the potreros are somewhat depauperate in native bunchgrasses.

The potreros are located on old landslides, most lying in an E.-central cluster between 2920 and 3000 ft (890-914 m). The largest one is near the stream at the bottom of trail P12/FS3. An additional potrero lies alongside the NW. ridge at 3480 ft (1061 m). Associated species include *Calochortus* sp., *Clarkia speciosa*, *Sidalcea hickmanii*, and *Malacothamnus niveus* (Jepson [Hickman 1993]: *M. jonesii*, CNPS List 4).

Blue Oak Woodland (71140): Less than 1.5 acres (0.6 ha). This association type is located in the far SE. tip of the study area, outside the RNA boundary. It is a small savanna-form stand of *Quercus douglasii* (blue oak). The stand occupies a gentle SE.-facing slope at 3560-3700 ft (1085-1128 m). The majority of the trees are mature, and a few appear quite old. Evidence of regeneration is apparent by the presence of young trees. Diversity within the community appears only moderate, and introduced grasses and forbs are noticeably mixed with natives. *Calochortus simulans* (CNPS List 4) is found here.

Plant Diversity

Two hundred thirty-nine species of vascular plants are listed.

Conflicting Impacts

Recreational use of the area is generally light, although evidence of target shooters and mountain bikers was observed on trail 16E01 defining the N. and E. boundaries.