

## FOX HOLLOW RESEARCH NATURAL AREA

*Supplement No. 22<sup>1</sup>**Alan B. Curtis<sup>2</sup>*

The Research Natural Area described in this supplement is administered by the Bureau of Land Management, U.S. Department of the Interior. Bureau of Land Management Research Natural Areas are administered by District Offices, which are organizational subdivisions of their State Offices. Scientists wishing to use these Research Natural Areas should contact the Bureau's State Director. Because this tract is located in Oregon, the responsible individual is the Oregon State Director (Bureau of Land Management, P.O. Box 2965, Portland, Oregon 97208). The manager of the district in which the Research Natural Area is located will be informed of mutually agreed on activities by the State Director. Nevertheless, a scientist should visit the administering District Office when beginning a study and explain the nature, purpose, and duration of activities planned. Permission for brief observational visits to Research Natural Areas can be obtained from District Managers.

Fox Hollow Research Natural Area is part of a Federal system of such tracts established for research and educational purposes. Each RNA constitutes a site where natural features are preserved for scientific purposes and natural processes are allowed to dominate. Their main purposes are to provide:

1. Baseline areas against which effects of human activities can be measured;
2. Sites for study of natural processes in undisturbed ecosystems; and
3. Gene pool preserves for all types of organisms, especially rare and endangered types.

<sup>1</sup> Supplement No. 22 to "Federal Research Natural Areas in Oregon and Washington: A Guidebook for Scientists and Educators," by Jerry F. Franklin, Frederick C. Hall, C.T. Dyrness, and Chris Maser (Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station; 1972. 498 p.).

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The Federal system is outlined in "A Directory of the Research Natural Areas on Federal Lands of the United States of America."<sup>3</sup>

Of the 96 Federal Research Natural Areas established in Oregon and Washington, 45 are described in "Federal Research Natural Areas in Oregon and Washington: A Guidebook for Scientists and Educators" (see footnote 1). Supplements to the guidebook describe additions to the system.

The guiding principle in management of Research Natural Areas is to prevent unnatural encroachments or activities that directly or indirectly modify ecological processes. Logging and uncontrolled grazing are not allowed, for example, nor is public use that might impair scientific or educational values. Management practices necessary for maintenance of ecosystems may be allowed.

Federal Research Natural Areas provide a unique system of publicly owned and protected examples of undisturbed ecosystems where scientists can conduct research with minimal interference and reasonable assurance that investments in long-term studies will not be lost to logging, land development, or similar activities. In return, a scientist wishing to use a Research Natural Area is obligated to:

1. Obtain permission from the appropriate administering agency before using the area;<sup>4</sup>

<sup>3</sup> Federal Committee on Ecological Reserves. A directory of the Research Natural Areas on Federal lands of the United States of America. Washington, DC: U.S. Department of Agriculture, Forest Service; 1977.

<sup>4</sup> Six agencies cooperate in this program in the Pacific Northwest: U.S. Department of Agriculture-Forest Service; U.S. Department of the Interior-Bureau of Land Management, Fish and Wildlife Service, and National Park Service; U.S. Department of Energy; and U.S. Department of Defense.

2. Abide by the administering agency's regulations governing use, including specific limitations on the type of research, sampling methods, and other procedures; and
3. Inform the administering agency on progress of the research, published results, and disposition of collected materials.

The purpose of these limitations is to:

1. Ensure that the scientific and educational values of the tract are not impaired;
2. Accumulate a documented body of knowledge about the tract; and
3. Avoid conflict between studies.

Research must be essentially nondestructive; destructive analysis of vegetation is generally not allowed, nor are studies requiring extensive modification of the forest floor or extensive excavation of soil. Collection of plant and animal specimens should be restricted to the minimum necessary to provide voucher specimens and other research needs. Under no circumstances may collecting significantly reduce population levels of species. Collecting must also be carried out in accordance with applicable State and Federal agency regulations. Within these broad guidelines, appropriate uses of Research Natural Areas are determined by the administering agency.

# FOX HOLLOW RESEARCH NATURAL AREA

Mature *Pseudotsuga menziesii* forest with scattered *Pinus ponderosa* growing on foothills west of the Willamette Valley.<sup>5</sup>

Fox Hollow Research Natural Area (RNA) was established in January 1984 to provide an example of dry-site, mature *Pseudotsuga menziesii*-*Pinus ponderosa* forest in the Willamette Valley foothills (fig. 1). This rectangular 66-ha area in Lane County, Oregon, is administered by the Lorane Resource Area of the Eugene (Oregon) District of the Bureau of Land Management (BLM). The RNA is situated in section 9, T. 19 S., R. 4 W., Willamette Meridian (lat. 43° 56' N.; long. 123° 10' W.).

<sup>5</sup>Scientific and common names of plant species are listed in table 1.

## Access and Accommodations

To reach the RNA from the center of Eugene, drive south on Willamette Street 6.4 mi. Turn west onto Fox Hollow Road (County Road 1280) and drive 5.1 mi to Perry Road, BLM road 19-4-4. Turn left on this road, proceed past a house for 0.4 mi to a turnout on the left side of the road. Park and proceed on foot. Cross the small stream and walk southeasterly on an old logging road (shown as a trail on fig. 2). The RNA is the strip of large trees on the ridgetop, along the east side of the property.

Commercial accommodations are available in the Eugene-Springfield metropolitan area. Scheduled commercial air service is available at the Eugene airport.



Figure 1—View of mature timber along west edge of Fox Hollow Research Natural Area.

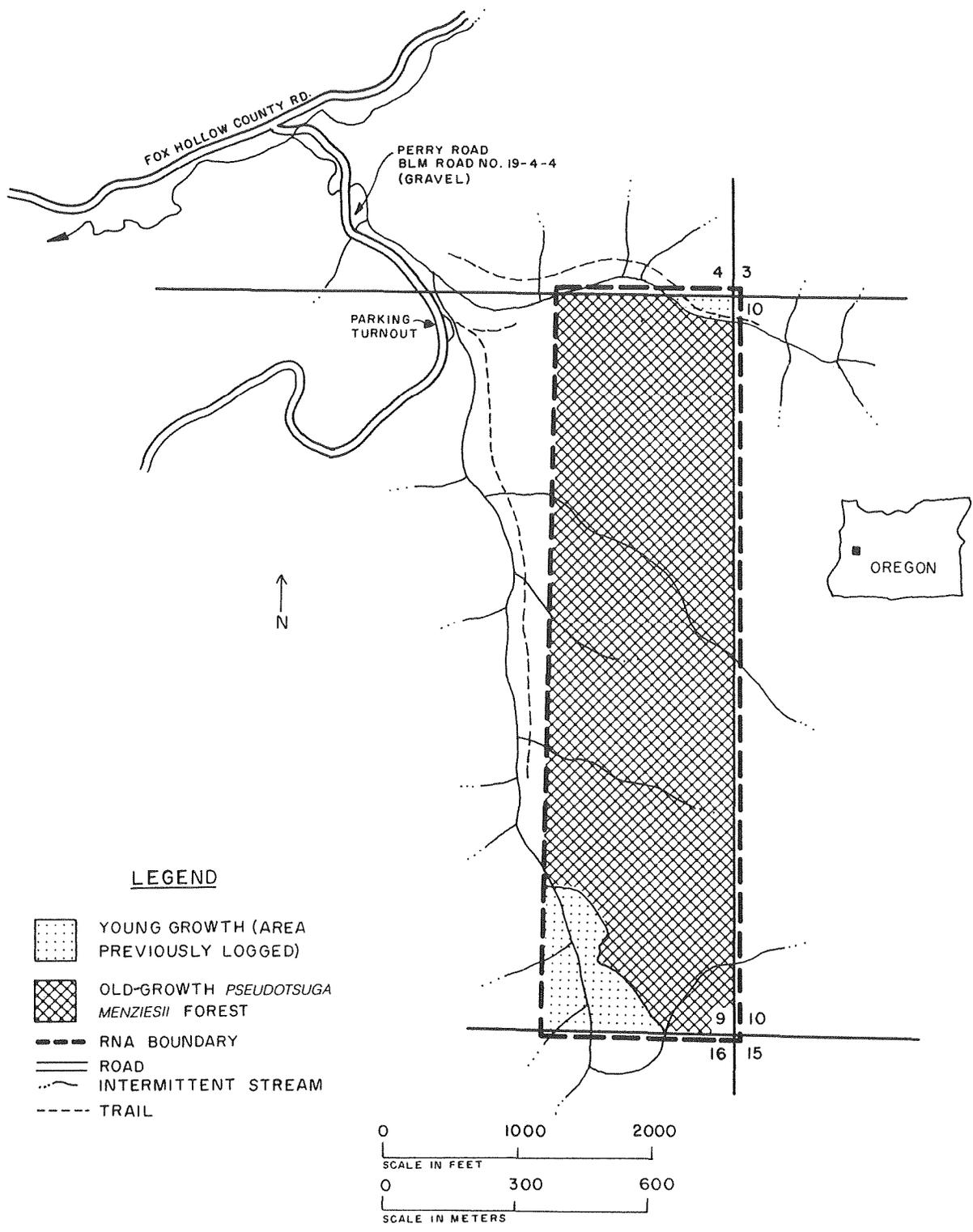


Figure 2—Fox Hollow Research Natural Area.

## Environment

Fox Hollow RNA lies on the approximate boundary of the Willamette Valley and Coast Range physiographic provinces. In this area low, rounded hills pass gradually into mountainous, highly dissected terrain with steep slopes.

The RNA is composed of a series of east-west ridges along the flank of a neighboring hill that lies in a north-south direction (Franklin and Dyrness 1973). These ridges are cut at three places by northwesterly flowing streams; thus the slopes have alternating south and north aspects. Elevations range from 213 to 366 m. The area is uniformly forested with mature conifers; there are also deciduous trees along stream courses and in slump areas.

The Pacific Ocean, 49 mi west of Fox Hollow RNA, gives the area a temperate marine climate with cool, wet winters and warm, dry summers. In summer, stable high-pressure airmasses bring clear skies, and light winds are from the north. In the summer and fall, temperature inversions with fog sometimes occur in the valleys and foothills of the Eugene area. In late fall and in winter and spring, unstable low-pressure airmasses bring frequent storms from the Pacific Ocean. In Eugene, temperatures average 3.8 °C in January and 19.4 °C in July; the mean annual temperature is 11.1 °C (National Oceanic and Atmospheric Administration 1984).

Precipitation at the RNA averages 100 cm per year (Pacific Northwest River Basins Commission 1970). About 70 percent of the precipitation falls from November through March, and only 5 percent from June through August. Nearly all of it falls as rain; on rare occasions 4–6 cm of snow may accumulate, but it usually melts in 3 or 4 days. In summer the relative humidity at Eugene is commonly between 35 and 50 percent, but it can drop below 30 percent. Evaporation at this time far exceeds precipitation and leads to drought.

## Biota

### Soils

Soils in the Fox Hollow RNA, formed from tuff and breccia, vary from well drained to poorly drained. Deep-seated rotational slope failures have created benches in the northern half of the RNA; shallow slope failures exist on sideslopes adjacent to the stream.

A complex of Bellpine and Jory soils occurs on the broad ridgetops and the north-facing slope adjacent to the northernmost stream. The well-drained Bellpine and Jory soils typically have silty clay loam A horizons and silty clay B horizons, are red in color, and range from 61 to 152 cm in depth. Site class for these soils varies from II- to III+.

Small areas of Witzel soils occur sporadically on the steep slope breaks between the ridgetops and the moderate to steep sideslopes. These well-drained, dark brown soils are gravelly silt loams less than 51 cm deep. Site class for Witzel soils is IV.

The moderate to steep midslope positions are occupied by dark reddish-brown soils of the Nekia series. These soils are well-drained clay loams overlying clays with 5–35 percent coarse fragments. Nekia soils have a site class of III+.

Soils with imperfect drainage are associated with the drainage channels and benchy slopes immediately above the channels. Poorly drained soils of the Panther series are located in a depression and in the drainage head of a stream about the middle of the RNA. Panther soils have clay loam and clay textures, are moderately deep, and have mottles in the lower part of the A horizons. Trees growing on Panther soils are *Fraxinus latifolia*, *Quercus garryana*, *Alnus rubra*, *Acer macrophyllum*, and occasional *Pseudotsuga menziesii*.

Moderately well to somewhat poorly drained soils of the Hazelair series are found on benchy, unstable slopes immediately above the drainage channels. These soils are forming in colluvium underlain by clay material derived mostly from volcanic tuff. Hazelair soils are dark brown silty clay loams over silty clays, and mottles are distinct at depths of less than 76 cm. Site class for these Hazelair soil areas is estimated to be III- to IV+.

## Vegetation

The mature forest at Fox Hollow RNA covers 60 ha and is dominated by large *Pseudotsuga menziesii*, the same as Society of American Foresters cover type 229, Pacific Douglas-Fir (Eyre 1980). East-west ridges cross the RNA, producing an alternation of forest stands on south and north aspects. A mixed stand of *Pseudotsuga menziesii* and *Pinus ponderosa* is on the south slopes and ridgetops, with minor amounts of *Calocedrus decurrens* and *Quercus garryana* (fig. 3). This forest was originally more open as is shown by the scattered, obviously open-grown old trees. Cole (1977) states that the pre-1850 forest at this site appears to have been adapted to annual burning by local Native Americans. This burning created and maintained the open character of the forest and enabled the pines and oaks to become an important component. The cessation of regular burning after the arrival of settlers in the mid-1850's resulted in an increase in forest density and a shift in species composition. *Arbutus menziesii*, *Castanopsis chrysophylla*, and two species of *Quercus* became established but are today a very minor component of the stand because pole-size *Pseudotsuga menziesii* and *Calocedrus decurrens* are crowding them out. The largest *Q. garryana* was 58 cm in diameter at breast height (d.b.h.) and 21 m tall. The largest *Castanopsis chrysophylla* was 61 cm in d.b.h. and 21 m tall. Coniferous reproduction now consists of *P. menziesii* and *Abies grandis*; there are only a few young pines.

*Pinus ponderosa* comprises about 25 percent of the stems in portions of the forest (fig. 4). Average size pines are 76 cm in d.b.h. and 44 m tall; the largest one is 134 cm in d.b.h. and 42 m tall. The largest *Calocedrus decurrens* is 161 cm in d.b.h. and 49 m tall.

The understory vegetation on south slopes and ridgetops is characterized by an abundance of *Rhus diversiloba* in both shrub and liana forms. Other common shrubs are *Corylus cornuta* val'. *californica* and *Holodiscus discolor*. *Castanopsis chrysophylla* grows as a shrub in areas of low light. Common herbaceous plants and cryptogams are *Cardamine pulcherrima* val'. *tenella*, *Cynoglossum grande*, *Galium* spp., *Synthyris reniformis*, and mosses and liverworts.

On the north slopes the *Pseudotsuga menziesii*-*Acer circinatum*-*Polystichum munitum* community is in sharp contrast to the vegetation on south slopes (fig. 5). Here old-growth *Pseudotsuga menziesii* forms a nearly pure forest. Trees average 91 to 122 cm in d.b.h. The largest tree in the RNA is 179 cm in d.b.h., and the tallest tree is 58 m tall. The only other conifers found on north slopes are occasional *Abies grandis*; the largest is 86 cm in d.b.h. and 55 m tall. *Abies grandis* dominates the coniferous reproduction on north slopes. The only large-size hardwood tree here is *AceI' macrophyllum*. The canopy closure of this stand varies from complete to somewhat open, permitting shrubs and herbs to proliferate in this cool, moist habitat.

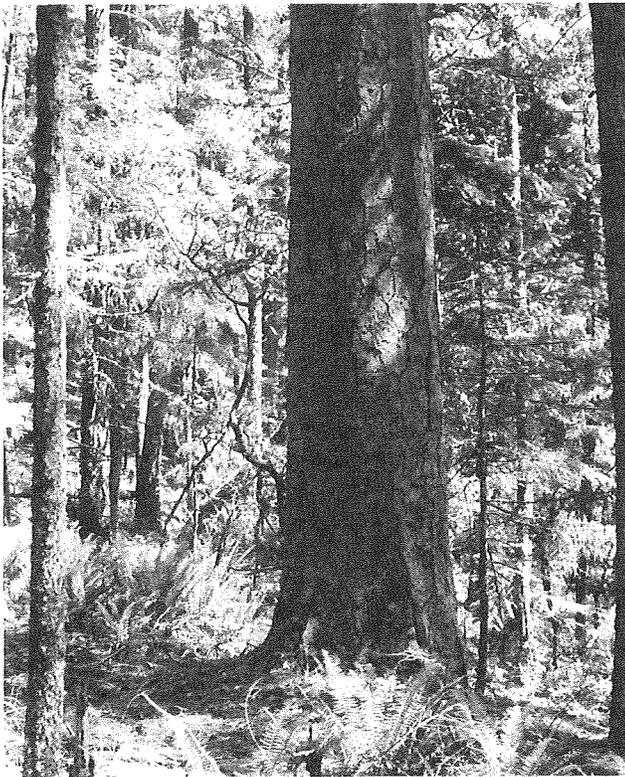
The understory on north slopes comprises a dense tangle of *AceI' circinatum* and *Corylus cornuta* val'. *californica* as well as some *Cornus nuttallii*. Common shrubs are *Berberis nervosa* and *Gaultheria shallon*. *Polystichum munitum* is pervasive. Other common plants are *Dicentra forwnsa*, *Montia sibirica* val'. *sibirica* and *Trillium ovatum*. A thick layer of moss covers the ground.

Along streams and on slump areas, conifers and hardwoods are present. The most common hardwood is *AceI' macrophyllum*; there are lesser numbers of *Fraxinus latifolia* and still fewer *Alnus rubra*. Riparian vegetation includes *Gaultheria shallon*, *Oenanthe sarmentosa*, *Polystichum munitum*, *Carex obnupta*, and *Scirpus m/crocarpus*.

No rare, threatened, or endangered plants are known to occur in the RNA.



*Figure 3—A mixed forest of Pseudotsuga menziesii and Calocedrus decurrens on a south slope in the Fox Hollow Research Natural Area. The shrub layer is dominated by Rhus diversiloba.*



*Figure 4—Pinus ponderosa is scattered over the south slopes and on ridgetops in the Fox Hollow Research Natural Area. This large specimen is surrounded by pole-size Pseudotsuga menziesii; on the ground Polystichum munitum is abundant.*



Figure 5—A north-slope forest in the Fox Hollow Research Natural Area. A *Pseudotsuga menziesii* overstory and a dense understory of *Acer circinatum* and *Corylus cornuta* var. *californica* are evident. Most of the forest on north slopes has a closed canopy; the area shown here is an exception.

## Fauna

A list of reptiles and amphibians believed to frequent the RNA is in table 2. Birds are listed in table 3 and mammals in table 4.

## History of Disturbance

Forest fires have occurred in the RNA; the trunks of some larger *Pseudotsuga menziesii* are blackened from fire. No scars have been burned into the trunks of these trees, however.

Prevailing winds are out of the southwest, and sometimes their force is sufficient to cause extensive windthrow of trees. During the 1962 Columbus Day storm, windspeeds of 98 m/h were recorded in Eugene, which caused some windthrow in the RNA (fig. 6).

Adjacent lands on all sides of the RNA have been logged. A 5-ha portion at the southwest corner of the RNA was clearcut and replanted in 1967. An area of 1 ha at the northeast corner has also been cut.

Beavers live in creeks flowing adjacent to and through the RNA, and they have girdled some trees in the vicinity of these creeks.

Local residents occasionally use the area for horseback riding, hiking, and hunting. Several residences are located less than one-half mile from the RNA boundary.

There are no known archeological sites in the RNA.

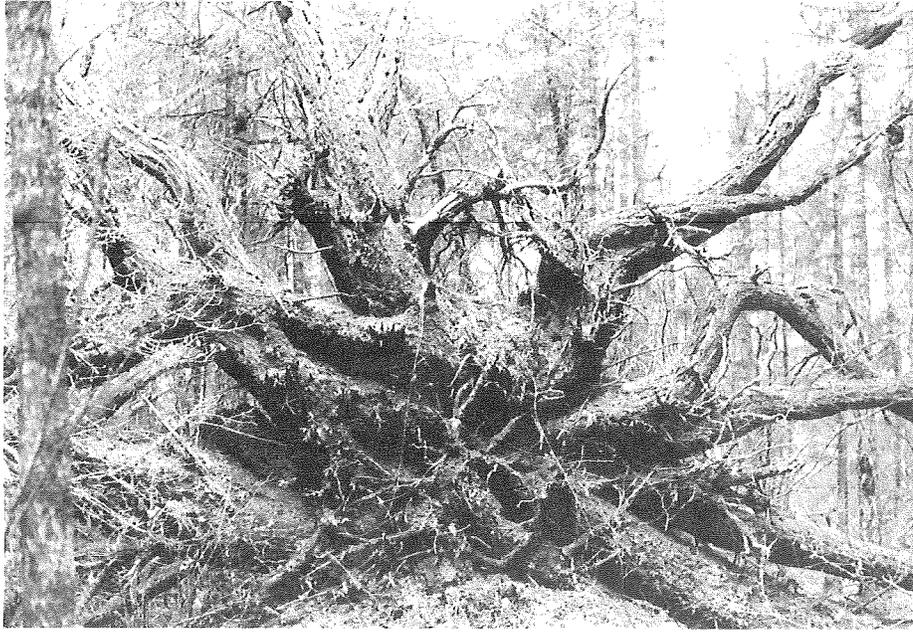


Figure 6—An enormous root system is exposed on this *Pseudotsuga menziesii* which fell during the 1962 windstorm at Fox Hollow Research Natural Area. The tree measures 147 cm in d.b.h. and is about 46 m tall.

## Research

No research studies are known to be in progress on the RNA. The area is an excellent site for studying growth and succession, seed germination, seedling establishment, agents of decomposition, and so forth in a dry-site, mixed coniferous forest of the Willamette Valley foothills.

## Maps and Aerial Photographs

The maps applicable to Fox Hollow Research Natural Area are: Topographic-Cottage Grove, Oregon, quadrangle, scale 1:62,500, issued by the U.S. Geological Survey in 1957; Geologic-reconnaissance geologic map and sections of the western Cascade Range, Oregon, north of latitude 43° N. (Peck and others 1964). The Bureau of Land Management, Eugene District Office, can supply information on the most recent aerial photos and forest type maps for the area. Historical air photos of the area are filed at the University of Oregon (Eugene) map library.

## Metric and English Equivalents

1 centimeter (cm)	= 0.4 inch
1 meter (m)	= 3.3 feet
1 kilometer (km)	= 0.6 mile
1 hectare (ha)	= 2.5 acres
$9/5 \text{ } ^\circ\text{C} + 32$	= $^\circ\text{F}$

**Table 1—Plants found in Fox Hollow Research Natural Area<sup>1</sup>**

Scientific name	Common name
<i>Abies grandis</i> (Dougl.) Forbes	Grand fir
<i>Acer circinatum</i> Pursh	Vine maple
<i>Acer macrophyllum</i> Pursh	Bigleaf maple
<i>Achillea millefolium</i> L.	Common yarrow
<i>Achlys triphylla</i> (Smith) DC.	Vanillaleaf
<i>Adenocaulon bicolor</i> Hook.	Pathfinder
<i>Adiantum pedatum</i> L.	Maidenhair fern
<i>Aira caryophylla</i> L. <sup>2</sup>	Silver hairgrass
<i>Alnus rubra</i> Bong.	Red alder
<i>Amelanchier alnifolia</i> Nutt.	Western serviceberry
<i>Anemone deltoidea</i> Hook.	Threeleaf anemone
<i>Anemone lyallii</i> Britt.	Lyall's anemone
<i>Angelica arguta</i> Nutt.	Sharptooth angelica
<i>Aquilegia formosa</i> Fisch.	Sitka columbine
<i>Arbutus menziesii</i> Pursh	Pacific madrone
<i>Asarum caudatum</i> Lindl.	Wild ginger
<i>Athyrium filix-femina</i> (L.) Roth.	Lady-fern
<i>Balsamorhiza deltoidea</i> Nutt.	Deltoid balsamroot
<i>Bellis perennis</i> L. <sup>2</sup>	English daisy
<i>Berberis aquifolium</i> Pursh	Tall Oregongrape
<i>Berberis nervosa</i> Pursh	Oregongrape
<i>Brodiaea elegans</i> Hoover	Elegant brodiaea
<i>Bromus mollis</i> L. <sup>2</sup>	Soft brome
<i>Calocedrus decurrens</i> (Torr.) Florin	Incense-cedar
<i>Calochortus tolmiei</i> H. & A.	Cats-ear or Tolmie mariposa
<i>Calypso bulbosa</i> (L.) Oakes	Calypso orchid
<i>Campanula prenanthoides</i> Dur.	California harebell
<i>Cardamine oligosperma</i> Nutt.	Little western bittercress
<i>Cardamine pulcherrima</i> Greene var. <i>tenella</i> (Pursh) Hitchc.	Slender toothwort
<i>Carex obnupta</i> Bailey	Slough sedge
<i>Carex</i> spp.	Sedge
<i>Castanopsis chrysophylla</i> (Dougl.) DC.	Golden chinquapin
<i>Centaurium umbellatum</i> Gilib. <sup>2</sup>	European centaury
<i>Cerastium arvense</i> L.	Field chickweed
<i>Cerastium viscosum</i> L. <sup>2</sup>	Sticky chickweed
<i>Chimaphila umbellata</i> (L.) Bart.	Prince's-pine
<i>Chrysanthemum leucanthemum</i> L. <sup>2</sup>	Oxeye-daisy
<i>Circaea alpina</i> L.	Circaea
<i>Cirsium arvense</i> (L.) Scop. var. <i>horridum</i> Wimm. & Grab.	Canada thistle

See footnotes at end of table.

**Table 1—Plants found in Fox Hollow Research Natural Area<sup>1</sup> (continued)**

Scientific name	Common name
<i>Cirsium vulgare</i> (Savi) Tenore <sup>2</sup>	Bull thistle
<i>Collinsia parviflora</i> Lindl.	Small-flowered blue-eyed Mary
<i>Collomia heterophylla</i> Hook.	Varied-leaf collomia
<i>Coptis laciniata</i> Gray	Cutleaf goldthread
<i>Corallorhiza maculata</i> Raf.	Spotted coral-root
<i>Cornus nuttallii</i> Aud.	Pacific dogwood
<i>Cornus stolonifera</i> Michx. var. <i>occidentalis</i> (T. & G.) Hitchc.	Creek dogwood
<i>Corylus cornuta</i> Marsh. var. <i>californica</i> (DC.) Sharp	Hazelnut or California hazel
<i>Crataegus douglasii</i> Lindl.	Black hawthorn
<i>Cryptantha intermedia</i> (Gray) Greene	Cryptantha
<i>Cynoglossum grande</i> Dougl.	Pacific hound's-tongue
<i>Cynosurus echinatus</i> L. <sup>2</sup>	Hedgehog dogtail
<i>Cystopteris fragilis</i> (L.) Bernh.	Brittle bladderfern
<i>Cytisus scoparius</i> (L.) Link. <sup>2</sup>	Scot's broom
<i>Daucus carota</i> L. <sup>2</sup>	Queen Anne's lace
<i>Delphinium menziesii</i> DC. var. <i>pyramidale</i> (Ewan) Hitchc.	Menzies' larkspur
<i>Dicentra formosa</i> (Andr.) Walp.	Pacific bleedingheart
<i>Disporum smithii</i> (Hook.) Piper	Fairy lantern
<i>Dryopteris arguta</i> (Kaulf.) Watt.	Coastal shield-fern
<i>Elymus glaucus</i> Buckl.	Blue wildrye
<i>Epilobium minutum</i> Lindl.	Small-flowered willow-weed
<i>Epilobium paniculatum</i> Nutt.	Autumn willow-weed
<i>Equisetum arvense</i> L.	Horsetail
<i>Equisetum hyemale</i> L.	Scouring-rush
<i>Equisetum telmateia</i> Ehrh.	Giant horsetail
<i>Eriophyllum lanatum</i> (Pursh) Forbes	Woolly sunflower
<i>Erythronium oregonum</i> Applegate	Giant fawn-lily
<i>Festuca californica</i> Vasey	California fescue
<i>Fragaria vesca</i> L.	Woods strawberry
<i>Fraxinus latifolia</i> Benth.	Oregon ash
<i>Galium aparine</i> L. var. <i>echinospermum</i> (Wallr.) Farw.	Bedstraw
<i>Galium triflorum</i> Michx.	Sweetscented bedstraw
<i>Gaultheria shallon</i> Pursh	Salal
<i>Geranium molle</i> L. <sup>2</sup>	Dovefoot geranium
<i>Goodyera oblongifolia</i> Raf.	Rattlesnake-plantain

See footnotes at end of table.

**Table 1—Plants found in Fox Hollow Research Natural Area<sup>1</sup> (continued)**

Scientific name	Common name
<i>Habenaria elegans</i> (Lindl.) Boland	Elegant rein-orchid
<i>Hieracium albiflorum</i> Hook.	White-flowered hawkweed
<i>Holcus lanatus</i> L. <sup>2</sup>	Velvet-grass
<i>Holodiscus discolor</i> (Pursh) Maxim.	Ocean-spray
<i>Hydrophyllum</i> sp.	Waterleaf
<i>Hypericum perforatum</i> L. <sup>2</sup>	Common St. Johns-wort
<i>Hypochaeris radicata</i> L. <sup>2</sup>	False dandelion
<i>Iris chrysophylla</i> Howell	Slender-tubed iris
<i>Iris tenax</i> Dougl.	Oregon iris
<i>Juncus</i> spp.	Rush
<i>Lathyrus nevadensis</i> Wats.	Peavine
<i>Lathyrus polyphyllus</i> Nutt.	Leafy peavine
<i>Ligusticum apiifolium</i> (Nutt.) Gray	Celery-leaved lovage
<i>Linnaea borealis</i> L.	Twinflower
<i>Listera cordata</i> (L.) R. Br.	Heart-leaf twayblade
<i>Lomatium utriculatum</i> (Nutt.) Coult. & Rose	Common lomatium
<i>Lonicera ciliosa</i> (Pursh) DC.	Orange honeysuckle
<i>Lonicera hispidula</i> (Lindl.) Dougl.	Hairy honeysuckle
<i>Lotus micranthus</i> Benth.	Small-flowered deervetch or lotus
<i>Madia gracilis</i> (J.E. Smith) Keck	Slender tarweed
<i>Marah oreganus</i> (T. & G.) Howell	Oregon bigroot
<i>Mimulus alsinoides</i> Dougl.	Chickweed monkey-flower
<i>Mimulus guttatus</i> DC.	Yellow monkey-flower
<i>Mitella caulescens</i> Nutt.	Leafy mitrewort
<i>Montia perfoliata</i> (Donn) Howell	Miners-lettuce
<i>Montia sibirica</i> (L.) Howell var. <i>sibirica</i>	Western springbeauty
<i>Nemophila menziesii</i> H. & A.	Baby blue-eyes
<i>Nemophila parviflora</i> Dougl.	Smallflowered nemophila
<i>Oemleria cerasiformis</i> (H. & A.) Landon	Indian plum
<i>Oenanthe sarmentosa</i> Presl	Pacific water-parsley
<i>Osmorhiza chilensis</i> H. & A.	Mountain sweet-root
<i>Oxalis suksdorfii</i> Trel.	Western yellow oxalis
<i>Phacelia nemoralis</i> Greene	Woodland phacelia
<i>Philadelphus lewisii</i> Pursh	Lewis mockorange
<i>Physocarpus capitatus</i> (Pursh) Kuntze	Pacific ninebark
<i>Pinus ponderosa</i> Dougl.	Ponderosa pine
<i>Plectritis congesta</i> (Lindl.) DC.	Rosy plectritis
<i>Poa trivialis</i> L.	Roughstalk bluegrass
<i>Polypodium glycyrrhiza</i> D.C. Eat.	Licorice-fern

See footnotes at end of table.

Table 1—Plants found in Fox Hollow Research Natural Area<sup>1</sup> (continued)

Scientific name	Common name
<i>Polystichum munitum</i> (Kaulf.) Presl	Sword-fern
<i>Potentilla</i> sp.	Cinquefoil
<i>Prunella vulgaris</i> L. var. <i>lanceolata</i> <sup>2</sup>	Self-heal
<i>Prunus avium</i> L. <sup>2</sup>	Sweet cherry
<i>Pseudotsuga menziesii</i> (Mirb.) Franco	Douglas-fir
<i>Psoralea physodes</i> Dougl.	California tea
<i>Pteridium aquilinum</i> (L.) Kuhn	Bracken fern
<i>Quercus garryana</i> Dougl.	Oregon white oak
<i>Quercus kelloggii</i> Newberry	California black oak
<i>Ranunculus uncinatus</i> D.Don	Little buttercup
<i>Rhamnus purshiana</i> DC.	Cascara
<i>Rhus diversiloba</i> T. & G.	Poison-oak
<i>Ribes sanguineum</i> Pursh	Red-flowered currant
<i>Rosa eglanteria</i> L. <sup>2</sup>	Sweetbrier
<i>Rosa gymnocarpa</i> Nutt.	Baldhip rose
<i>Rubus laciniatus</i> Willd. <sup>2</sup>	Evergreen blackberry
<i>Rubus leucodermis</i> Dougl.	Blackcap
<i>Rubus ursinus</i> Cham. & Schlecht.	Pacific blackberry
<i>Salix scouleriana</i> Barratt	Scouler willow
<i>Sanicula bipinnatifida</i> Dougl.	Purple sanicle
<i>Sanicula crassicaulis</i> Poepp.	Pacific sanicle
<i>Satureja douglasii</i> (Benth.) Briq.	Yerba buena
<i>Scirpus microcarpus</i> Presl	Small-fruited bulrush
<i>Senecio jacobaea</i> L. <sup>2</sup>	Tansy ragwort
<i>Sherardia arvensis</i> L.	Blue field-madder
<i>Smilacina racemosa</i> (L.) Desf.	False Solomon's seal
<i>Smilacina stellata</i> (L.) Desf.	Star-flowered Solomon-plume
<i>Stachys cooleyae</i> Heller	Cooley's hedge-nettle
<i>Stellaria</i> sp.	Starwort
<i>Symphoricarpos albus</i> (L.) Blake	Common snowberry
<i>Synthyris reniformis</i> (Dougl.) Benth.	Snow-queen
<i>Taxus brevifolia</i> Nutt.	Pacific yew
<i>Tellima grandiflora</i> (Pursh) Dougl.	Fringecup
<i>Thermopsis montana</i> Nutt. var. <i>venosa</i> (Eastw.) Jeps.	Mountain thermopsis
<i>Tiarella trifoliata</i> L. var. <i>trifoliata</i>	Trefoil foamflower
<i>Trientalis latifolia</i> Hook.	Western starflower
<i>Trifolium bifidum</i> Gray	Pinole clover
<i>Trifolium microdon</i> H. & A.	Thimble clover
<i>Trillium ovatum</i> Pursh	Trillium

See footnotes at end of table.

**Table 1—Plants found in Fox Hollow Research Natural Area<sup>1</sup> (continued)**

Scientific name	Common name
<i>Vaccinium parvifolium</i> Smith	Red huckleberry
<i>Vancouveria hexandra</i> (Hook.) Morr. & Dec.	White inside-out-flower
<i>Veronica arvensis</i> L. <sup>2</sup>	Common speedwell
<i>Viburnum ellipticum</i> Hook.	Oregon viburnum
<i>Vicia americana</i> Muhl.	American vetch
<i>Viola sempervirens</i> Greene	Evergreen violet
<i>Wyethia angustifolia</i> (DC.) Nutt.	Mule's-ears

<sup>1</sup>Nomenclature follows Hitchcock and Cronquist (1976).

<sup>2</sup>Introduced species.

**Table 2—Reptiles and amphibians expected to be found in Fox Hollow Research Natural Area<sup>1</sup>**

Order	Scientific name	Common name
Anura	<i>Hyla regilla</i>	Pacific treefrog
	<i>Rana aurora</i>	Red-legged frog
	<i>Rana catesbeiana</i>	Bullfrog
Caudata	<i>Ambystoma gracile</i>	Northwestern salamander
	<i>Aneides ferreus</i>	Clouded salamander
	<i>Dicamptodon ensatus</i>	Pacific giant salamander
	<i>Ensatina eschscholtzi</i>	Oregon salamander
	<i>Plethodon dunni</i>	Dunn's salamander
	<i>Plethodon vehiculum</i>	Western red-backed salamander
	<i>Taricha granulosa</i>	Roughskin newt
Squamata	<i>Charina bottae</i>	Rubber boa
	<i>Coluber constrictor</i>	Racer
	<i>Crotalus viridis</i>	Western rattlesnake
	<i>Diadophis punctatus</i>	Ringneck snake
	<i>Eumeces skiltonianus</i>	Western skink
	<i>Gerrhonotus coeruleus</i>	Northern alligator lizard
	<i>Gerrhonotus multicarinatus</i>	Southern alligator lizard
	<i>Pituophis melanoleucus</i>	Pacific gopher snake
	<i>Sceloporus occidentalis</i>	Western fence lizard
	<i>Thamnophis elegans</i>	Western terrestrial garter snake
	<i>Thamnophis ordinoides</i>	Northwestern terrestrial garter snake
<i>Thamnophis sirtalis</i>	Common garter snake	

<sup>1</sup> Nomenclature follows Collins and others (1978). Reptiles and amphibians listed are believed to use the area at some time of year. Information supplied by Charles Thomas, wildlife biologist, U.S. Department of the Interior, Bureau of Land Management, Eugene, Oregon, and Chris Maser, wildlife biologist, U.S. Department of the Interior, Bureau of Land Management, Forestry Sciences Laboratory, Corvallis, Oregon.

Table 3—Birds expected to be found in Fox Hollow Research Natural Area<sup>1</sup>

Order	Scientific name	Common name
Ciconiiformes	<i>Ardea herodias</i>	Great blue heron
	<i>Butorides striatus</i>	Green-backed heron
Falconiformes	<i>Accipiter cooperii</i>	Cooper's hawk
	<i>Accipiter gentilis</i>	Northern goshawk
	<i>Accipiter striatus</i>	Sharp-shinned hawk
	<i>Aquila chrysaetos</i>	Golden eagle
	* <i>Buteo jamaicensis</i>	Red-tailed hawk
	<i>Cathartes aura</i>	Turkey vulture
	<i>Falco sparverius</i>	American kestrel
Galliformes	<i>Bonasa umbellus</i>	Ruffed grouse
	<i>Dendragapus obscurus</i>	Blue grouse
	<i>Oreortyx pictus</i>	Mountain quail
Columbiformes	<i>Columba fasciata</i>	Band-tailed pigeon
	<i>Zenaida macroura</i>	Mourning dove
Strigiformes	<i>Aegolius acadicus</i>	Saw-whet owl
	<i>Bubo virginianus</i>	Great horned owl
	<i>Glaucidium gnoma</i>	Pygmy owl
	<i>Otus asio</i>	Western screech owl
	<i>Strix occidentalis</i>	Spotted owl
	<i>Tyto alba</i>	Barn owl
Apodiformes	<i>Chaetura vauxi</i>	Vaux's swift
	<i>Selasphorus rufus</i>	Rufous hummingbird
	<i>Stellula calliope</i>	Calliope hummingbird
Piciformes	<i>Colaptes auratus</i>	Common flicker
	<i>Dendrocopos villosus</i>	Hairy woodpecker
	* <i>Dryocopus pileatus</i>	Pileated woodpecker
	<i>Picoides pubescens</i>	Downy woodpecker
	<i>Sphyrapicus varius</i>	Yellow-bellied sapsucker
Passeriformes	<i>Nuttallornis borealis</i>	Olive-sided flycatcher
	<i>Empidonax difficilis</i>	Western flycatcher
	<i>Empidonax oberholseri</i>	Dusky flycatcher
	<i>Contopus sordidulus</i>	Western wood pewee
	<i>Parus rufescens</i>	Chestnut-backed chickadee
	<i>Parus atricapillus</i>	Black-capped chickadee
	<i>Psaltriparus minimus</i>	Bushtit
	<i>Aphelocoma coerulescens</i>	Scrub jay

<sup>1</sup>See footnotes at end of table.

Table 3—Birds expected to be found in Fox Hollow Research Natural Area<sup>1</sup> (continued)

Order	Scientific name	Common name
Passeriformes (continued)	<i>Perisoreus canadensis</i>	Gray jay
	<i>Cyanocitta stelleri</i>	Steller's jay
	<i>Corvus corax</i>	Common raven
	<i>Corvus brachyrhynchos</i>	American crow
	<i>Sitta canadensis</i>	Red-breasted nuthatch
	<i>Certhia familiaris</i>	Brown creeper
	* <i>Troglodytes troglodytes</i>	Winter wren
	<i>Ixoreus naevius</i>	Varied thrush
	<i>Turdus migratorius</i>	Robin
	<i>Catharus guttatus</i>	Hermit thrush
	<i>Catharus ustulatus</i>	Swainson's thrush
	<i>Regulus calendula</i>	Ruby-crowned kinglet
	<i>Regulus satrapa</i>	Golden-crowned kinglet
	<i>Vireo gilvus</i>	Warbling vireo
	<i>Vireo huttoni</i>	Hutton's vireo
	<i>Vireo solitarius</i>	Solitary vireo
	<i>Dendroica coronata</i>	Yellow-rumped warbler
	<i>Dendroica nigrescens</i>	Black-throated gray warbler
	<i>Dendroica occidentalis</i>	Hermit warbler
	<i>Dendroica townsendi</i>	Townsend's warbler
	<i>Wilsonia pusilla</i>	Wilson's warbler
	<i>Carpodacus purpureus</i>	Purple finch
	<i>Melospiza melodia</i>	Song sparrow
	<i>Hesperiphona vespertina</i>	Evening grosbeak
	<i>Pheucticus melanocephalus</i>	Black-headed grosbeak
	<i>Loxia curvirostra</i>	Red crossbill
	* <i>Junco hyemalis</i>	Dark-eyed junco
	<i>Pipilo erythrophthalmus</i>	Rufus-sided towhee
	<i>Spinus pinus</i>	Pine siskin
	<i>Piranga ludoviciana</i>	Western tanager

<sup>1</sup>Nomenclature follows Bertrand and Scott (1979). Birds listed are believed to use the area at some time of year. Information supplied by Charles Thomas, wildlife biologist, U.S. Department of the Interior, Bureau of Land Management, Eugene, Oregon, and Chris Maser, wildlife biologist, U.S. Department of the Interior, Bureau of Land Management, Forestry Sciences Laboratory, Corvallis, Oregon.

\*Indicates presence verified by sight, sound, or sign.

Table 4—Mammals expected to be found in Fox Hollow Research Natural Area'

Order	Scientific name	Common name
Marsupialia	<i>Didelphis virginiana</i>	Common opossum
Insectivora	<i>Neurotrichus gibbsii</i>	Shrew-mole
	* <i>Scapanus orarius</i>	Pacific Coast mole
	<i>Sorex trowbridgii</i>	Trowbridge's shrew
	<i>Sorex vagrans</i>	Vagrant shrew
Chiroptera	<i>Antrozous pallidus</i>	Pallid bat
	<i>Eptesicus fuscus</i>	Big brown bat
	<i>Lasionycteris noctivagans</i>	Silver-haired 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 townsendii</i>	Townsend's 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 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 townsendii</i>	Townsend's chipmunk
	<i>Glaucomys sabrinus</i>	Northern flying squirrel
	<i>Microtus oregoni</i>	Oregon vole
	* <i>Microtus townsendii</i>	Townsend's vole
	* <i>Neotoma fuscipes</i>	Dusky-footed woodrat
	* <i>Peromyscus maniculatus</i>	Deer mouse
	<i>Sciurus griseus</i>	Western gray squirrel
	* <i>Tamiasciurus douglasii</i>	Chickaree
	<i>Zapus trinotatus</i>	Pacific jumping mouse

See footnotes at end of table.

**Table 4—Mammals expected to be found in Fox Hollow Research Natural Area<sup>1</sup> (continued)**

Order	Scientific name	Common name
Carnivora	<i>Canis latrans</i>	Coyote
	<i>Felis rufus</i>	Bobcat
	<i>Mustela erminea</i>	Shorttail weasel
	<i>Mustela frenata</i>	Long-tailed weasel
	<i>Mustela vison</i>	Mink
	* <i>Procyon lotor</i>	Raccoon
	<i>Spilogale putorius</i>	Spotted skunk
	<i>Urocyon cinereoargenteus</i>	Gray fox
	<i>Vulpes vulpes</i>	Red fox
	Artiodactyla	<i>Cervus canadensis</i>
<i>roosevelti</i>		
* <i>Odocoileus hemionus</i>		Blacktail deer

<sup>1</sup>Nomenclature follows Jones and others (1975). Mammals listed are believed to use the area at some time of year. Information supplied by Charles Thomas, wildlife biologist, U.S. Department of the Interior, Bureau of Land Management, Eugene, Oregon, and Chris Maser, wildlife biologist, U.S. Department of the Interior, Bureau of Land Management, Forestry Sciences Laboratory, Corvallis, Oregon.

\*Indicates presence verified by sight, sound, or sign.

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