

CHERRY CREEK RESEARCH NATURAL AREA¹

Old-growth Douglas-fir and western hemlock stands growing on slopes and ridgetops in the southwestern Oregon Coast Ranges.

The Cherry Creek Research Natural Area was established on February 4, 1965. It typifies virgin, old-growth Douglas-fir (*Pseudotsuga menziesii*)-western hemlock (*Tsuga heterophylla*) stands as they occur on sedimentary materials in the southwestern Oregon Coast Ranges. The 239-ha. (590-acre) tract is located in Coos County, Oregon, and is administered by the Coos Bay District (Coos Bay, Oregon), Bureau of Land Management (BLM). The natural area occupies portions of sections 17, 18, 19, and 20, T. 27 S., R. 10 W., Willamette meridian (fig. CH-1). It lies at 45°13' N. latitude and 123°56' W. longitude.

ACCESS AND ACCOMMODATIONS

The normal approach to the natural area is from Coquille, to the south. Just west of the Coquille High School, turn north from State Highway 42 onto the Fairview-McKinley Road. At Fairview, 14.5 km. (9 miles) to the north, turn southeast (right) onto the Coos Bay Wagon Road. Follow this road to Cherry Creek Park (about 11 km. or 7 miles) and turn left on Cherry Creek County Road which later changes to the B.L.M. Cherry Creek Access Road (27-11-27.0). Follow it for 9.5 km. (6 miles) to the Big Tree Recreational

Site at the edge of the natural area. The vicinity of the natural area can also be reached via the BLM Middle Creek Access Road (2711-29.0) and Burnt Mountain Road (27-1112.0). To approach the north side of the natural area in this way, turn onto the Middle Creek Access Road about 6 km. (4 miles) east of Fairview.

There are no roads or trails within the main body of the natural area. Access is by cross-country travel.

The nearest commercial accommodations are in Coquille and Coos Bay, approximately 35 km. (22 miles) and 50 km. (31 miles) away, respectively. There are several improved forest camps in the vicinity, the most convenient being located on Middle Creek.

ENVIRONMENT

The Cherry Creek Research Natural Area occupies complex ridge and valley topography bounding a portion of Cherry Creek. Slopes are generally moderate to steep on the middle and lower slopes and gentle to moderate along the ridgetops (fig. CH-1). Elevations range from about 207 m. (680 ft.) along Cherry Creek to 451 m. (1,480 ft.) in the northwestern corner of the natural area. The topography is very complex and dissected.

Sedimentary bedrock underlies the entire natural area. These sand and siltstones belong to the Tye formation of Middle Eocene Age (Pech 1961).

The climate is wet and mild. Precipitation is seasonal, with a peak in January and December and a minimum in July and August. The summer drought period is more pronounced than in northern Oregon and Washington coastal mountains. The following climatic data are from the closest weather station at Sitkum located about 5 km. (3 miles) to the southeast (U.S. Weather Bureau 1965):

¹ Description prepared by Dr. J. F. Franklin. U.S. Department of Agriculture. Forest Service, Pacific Northwest Forest and Range Experiment Station. Forestry Sciences Laboratory, Corvallis, Oregon.

Mean annual temperature 11.1°C. (52.0°F.)
 Mean January temperature 4.2°C. (40.6°F.)
 Mean July temperature 17.2°C. (63.0°F.)
 Mean January minimum
 temperature 0.8°C. (33.5°F.)
 Mean July maximum temperature 25.1°C. (77.2°F.)
 Average annual precipitation 2,035 mm. (80.11 in.)
 June through August
 precipitation 82 mm. (3.21 in.)

A soil survey for the area is not available, but most soils tend toward relatively deep, Reddish-Brown Lateritics developed in colluvium and residuum from silt and sandstones. Surface (A1) horizons are typically dark brown in color and the B2 horizon has a clay-loam texture and fine to very fine, sub-angular, blocky structure. Depth to bedrock (R horizon) is typically from 100 to over 150 cm. (40 to 60 in.). A horizons typically average about 20 cm. (8 in.) in thickness and B horizons 75 to 90 cm. (30 to 35 in.).

BIOTA

All 239 ha. (590 acres) of the Cherry Creek Research Natural Area are classified as SAF cover type 230, Douglas-Fir - Western Hemlock (Society of American Foresters 1954). The area falls within Kuchler's (1964) Type 2 (Cedar-Hemlock-Douglas Fir Forest) and the *Tsuga heterophylla* Zone of Franklin and Dyrness (1969).

Douglas-fir and western hemlock dominate the natural area. The average age of the Douglas-fir is not known, but it is believed to be in excess of 300 years. Old-growth Douglas-firs average 125- to 175-cm. (50- to 70-in.) d.b.h. The maximum recorded size is 294-cm. (116-in.) d.b.h. and 86.9 m. (285 ft.) high at over 600 years of age. Western hemlock typically average 75- to 100-cm. (30 to 40-in.) d.b.h. and are somewhat younger in age than associated Douglas-fir. Other tree species present on the natural area include western red-cedar (*Thuja plicata*) and tanoak (*Lithocarpus densiflora*), with bigleaf maple (*Acer macrophyllum*) and California-laurel (*Umbellularia californica*) common in streamside areas (fig. CH-2).

The climax tree species on the natural area clearly appears to be western hemlock. Hem-

lock seedlings and saplings are more abundant than those of any other coniferous species. In some areas sprout and seedling reproduction of tan oak is also common, suggesting it may also be a climax species. Very little reproduction of Douglas-fir or western red-cedar is present anywhere on the natural area.

Most of the forest communities on the natural area are assignable to one of the associations recognized by Bailey (1966) in a study of nearby old-growth forests. The communities on middle and lower slopes and on broad mesic ridgetops appear to belong to the *Tsuga heterophylla/Polystichum munitum - Oxalis oregana* Association. The understory is dominated by a dense cover of *Polystichum munitum*, with many other associated herbs such as *Oxalis oregana*, *Tiarella trifoliata*, *Adiantum pedatum*, *Athyrium filix-femina*, *Blechnum spicant*, *Montia sibirica*, and *Galium triflorum* (fig. CH-2). The shrubby layer is poorly developed, being confined to *Berberis nervosa* and scattered cover of vine maple (*Acer circinatum*), *Vaccinium parvifolium*, *V. ovatum*, and *Rhododendron macrophyllum*. A community related to Bailey's (1966) *Tsuga heterophylla - Pseudotsuga menziesii/Rhododendron macrophyllum/Berberis nervosa* Association occurs on some upper side slopes and narrow ridgetops, particularly those with a southerly or westerly aspect. Shrubs such as *Rhododendron macrophyllum* and *Berberis nervosa* and small hardwoods such as tanoak and golden chinkapin (*Castanopsis chrysophylla*.) are much more conspicuous in communities of this type. Conversely, the herbaceous layer is much more poorly developed.

Resident and transient mammals believed to occur within the natural area are listed in table CH-1. The most important mammal, the Roosevelt elk (*Cervus canadensis roosevelti*), utilizes the area and its surroundings heavily. Browsing and trampling by elk is undoubtedly a major influence upon the character of the understory communities within the forest stands and helps account for their relatively open nature. Elk trails provide some of the easiest means for travel through

the area. Heaviest elk use appears to be the broad ridge tops in the center and southern half of the natural area.

There are several miles of live stream course within the natural area. These streams and the streamside areas provide specialized habitats for a variety of flora and fauna. A few minor tributaries of Cherry Creek are located entirely within the natural area and support both steelhead (*Salmo gairdneri*) and sea-run cutthroat trout (*Salmo clarki*).

HISTORY OF DISTURBANCE

Major human influences upon the area are related to the road construction and clear-cut logging operations adjacent to the natural area boundaries. Burnt Mountain Road (2711-12.0), which is located along the northern edge of the natural area, is probably most important in this regard. Construction and maintenance of this road has influenced the slopes below, which are within the natural area. A picnic site and short nature trail have been developed along the western edge of the natural area (Big Tree Site). There is relatively little visitor use of the natural area core because of the lack of trails.

There is no evidence that wildfires have occurred within the natural area for at least 190 years. Nor is there evidence of recent catastrophic damage by windthrow or bark beetles.

RESEARCH

No research studies are presently known to be in progress on the Cherry Creek Research Natural Area. Some data on community structure and limited plant collections have been obtained by Forest Service personnel. The natural area provides an excellent site for studying the old-growth coniferous forest that once typified a large portion of Oregon's Coast Ranges and for studying the effect of Roosevelt elk upon the structure and composition of such communities.

MAPS AND AERIAL PHOTOGRAPHS

Maps applicable to the natural area include:

Topography - 15' Sitkum, Oregon quadrangle, scale 1:62,500, issued by the U.S. Geological Survey in 1955; and *geology Geologic Map of Oregon West of the 121st Meridian*, scale 1:500,000 (Peck 1961). The District Manager (Coos Bay District, Bureau of Land Management, Coos Bay, Oregon) can provide details on the most recent aerial photo coverage and forest type maps for the area.

LITERATURE CITED

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Table CH-1. — Tentative list of mammals for Cherry Creek Research Natural Area¹

| Order | Scientific name | Common name | |
|----------------------------|------------------------------------|-------------------------------|-------------------------|
| Insectivora | <i>Neurotrichus gibbsi</i> | shrew mole | |
| | * <i>Scapanus orarius</i> | coast mole | |
| | <i>Sorex bendirii</i> | marsh shrew | |
| | <i>Sorex pacificus</i> | Pacific shrew | |
| | * <i>Sorex trowbridgii</i> | Trowbridge shrew | |
| Chiroptera | <i>Sorex vagrans</i> | wandering shrew | |
| | <i>Antrozous pallidus</i> | pallid bat | |
| | <i>Eptesicus fuscus</i> | big brown bat | |
| | <i>Lasiorycteris noctivagans</i> | silver-haired bat | |
| | <i>Lasiurus borealis</i> | red bat | |
| | <i>Lasiurus cinereus</i> | hoary bat | |
| | <i>Myotis californicus</i> | California myotis | |
| | <i>Myotis evotis</i> | long-eared myotis | |
| | <i>Myotis lucifugus</i> | little brown myotis | |
| | <i>Myotis thysanodes</i> | fringed myotis | |
| | <i>Myotis volans</i> | long-legged myotis | |
| | <i>Myotis yumanensis</i> | Yuma myotis | |
| | <i>Plecotus townsendi</i> | Townsend big-eared bat | |
| | Lagomorpha | <i>Lepus americanus</i> | snowshoe hare |
| <i>Sylvilagus bachmani</i> | | brush rabbit | |
| Rodentia | | <i>Aplodontia rufa</i> | mountain beaver |
| | <i>Arborimus albipes</i> | white-footed vole | |
| | <i>Arborimus longicaudus</i> | red tree vole | |
| | * <i>Castor canadensis</i> | beaver | |
| | <i>Clethrionomys californicus</i> | California red-backed vole | |
| | <i>Erethizon dorsatum</i> | porcupine | |
| | * <i>Eutamias townsendi</i> | Townsend chipmunk | |
| | <i>Glaucomys sabrinus</i> | northern flying squirrel | |
| | <i>Microtus longicaudus</i> | long-tailed vole | |
| | <i>Microtus oregoni</i> | Oregon or creeping vole | |
| | <i>Microtus townsendi</i> | Townsend vole | |
| | <i>Neotoma cinerea</i> | bushy-tailed wood rat | |
| | <i>Neotoma fuscipes</i> | dusky-footed wood rat | |
| | * <i>Peromyscus maniculatus</i> | deer mouse | |
| | <i>Spermophilus beecheyi</i> | California ground squirrel | |
| | * <i>Tamiasciurus douglasi</i> | chickaree | |
| | <i>Zapus trinotatus</i> | Pacific jumping mouse | |
| | Carnivora | <i>Bassariscus astutus</i> | ringtail or miner's cat |
| | | <i>Canis latrans</i> | coyote |
| <i>Felis concolor</i> | | mountain lion or cougar | |
| <i>Lynx rufus</i> | | bobcat | |
| <i>Martes americana</i> | | marten | |
| <i>Mustela erminea</i> | | short-tailed weasel or ermine | |
| <i>Mustela frenata</i> | | long-tailed weasel | |
| <i>Mustela vison</i> | | mink | |
| * <i>Procyon lotor</i> | | raccoon | |
| <i>Spilogale putorius</i> | | spotted skunk or civet cat | |
| Artiodactyla | <i>Ursus americanus</i> | black bear | |
| | * <i>Cervus canadensis</i> | wapiti or elk | |
| | * <i>Odocoileus h. columbianus</i> | black-tailed deer | |

¹ Asterisk (*) indicates habitation verified by sign, sighting, or collection.

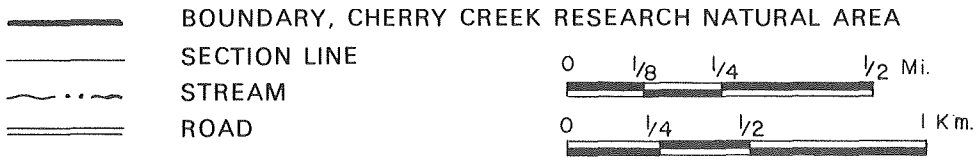
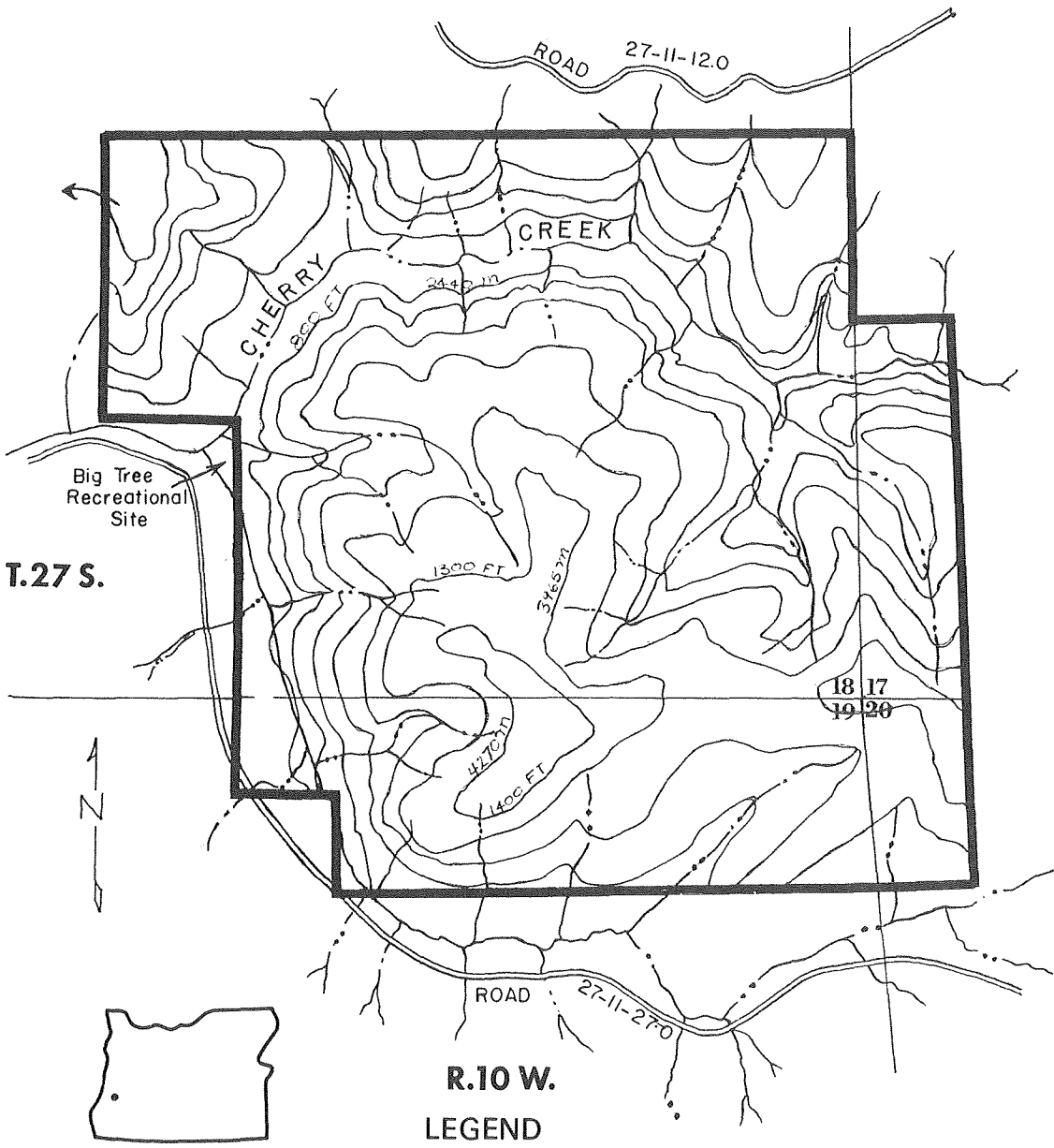


Figure CH-1.- Cherry Creek Research Natural Area, Coos County, Oregon.

Figure CH-2.-Natural features of Cherry Creek Research Natural Area. Upper left: Stand of western hemlock with dense *Polystichum munitum* understory located on a ridgetop bench. Upper right: Mixed stand of Douglas-fir (left) and western hemlock (right) on steep canyon sideslope. Center: Typical understory species including *Polystichum munitum*, *Oxalis oregana*, *Vaccinium ovatum*, *V. parvifolium*, and *Rhododendron macrophyllum*. Lower left: Open, lower-slope stand of western red-cedar, big leaf maple, and California-laurel. Lower right: Main branch of Cherry Creek near its exit from the natural area.

