PRESERVE ANALYSIS:
WINCHUCK SLOPE

prepared by

Robert E. Frenkel

OREGON NATURAL AREA PRESERVES ADVISORY COMMITTEE

to the

STATE LAND BOARD

Salem, Oregon

May, 1976

NATURAL AREA PRESERVES ADVISORY COMMITTEE

to the

OREGON STATE LAND BOARD

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PREFACE

The purpose of this preserve analysis is to aid the Natural Area Preserves Advisory Committee in deciding whether to recommend dedication of the Winchuck Slope tract as a natural area preserve to the State Land Board and to the State Board of Forestry. The preserve analysis considers principally the natural area values of the tract. Considerations of preserve management, agency agreements, and master planning are taken-up subsequently by the Division of State Lands.

Constructive comments on the preliminary draft preserve analysis circulated January, 1976 have been received from many individuals. I particularly wish to thank Ted Fies, Bill Phelps and Chris Maser for their care in review. The present report represents field work completed by Committee members and others. I have spent about five days on the site in field reconnaissance on two separate occasions. I wish to express appreciation for the assistance given by Donald Matlick and Jerry Phillips of the Coos Bay Office, Forestry Department who together have surveyed the parcel and reported their findings, January 29, 1975. Chris Maser has surveyed the tract in the fall of 1974 for mammals and birds and his help is also acknowledged.

Robert E. Frenkel

September 11, 1976

SUMMARY

A 190 acre tract of State Land Board Common School Fund land in southwestern Curry County adjacent to California is proposed as the Winchuck Slope Natural Area Preserve under the authority of ORS 273.562-273.597. The parcel, located in Section 16, Township 41 South, Range 12 West (W.M.), is approximately four miles from the Pacific coast and at an altitude ranging from 520 to 1510 feet. The surrounding land to the north and south (California) is privately owned, to the east and west is federally owned, administered by the U. S. Forest Service.

The preserve is proposed in order to protect redwood forest near its northern limits, Douglas-fir-western hemlock forest, mixed evergreen forest, tanoak-madrone forest and riparian hardwood forest. The candidate preserve will protect the habitat of the red tree vole which is listed as endangered in Oregon by Olterman and Verts (1972). A genetically distinct population of red tree voles is unique to this area. This vole only inhabits forests older than 30 years. With accelerating harvesting of forests in southwestern Curry County, the habitat of this species is rapidly being destroyed. A number of other animal species at their range limits occurs in the parcel and protection of their habitat is important. The tract will provide a bench mark against which to compare forest management treatments on similar nearby forest types. Because the area includes a diversity of vegetation types ranging from dry shrubby communties with manzanita and golden chinkapin to moist stream canyon communities containing western hemlock, redwood, and California laurel, the area will be important for initiating ecological studies across moisture gradients. The proposed preserve will serve as an important research and educational resource and will help fill a number of natural area needs listed in Dyrness et al. (1975) which presently are not adequately protected on federal, state or private lands. A more detailed description and ecological analysis of the candidate preserve follows.

The tract, owned by the State Land Board, is administered under statutory agreement (ORS 530.490) by the Department of Forestry, Coos Bay Office. The Department regards the parcel, as potentially being part

of a future land exchange. No specific land exchange has been proposed. No active timber management practices such as thinning or harvesting have taken place. A road, built by and at the expense of the Simonson Lumber Company, crosses the western portion of the area. Access to this proposed natural area preserve is by Simonson land in California. The surrounding private land has been logged.

Economic values were very roughly estimated by the Coos Bay Office, Forestry Department at about $650,000 but no appraisal of timber or land has been made. Forestry has estimated that the area contains site class II, III, and upper III lands. About one-third of the area consists of dry forest with a southeast exposure. A more detailed account of resource values and management considerations appears in the report.

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PRESERVE ANALYSIS: WINCHUCK SLOPE

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Name of Natural Area Preserve Candidate

Proposed Name

"Winchuck Slope Natural Area Preserve" is proposed as the name for this natural area. The Committee has been informally referring to the area as the "Land Board Redwood Area" with reference to its ownership as part of the Common School Fund Forest Land and to the presence of a number of redwood trees. These trees, although important forest components, do not characterize the vegetation sufficiently to have the area named for them. A geographic name, therefore, is preferred.

Reasons for Preservation

Although the Winchuck Slope parcel was initially selected for Committee consideration based on a survey of selected State Land Board forest lands, the comprehensive remote sensing inventory of potential natural areas on state-owned land in Curry County sponsored by the Natural Area Preserves Advisory Committee, also identified the tract as having "good potential for (a) natural area preserve" (Mairs, 1975). About one percent of Curry County is state-owned. Of this state-owned land, about 20 percent is State Land Board Common School Fund land, the remainder being Department of Transportation State Parks land located exclusively along the coast. Of the State Land Board land, the inventory identified five parcels, three of which were considered as having good potential for natural areas. The Winchuck Slope tract was one of these three; the other two supported knobcone pine and represented entirely different

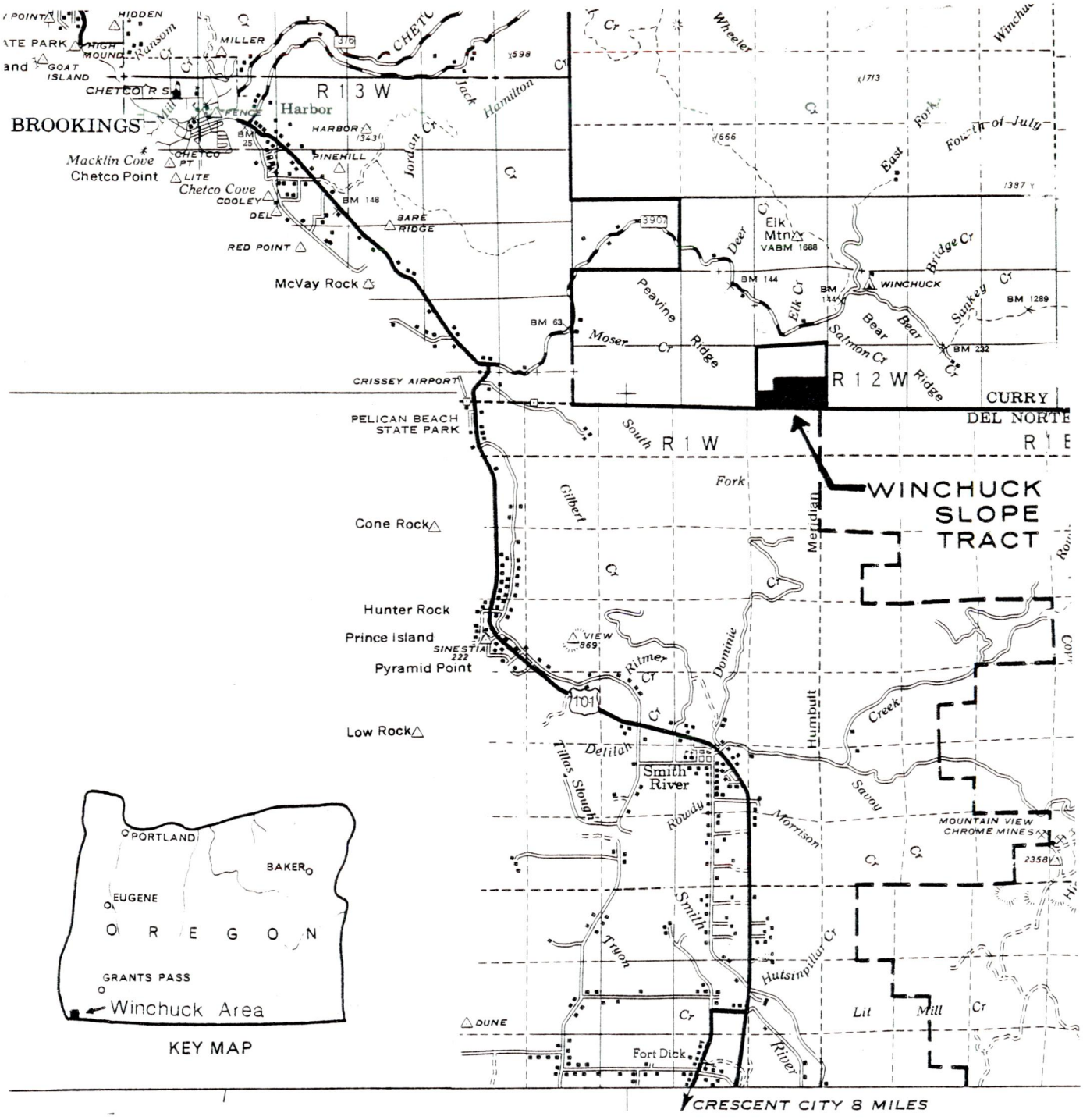


Figure 1. Location of proposed Winchuck Slope Natural Area Preserve.
Source: U. S. Forest Service, Siskiyou National Forest map.

ecosystems. The U.S. Forest Service has no other comparable vegetation types available for natural area preserves (pers. comm. W.P. Ronayne, Supervisor, Siskiyou National Forest). Thus, the candidate area is not duplicated by other public land, and represents the best candidate of state-owned land for filling the natural area needs of a mixed-evergreen forest.

The preserve will:

(1) protect a typical set of ecosystems identified in Research Natural Area Needs in the Pacific Northwest (Dyrness et al., 1975) including redwood forest near the northern limits of its range, Douglas-fir-western hemlock forest, mixed-evergreen forest (Douglas-fir and evergreen hardwoods), tanoak-madrone forest, riparian hardwood forest,

(2) protect the southernmost habitat of the red tree vole (Aborimus longicaudus) which is listed in Endangered Plants and Animals IV Mammals (Olterman and Verts, 1972) and has been studied by Maser (1966) and is currently being studied by Dr. Murray Johnson; the area will also help protect the best population of ringtails (Bassariscus astutus) in Oregon,

(3) provide a bench mark against which to compare various management treatments of similar forest types nearby, and

(4) complement Wheeler Creek RNA by providing a north and east facing slope system representing a more typical mixed-evergreen forest community than exists at Wheeler Creek.

Description of Area

Legal Description

The candidate preserve occupies 76.7 ha (189.40 ac) in the southern half of Section 16, Township 41 South, Range 12 West, Willamette Meridian. The parcel includes the entirety of the Section Tax Lots: 13 (40.55 ac), 14 (40.55 ac), 15 (19.30 ac), 17 (14.43 ac), 18 (16.25 ac), 19 (18.22 ac), and

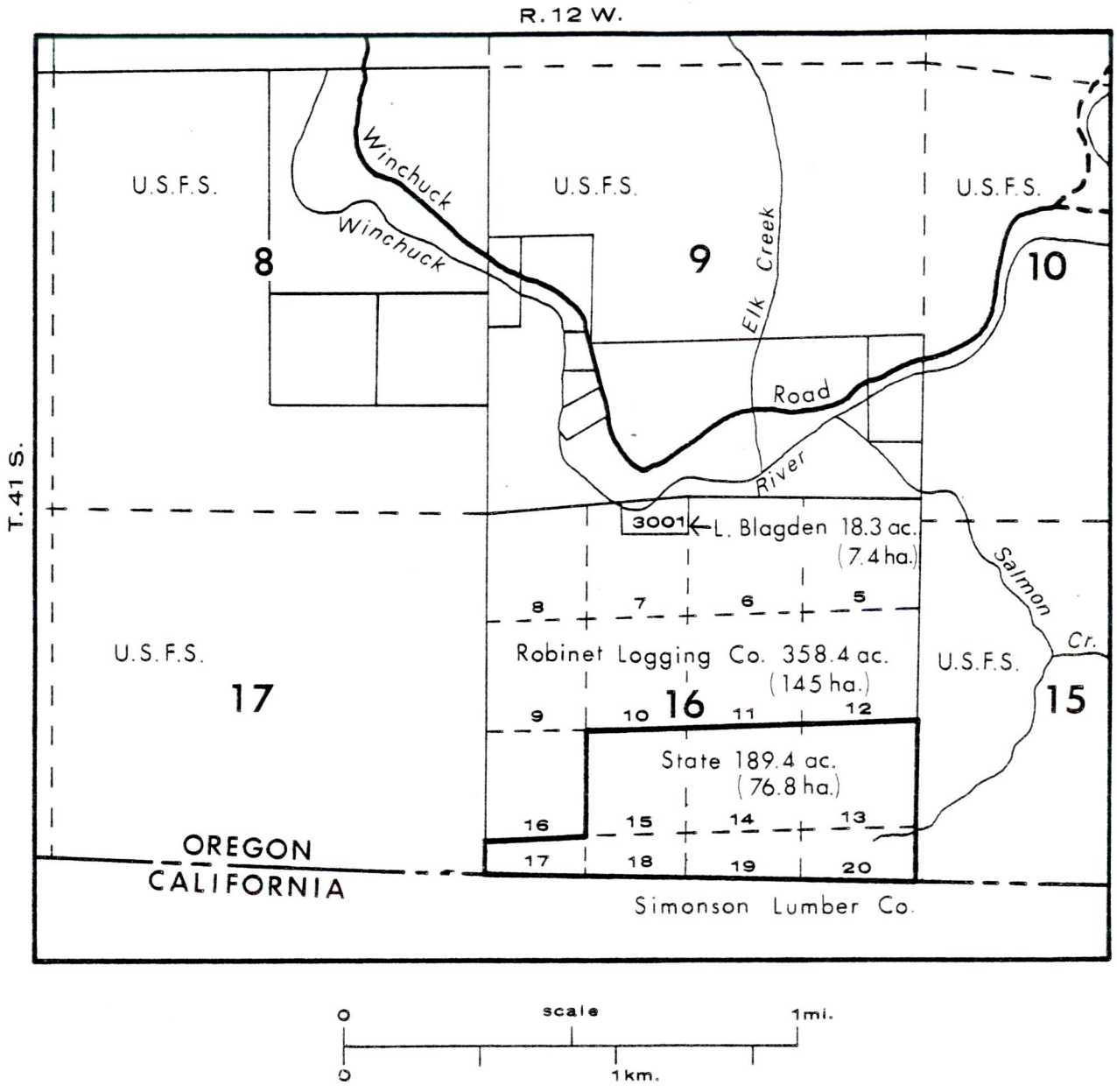


Figure 2. Land ownership in the vicinity of the proposed Winchuck Slope Natural Area Preserve. Source: Curry County Tax Assessor.

20 (20.10 ac) as shown in Figure 2.

The proposed preserve is bounded on the north by logged-over land owned by Robinet Logging Company, on the east and west by U.S. Forest Service land administered by the Siskiyou National Forest and on the south by logged-over land in California owned by the Simonson Lumber Company of Smith River, California.

Ownership

The proposed area is owned by the State Land Board and represents Common School Fund Forest Land administered under statutory agreement (O.R.S. 530.490) by the Department of Forestry, Coos Bay Office.

A temporary right-of-way was granted to Simonson Lumber Company (Smith River, CA) in 1961 to construct a road (No. 290) which traverses about 640 m (2000 ft) of the western third of the parcel. The temporary right-of-way was returned to the State upon completion of the project in 1969 and the bond was returned to Simonson Lumber Company.

Biological and Physical Description

Ecosystems and Cells

"Cells" refer to specific ecological type needs for a complete natural area system. These cells have also been called "ecological elements" (The Nature Conservancy, 1975). Cells, or type needs have been identified for Oregon and Washington in Research Natural Area Needs in the Pacific Northwest--A Contribution to Land-Use Planning (Dyrness et al., 1975). The Winchuck Slope candidate will help complete the following terrestrial cells in the Siskiyou Mountain Province:

(1) Redwood forest near the northern limits of its range
(2) Douglas-fir-western hemlock forest
(3) Mixed-evergreen forest (Douglas-fir and evergreen hardwoods)
(4) Tanoak-madrone forest

(5) Riparian hardwood forest along a major west-side river (with alder, bigleaf maple, and California laurel)

(6) Major stream drainage in mixed-evergreen forest

Of the above cells, the proposed Winchuck Slope area would complete the redwood forest need, complementing the filling of that cell by Wheeler Creek RNA and it would contribute importantly in filling the mixed-evergreen forest cell. The other terrestrial type needs would only be partially filled by the proposed preserve. Wheeler Creek RNA has a purer stand of redwoods while in Winchuck Slope redwood trees are thinly scattered in moist sites.

Certain rare endangered species are also regarded as "cells" within a natural area system. The following rare and endangered vertebrate animal cells in the Siskiyou Mountains Province are listed in Dyrness et al. (1975) and are found in the Winchuck Slope candidate preserve:

(1) California slender salamander (Batrachoceps attenuatus)
(2) Del Norte salamander (Plethodon elongatus)
(3) Red tree vole (Aborimus longicaudus)

The red tree vole is an animal presently lacking adequate habitat protection and the candidate preserve would contribute substantially to securing the habitat of this tree vole. The vole population in the area is especially important because it is the southern extremity of its range. The two salamanders are peripheral species at the northern end of their geographical distribution and, although they are also found in Wheeler Creek RNA, their additional protection is very desirable (Appendix 9). It is noteworthy that if the area is brought into timber harvest the habitat of these animals will be destroyed and the animals will be further endangered (Maser, pers. comm.).

Beside the three above listed vertebrate animals, there are a number of additional animal species marked and listed in Appendix 3 which are rare or uncommon in the state and which are known in the parcel area. As a detailed floristic exploration of the area has not taken place it is not known whether any vascular plants of special interest exist in the tract. Both Trillium kurabayashii and Clintonia andrewsiana might be expected in the area.

General Environment

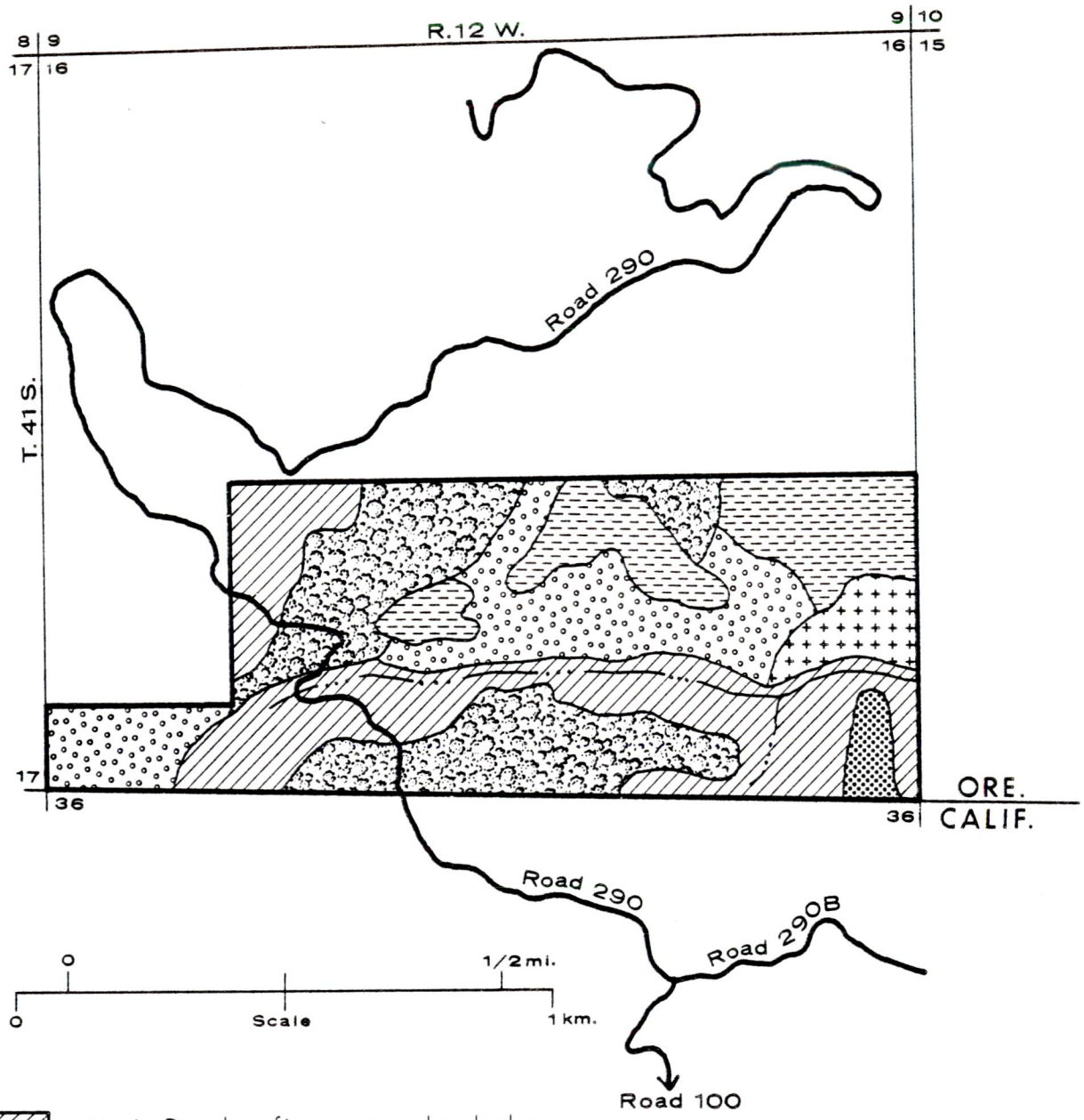
The Winchuck Slope tract occupies the upper eastern portion of Peavine Ridge which bounds the Winchuck River on the south a few kilometers inland from the Pacific Ocean. The parcel slopes steeply in an easterly direction and is protected by a higher [60 to 90 meters (200 to 300 feet)] ridge situated immediately south of the Oregon-California border. This ridge is the divide between the south fork and main stem of the Winchuck River (Figure 1). Because of the proximity to the Pacific Ocean and an elevation of 300 meters (1000 feet), the tract receives abundant [1830 mm (72 inches)] rainfall October through April.

The area is sufficiently elevated to avoid the influence of the cold California current and related fog during the summer; however, the easterly and northerly aspect of the area leads to some decrease of summertime temperatures.

A prominent ridge in the center of the candidate preserve with thin gravelly soils and a southerly exposure, supports a heavy cover of manzanita and madrone. Much evidence (vegetation and charcoal) exists of repeated fire. Elsewhere, coniferous and mixed-evergreen hardwood forest prevails and also exhibits a pattern of past fire. The upper arm of the west fork of Salmon Creek bisects the Winchuck Slope tract. The upper course of this stream is intermittent but the lower portion is perennial.

Plant Communities

Situated at the coastal margin of the Siskiyou Mountains Province, the proposed Winchuck Slope natural area preserve is best placed in Franklin and Dyrness' (1973) Tsuga heterophylla Zone as evidenced by vigorous reproduction of T. heterophylla in mesic locations. Dyrness, Franklin, and Maser (1973) discuss the position of Wheeler Creek RNA in various formational units and recognize the intermediate position of this area between the Picea sitchensis Zone and the Tsuga heterophylla Zone; they conclude that Wheeler Creek RNA is best referrable to Waring and Major's (1964) Redwood III--Douglas-fir III vegetation type group.



Mesic Douglas-fir-western hemlock-bigleaf maple oldgrowth with oxalis

Douglas-fir-tanoak oldgrowth

Douglas-fir-tanoak young growth

Xeric Douglas-fir-tanoak

Xeric Douglas-fir-tanoak scattered oldgrowth with beargrass

Xeric tanoak-madrone with manzanita

Vegetation interpretation from field examination and color-IR photo 9-8-73 41033-1273-71

Figure 3. Vegetation types in the proposed Winchuck Slope Natural Area Preserve. Source: color IR photographs 41033-973-71.

The Winchuck Slope candidate represents a gradation of vegetation types ranging from Waring and Major's Douglas-fir IV--Madrone-Tanoak type on dry south-facing ridges through the dominant Redwood III--Douglas-fir III type to the Redwood II--Douglas-fir III type adjacent to valley bottoms.

Tentative plant community classification followed normal field reconnaissance methods in which fifteen sample plots were selected to characterize vegetation associated with a variety of environmental conditions. Floristic field data were collected together with environmental information for each plot including slope, aspect, topographic position, coverage, stratification, and general characteristics of soils. On a number of plots quantitative data were recorded using a wedge prism and diameter tape to get an idea of stand basal area for major tree species. Occasional data were recorded for tree age with an increment borer. Floristic data were analyzed using the computer program, PHYTO, developed by J.J. Moore (1970) (Appendix 1).

Three plant communities all dominated by Pseudotsuga menziesii and Vaccinium ovatum, were tentatively identified (Appendix 1). Lithocarpus densiflora, Polystichum munitum and Rhododendron macrophyllum were also important in almost all stands. (1) The most mesic community is characterized by the presence of Acer macrophyllum, Rubus spectabilis, Athyrium filix-femina, Blechnum spicant and occupies moist coves, the bases of canyons, and sheltered northeast facing pockets. (2) The most prevalent plant community, covering slopes of all aspects but most commonly found on the upper portion of slopes, is strongly dominated by dense thickets of Vaccinium ovatum. This widespread community was identified by the minor presence of such species as Viola sempervirens Adenocaulon bicolor and Vaccinium parviflorum. However, the hallmark of this community was the absence of extremely mesic and xeric species. (3) The most xeric community, occupying a ridgetop and an upper south-facing slope, showed strong dominance of Rhododendron macrophyllum, Vaccinium ovatum, and Lithocarpus densiflora but was differentiated by the presence of Lotus crassifolius, Arbutus menziesii and Castanopsis chrysophylla.

Vegetation patterns are displayed in Figure 3. Additional field data is needed to fully describe and classify the candidate area.

Table 1. Ring counts on selected trees in the Winchuck Slope candidate natural area preserve.

Tree Species	DBH (m)	Ring Count	Location
Pseudotsuga menziesii	0.05	20	upper S. slope
Sequoia sempervirens	0.61	65	lower flat
Pseudotsuga menziesii	0.74	85	lower flat
Pseudotsuga menziesii	0.77	100	upper flat
Pseudotsuga menziesii	0.85	85	lower flat
Sequoia sempervirens	0.97	125	upper flat
Pseudotsuga menziesii	2.32	500+ (est)	N. slope
Sequoia sempervirens	2.58		lower flat

As discussed earlier, the position of the Winchuck Slope tract close to the coast yet generally elevated from the cooler temperatures prevailing along the coastal strip, leads to high summer-time moisture stresses. Past evidence of fire is also present. The age of the vegetation is generally less than 125 years, yet within the area are a few scattered trees which survived the last major fire and possibly earlier fires (Table 1). A Douglas-fir 2.32 m (7.6 ft) D.B.H. is located just a few hundred meters from where the road enters California. Table 2 presents basal area data for three typical stands in order of increasing dryness: M6, M1, M5.

Successional studies were not carried out but tree reproduction was noted in all samples. Pseudotsuga menziesii appears capable of maintaining dominance in mature forest communities except in the most mesic sites where it gives way either to Tsuga heterophylla or Sequoia sempervirens. Pseudotsuga menziesii normally reproduces as a result of wild fire or other disturbances. In this tract there was minor reproduction of Pseudotsuga in the forest floor. Alnus rubra, Acer macrophyllum and Umbellularia californica are found along the stream margins and showed reproduction with vegetative reproduction common for the latter two species. The presence of Arbutus menziesii, Lithocarpus densiflora and Castanopsis chrysophylla on the drier sites with individual trees frequently showing signs of stump sprouting suggests the role of these evergreen hardwoods as residual species in the successional sequence.

Flora

Appendix 2 lists vascular plant species found in the tract on the two visits. Species diversity is especially high within the candidate area because of the diversity of topographic positions ranging from moist to dry and because the area is situated at the margin of the Siskiyou Mountain and Klamath Mountain floristic provinces which are known for their floristic diversity (Whittaker 1961), although a large number of rare plant species are not likely to be found in this forested tract.

Fauna

The Winchuck tract is especially important as habitat for a number of

Table 2 . Maximum diameter and basal area for dominant tree species in three stands within the Winchuck Slope candidate natural area preserve.

Species	Plot Numbers[a]					
	M1		M5		M6	
	Max. d.b.h. cm	Basal area[b] m^2/ha	Max. d.b.h. cm	Basal area[b] m^2/ha	Max. d.b.h. cm	Basal area[b] m^2/ha
Pseudotsuga menziesii	89	23	84	28	97	14
Sequoia sempervirens	91	25	-	-	-	-
Lithocarpus densiflora	22	3	33	10	31	5
Umbellularia californica	-	-	-	-	31	5

a Stand M1 was in a slight depression at the north edge of the tract at the base of a steeply sloping north aspect slope. Stand M5 was at the southern edge of the tract on a southwest-facing ridge near the ridge-top with a general slope of 20^{o}. Stand M6 was near the center of the tract, immediately southeast of the main stream juncture that occurs in the tract. Stand M6 was on a 40^{o} west-southwest slope.

b Basal area data determined by wedge prism counts from corners of 15 x 25 m samples.

vertebrate animal species of scarce distribution. Chris Maser, a professional zoologist who has done extensive field work in the area, visited the candidate area and compiled a tentative list of animals for the area (Appendix 3).

As mentioned earlier there are three animal species listed as "rare and endangered" in Dyrness et al. (1975). Especially important is the presence of the red tree vole, Arborimus longicaudus, since this is the southern-most population of this vole and those voles found near the proposed preserve have an unusual and important karyogram (48 chromosome population) which is different than that of other Oregon populations and different than that of other species of related red tree voles in northern California (pers. comm., Dr. Murray Johnson). According to Maser (pers. comm.), with the degree and intensity of timber harvest in the vicinity of the proposed preserve, this population of rare to uncommon small mammals could become extinct. As timber harvest eliminates most populations, preservation of the habitat in this candidate area is especially important.

Maser also points to the hoary bat, red-tree vole, and ringtail cat as rare to uncommon in Oregon. The State Forestry Department also affirms that the general area also supports populations of the ringtailed cat (Bassariscus astutus). Maser (pers. comm.) asserts that this is "one of the better populations" in Oregon (Appendix 9).

The general area supports a population of black-tailed deer and a small but growing population of Roosevelt elk. The elk have been introduced by the Fish and Wildlife Department. Signs of the elk have been seen in a number of vegetation stands sampled. Hunting pressure is mostly from local people and besides an occasional spent shell there was little evidence of hunting use.

A tentative list of birds has been compiled for the area by Jim Collins, Fish and Wildlife Department (Appendix 4). A partial list of insects collected by Dr. David McCorkle is included as Appendix 5.

According to the Fish and Wildlife Department the biologic status of the Salmon Creek system is unknown. The aquatic system needs to be physically surveyed.

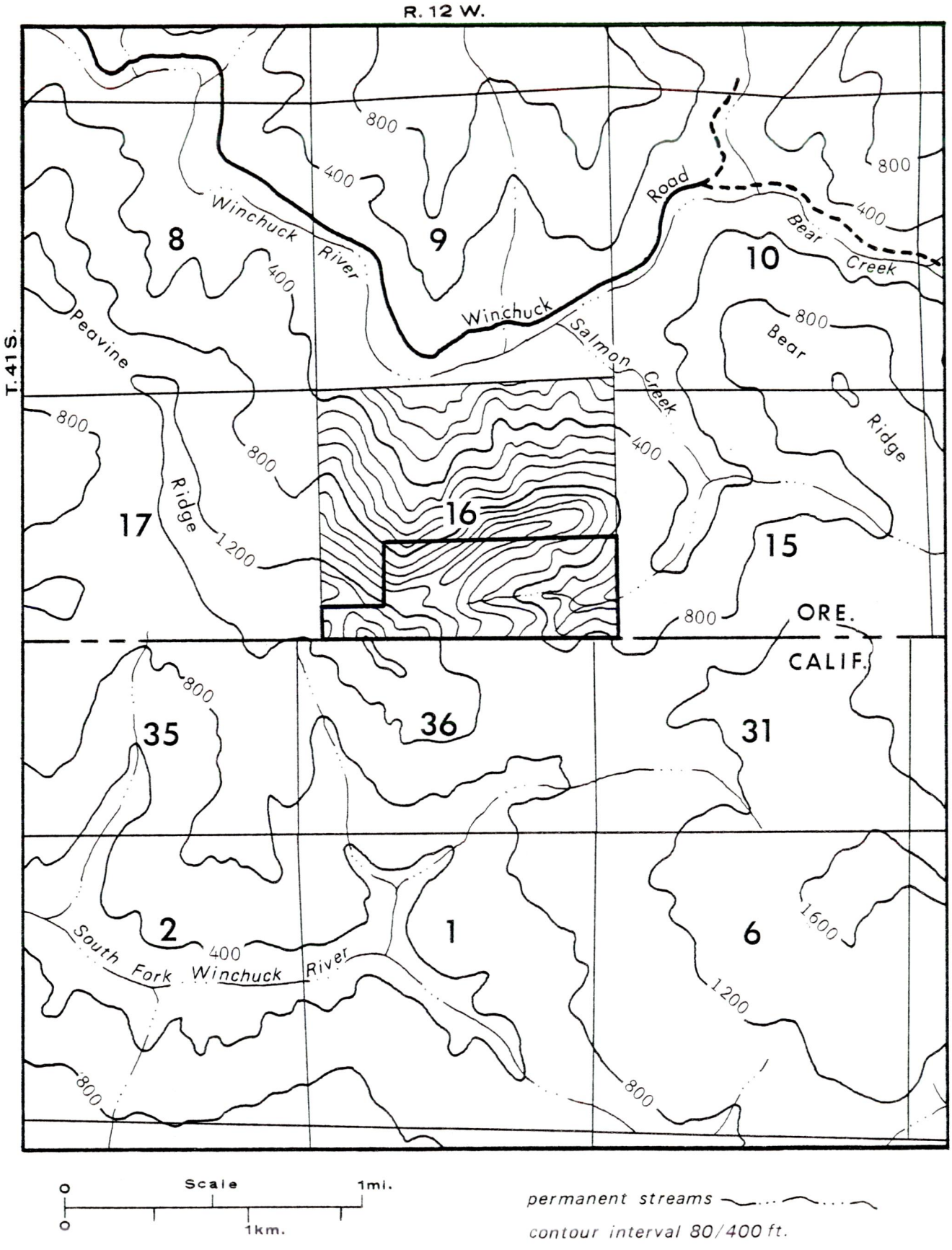


Figure 4. Topography in the vicinty of the proposed Winchuck Slope Natural Area Preserve. Source: USGS Mt. Emily, Oregon and Cresent City, California 1:62,500 quadrangles.

Geology, Soils and Hydrology

The geology of the Winchuck Slope tract has not been explicitly studied. Dott (1971), who has reported on the regional geology of the southwestern Oregon coast, has mapped the area and identified the parcel as being underlain by massive sandstone rocks classified as the Winchuck member of the Dothan Formation. This formation, of Jurassic age, is composed of black mudstone and siltstone. Prominent outcrops appear throughout the parcel and consist of poorly sorted wackes with much pebbly feldspar and a matrix of dark red silt and clay.

No soils reconnaissance was made in the course of the present analysis. Approximately two-thirds of Section 16, T. 41 S., R. 12 W. was included as part of the Curry Area, Oregon Soil Survey (1970). The soils of Winchuck Slope parcel are partly identified in the detailed soil survey as belonging to the Orford silty clay loam series, on 30 to 70 percent slopes. These are well drained, fine textured soils derived from the regionally prevalent siltstone and sandstone. A typical profile has a very dark brown friable silty clay loam surface horizon. The subsoil is a very dark grayish-brown silty clay at the base of the B horizon. The litter layer is about 5 cm thick. The A horizon ranges from 25 to 35 cm. The entire solum ranges from 90 to 150 cm (36 to 60 inches) thick. The relatively thick solum permits deep rooting of trees and relatively little wind throw was noted in the area.

Because of the relatively fine soil texture, runoff is rapid, causing a potential for small landslips and other forms of erosion as is evidenced in surrounding harvested areas. On the other hand, fine textured soils have a high moisture holding capacity, a benefit to the vegetation during times of high moisture stress.

Without quantitative values, hydrologic description must be brief. The system consists of first and second order stream channels which form the integrated network of the Winchuck Slope tract[1]. This network of streams

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1 A first order stream is an ephemeral creek with a slope system accordant with the channel; a second order stream is defined by the juncture of two or more first order streams.

forms a main channel with a perennial flow joining the west fork of Salmon Creek which flows into the Winchuck River (Figure 4). Creek channels are cut 1 to 2 meters into canyon floors. Canyon slopes range from 30 to 50 degrees. Downed logs along and across stream channels give evidence of bank undercutting. The uppermost reaches of the main streams show signs of headward erosion. In early May 1975, following and during a period of heavy rainfall, clear water was observed in the stream system. Most of the drainage area has not been modified by timber operations.

Climate

Climate of the Winchuck Slope area is typically wet and mild in winter with a dry season beginning in June and extending into September. Dense coastal fogs are generally confined to the lower valley and coastal areas and only partly ameliorate the dry summer conditions of the tract. Subfreezing temperatures are rare and snow is relatively infrequent. Strong southwesterly winds accompany winter precipitation.

The closest weather station with an extended climatic record is at Brookings (Table 3). One might anticipate temperatures 2 to 4^{o} C less than recorded at Brookings for the parcel. Because of an orographic effect, precipitation might be expected to be about 10 to 20% more than at Brookings. Rainfall of 2 mm (less than 0.1 inch) or more occurs about 150 to 200 days per year. Maximum twenty-four hour rainfall intensities vary from an annual normal of 100 mm to a 100 year expected frequency of 270 mm. Fog occurs 40 to 60 days per year. A more complete analysis of climatic data appears in the Soil Survey Curry Area, Oregon (USDA Soil Conservation Service, 1970).

Table 3. Selected climatic data from Brookings weather station.[a]

	Month												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Precipitation (mm)	330	266	251	146	102	69	16	16	45	185	286	366	2077 (81.4 in)
Temperature (^{o}C)	8.3	8.8	9.4	10.5	12.6	14.2	15.1	15.0	15.2	13.3	11.0	9.3	11.9 (53.4^{o} F)

a Source: U.S Weather Bureau (1974) Climates of the States-Oregon.

Scientific, Research and Educational Values

The Winchuck Slope tract will be an important element in Oregon's coordinated natural area system involving the federal, state and private sectors. The area will preserve an excellent sample of a mixed-evergreen forest, including a mosaic of forest communities ranging from an extremely dry assemblage on south-facing ridgetops to moist communities characteristic of canyon bottoms. The Winchuck area is rich in animals at the northern margin of their distribution and will help protect the red tree vole (Aborimus longicaudus) listed in Olterman and Verts' (1972) compilation of endangered Oregon mammals.

As a bench mark against which to measure disturbances associated with timber harvesting and forestry management on surrounding private and federal lands, the Winchuck tract is unexcelled. Analytical studies comparing community structure, diversity, composition, and functioning can be initiated within the tract and outside. The integrity of the first and second order streams can lead to studies of water quality on protected low order drainages. Studies could be pursued to relate environmental factors to the distribution of redwood near its northern margin of distribution. Likewise, studies on vertebrate animals near the edge of their distribution could be carried on. Studies of the mosaic of forest communities as they relate to soil, moisture and solar energy could be easily carried out in this site because of its uniformity of bedrock and diversity in aspect.

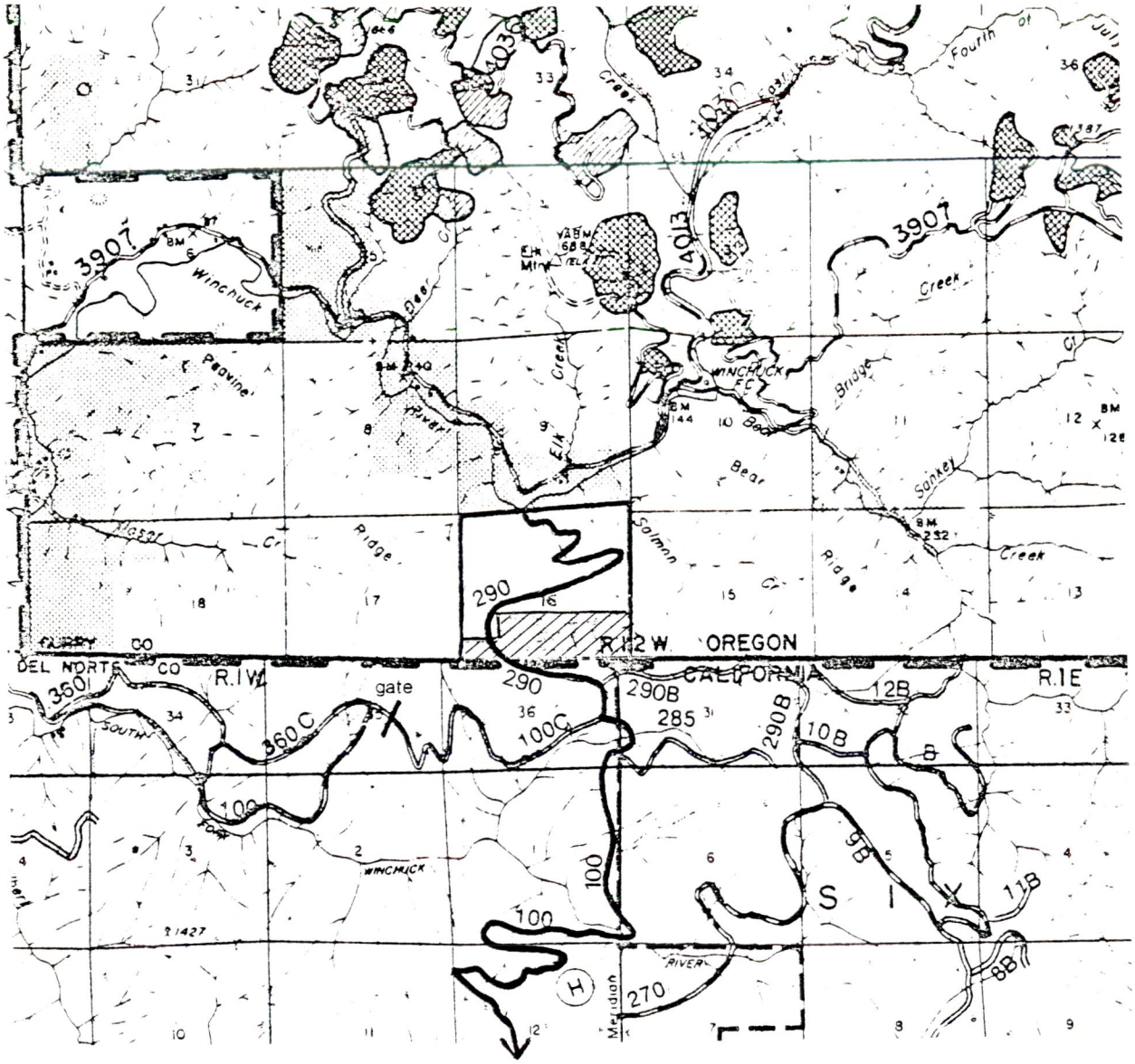
Because the area is remote from major population centers and because of difficult access, secondary school use of the area would probably be minor. However, its isolation is an advantage in protecting the area from excessive use.

Resource Base

Historical and Contemporary Resource Use

Other than timber removal for the road right-of-way, there has been no major resource extraction in the Winchuck Slope parcel to date. Adjoining

T. 41 S.



Miles	
4.2	Jct. (Rd. 200) stay on 100
3.2	Jct. (Rd. 180) stay on 100
3.0	Jct. (Rd. 175) stay on 100
0.0	Start: Simonson Lumber Co. Lumber receiving yard. Take Road 100 straight

Figure 5. Access to the proposed Winchuck Slope Natural Area Preserve-
Source: Simonson Lumber Co. map.

U.S. Forest Service lands to the east and west have not been harvested. Surrounding lands to the north, northwest and south are in private ownership and have been extensively logged. Adjacent logged areas have developed dense successional stands of red alder which had been sprayed with herbicide in 1973. Evaluation of herbicide drift has not been made. Recreation in this general area is of minor importance. The access to the tract is poor because of the locked gates on the Simonson property. The greatest recreational value of the Winchuck tract would be to act as a habitat for wildlife (pers. comm. D.E. Matlick). The area could also serve as an area of passive recreation and nature study.

As mentioned in the wildlife section of this report, the tract supports black-tailed deer, elk, quail, grouse, and bantail pigeons, all of which receive light hunting pressure. Because of difficult access, however, the area apparently receives little hunting use (pers. comm. D.E. Matlick).

Mineral contribution of the Dothan formation and Winchuck member is regarded as of no consequence except for gravel (Dott, 1971). The parcel has no gravel deposits.

Right-of-way, Access and Agreements

Access: Figure 5 describes road access to the Winchuck tract. Permission to use the Simonson Lumber Company road system must be obtained from company offices in Smith River, California ([707] 487-2911). Gates may or may not be locked. Although a number of different roads might be used to get to the tract from the south, in 1975 the following system was preferred. Start through Company log storage area, proceed on central road (100); at 3.0 miles continue left at junction with road 175; continue left on road 100 at junction with road 180; at 5.9 miles bear left at an unmarked junction and drop down to the South Fork Winchuck River; continue on north side of the river bearing right on road 290 at 9.1 miles and then left on road 290 at 9.5 miles, entering the Winchuck Slope tract at 10.0 miles from Simonson Lumber Company yard.

Access to the tract from the north by way of the Winchuck River Road is not apparent. No bridge crosses the river in the vicinity of the proposed

preserve; however, there is a small farm tract on the south side of the Winchuck River which can be reached by road 290. This road passes through the proposed preserve and then traverses Robinet Lumber Company land before reaching the farm. It is possible the farm may be reached in summer by fording the river, but this information was not confirmed.

Road traversing parcel: A sixteen-foot dirt road traverses the southwest portion of the tract. The road was constructed by Simonson Lumber Company in 1961 and is owned by the State Department of Forestry. The Department is not maintaining the road but the road is in good condition, with a gate at the entrance. Two wooden plank culverts installed in the road are now functioning properly, but will probably need replacement before 1985. No plans exist for more roading in the area (pers. comm. D. Matlick). It was estimated the road passes through about 640 m (2000 feet) of the northwest "handle" of the tract and then swings back and just touches the tract at its north-central boundary before swinging northeast and down to the Winchuck River.

Right-of-way agreement: Simonson Lumber Company obtained a right-of-way agreement in 1961. The right-of-way was logged and road constructed as part of the agreement. The bond was returned in 1969 from the right-of-way agreement. Mr. Matlick reports he could not locate a copy of this temporary right-of-way agreement but he is sure the agreement was not permanent. Neither Curry County, the State Forestry Department, nor the Division of State Lands has a record of a permanent agreement for the Winchuck tract.

Management

The Oregon State Department of Forestry has the authority to manage, control, and protect the Common School Fund Forest Lands by statute (ORS 530.490) (see Appendix 8).

The Winchuck Slope tract has been regarded by the Forestry Department as an excellent piece of land for a future land exchange since the parcel is isolated from the Department's main forestry operations. Concurrence of the State Land Board would be necessary for any land exchange. No specific land exchange has been proposed.

Management procedures reported by Forestry to date include:

1. Preliminary timber inventory (1958)
2. Isolated tract analysis (1966)
3. Granting of a temporary right-of-way to Simonson Lumber Company (1961-1969)

Don Matlick (pers. comm.) reports there have been approximately four Department visits to the tract since 1958. Two inspections were related to granting of the right-of-way in 1961, one inspection was made in 1967 and one inspection in January, 1975.

The Department of Forestry has not conducted any timber management practices, such as thinning or harvesting, on the tract. The parcel is inventoried on the Department's OSCUR System ('41, S 12 W' '2') in which the long range operational model identifies a suggested timber management strategy of "convert," meaning timber harvest of old-growth. The land use model identifies the parcel as "limited production isolated" and the cover type model inventoried in 1971 identifies seven types. No harvesting plans for the tract have been made.

Fire protection: Coos Forest Protective Association has contracted with the State Forester to protect approximately 1.5 million acres of land, of which the Winchuck tract is a part. C.F.P.A. has an arrangement with Siskiyou National Forest whereby the agency with the closest forces responds for the initial attack on the fire. All costs in the initial attack phase, except retardant drops, are paid for by the responding agency. All costs beyond the initial attack phase are to be assumed by C.F.P.A. on this piece of land. Appendix 6 shows exactly what equipment will respond from the various stations during different periods of fire danger (pers. comm. D. Matlick).

Economic Values

Except for timber harvest or land exchange or agreement purposes, the Department of Forestry does not normally place a value on the land it manages, nor does the Oregon State Department of Revenue appraise State lands for tax

purposes. No formal appraisal of the Winchuck slope tract has been made. Forestry has estimated the area contains Site Class II, III and upper III lands. Reproduction areas were judged upper level site III. Based on comparison of similar lands within tax zone "A" of Curry County under private ownership for which values varied from $55 per acre (site III) to $77 per acre (site II) a possible land value for 189 acres at $67 per acre would be $12,663 (Appendix 7). This value is based on Department of Revenue estimates.

Of the 189 acres (76.5 ha), Forestry estimates 148 acres (60 ha) support merchantable timber. Several different types of timber stands exist on the tract, which are defined in Appendix 7. The 148 acres of timber has approximately 5,492,000 board feet (net) of merchantable conifers and approximately 152,000 board feet (net) of merchantable hardwood. These figures are estimates based upon field and aerial photographs. The area has not been cruised (Appendix 7).

The State Department of Revenue does not appraise or tax the timber on the Winchuck tract, so a value of the timber is not readily available. Don Matlick, State Forestry (pers. comm.) has very roughly estimated the value of the timber based upon current market prices. The approximate present estimated value of the merchantable timber is $615,528, or $4,158 per acre. The approximate value of the 30 year old reproduction is $15,350, or $370 per acre (Appendix 7).

Total values for the tract have been roughly estimated by Forestry based on January, 1975 market values in southwestern Oregon (Appendix 7):

$ 12,663	land value
$615,528	merchantable timber value
$ 20,900	reproduction timber value (80 year rotation)
$649,091	Total

No independent evaluation of these economic values has been made by the Natural Area Preserves Advisory Committee. Forestry has made no formal appraisals of timber or land for this tract.

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APPENDIX I

Plant Community Analysis of the Winchuck Slope Candidate Natural Area Preserve

Floristic data were taken at 15 sample stands each approximately 30x30 m. Species "total estimate" according to Braun-Blanquet (Mueller-Dombois and Ellenberg, 1974) was recorded. Data were processed by J.J. Moore's (1970) PHYTO program developed at University College, Dublin by which the first stages of a Braun-Blanquet tabular rearrangement are achieved by program-selection of the two "best" pairs of opposing "differential" species.

Computer output, is displayed below (p.27) showing three groups of stands. A, B, and C each distinguished by groups of species. Group A, the most mesic community group is characterized by Acer macrophyllum and Rubus spectablis, but such species as Oxalis oregana, Adiantum pedatum, Asarum caudatum, Listera cordata, and Osmaronia cerasiformis show preference for this group. Community Group B was identified by the absence of the species characterizing Groups A and C, but dominance by Vaccinium parvifolium and Sequoia sempervirens helped separate this group from the others. Group C, the xeric ridgetop group of stands, is identified by Lotus crassifolius and Arbutus menziesii, but also has such species as Arctostaphylos columbiana.

A second computer run is shown (p.28) which regards the degree of restriction of a plant species to a given plant community as more important than dominance. This run identifies the same xeric group as before but characterizes the most mesic community by the presence of Montia sibirica and Athyrium filix-femina. Many species transcend the three identified groups and are found in all stands. Because sampling was only at a preliminary stage, further refinement of the tabular analysis was not judged worthwhile. The table below (p.26) shows site characteristics of the 16 stand samples. The tabulation in the subsequent tables shows community groupings (p.27 and p.28).

Site Characteristics of 16 Stands in Winchuck Slope Candidate Natural Area Preserve

Field No.	J1	J2	J3	J4	J5	J6	J7	J8	J9	M1	M2	M3	M4	M5	M6	M7
Serial No.	6	7	-	14	15	13	8	4	1	5	9	10	3	11	12	2
Sample Date	7-1-74	7-1-74	7-1-74	7-1-74	7-2-74	7-2-74	7-2-74	7-2-74	7-2-74	5-2-75	5-2-75	5-2-75	5-2-75	5-3-75	5-3-75	5-3-75
General Location	Ck head	Ck head	Ridgetop	Ridgetop	Ridgetop	Ridgetop	Ridgeslope	Ck head	Ck bottom	N. boundary	N. slope	Cent. ridge	Panhandle	S. boundary	Lower canyon	Ck bottom
Moisture Status	Int.	Int.	Xeric	Xeric	Xeric	V. Xeric	Int.	Int-Mesic	Mesic-Hydric	Int.-Mesic	Int.	Int.	Mesic	Int.-Xeric	Mesic	Mesic-Hydric
Slope (°)	30	10	15	20	17	33	35	30	0-35	5	7	20	10	20	40	0-30
Aspect (comp)	SE	SE	W	W	E	E	SE	N	NE	N	N	N	NE	SW	WSW	N
Community Gp.	B	B	_	C	C	C	B	A	A	A	B	B	A	B	B	A
No. Species	29	29	11	11	13	21	27	23	31	16	16	10	22	16	17	24
Tree Cover (%)	50	50	40	40	8	60	60	70	80	65	55	30	55	35	40	30
Shrub Cover (%)	10	50	70	80	80	80	50	10	50	10	80	95	30	80	30	95
Herb Cover (%)	70	20	10	10	10	50	50	90	70	70	30	4	40	30	80	90
Remarks			no quant. data			fire signs		heavy pomu	riparian	swale		inpent. Vaov	Swale			riparian

Tabular Arrangement of Floristic Community Data for the

Winchuck Slope Candidate Natural Area Preserve

Dominance Weighting

			A					B							C		
		FIELD DATA NUMBER	J9	M7	J1	J2	J8	J7	M1	M2	M3	M4	M5	M6	J6	J4	J5
PRESENCE	CODE	SERIAL NUMBER	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
6	7	ACER MACROPHYLLUM	2	2	+	+	1	+									
4	13	RUBUS SPECTABILIS	1	3	+	+											
4	35	BROMUS VULGARIS	+		+	+		+									
3	46	GRAMINEAE A	+				+	+									
3	50	ADIANTUM PEDATUM	+	+			+										
2	15	OSMARONIA CERASIFORMIS			+	+											
2	32	LISTERA CORDATA			+	+											
2	53	MIMULUS GUTTATUS	+	+													
2	56	ASARUM CAUDATUM	+	+													
2	58	STACHYS SPP	+	+													
3	39	LOTUS CRASSIFOLIUS													+	2	2
3	8	ARBUTUS MENZIESII													1	+	+
15	1	PSEUDOTSUGA MENZIESII	3	1	1	3	3	3	3	3	2	3	3	3	1	3	+
14	12	VACCINIUM OVATUM	2		+	2	+	1	2	5	5	2	4	2	3	4	3
13	26	POLYSTICHUM MUNITUM	3	5	4	2	5	2	4	1	+	3	1	5	+		
13	6	LITHOCARPUS DENSIFLORA			1	1	1	3	1	+	1	+	1	1	3	1	1
12	11	RHODODENDRON MACROPHYLLUM	+		+	3		1	+	+	3	1	1		3	3	2
11	33	TRILLIUM OVATUM	+	+	+	+	+	+	+	+		+	+	+			
10	27	GALIUM SPP	+	+	+	+	+	+		+		+	+	+			
10	31	BERBERIS NERVOSA			+	1	+	1	+	+	+	+	+		+		
10	14	VACCINIUM PARVIFOLIUM	1	2	+	+			+	3	1	1	1		+		
9	25	PTERIDIUM AQUILINUM			+	+	1	+					+	+	+	+	+
9	29	GAULTHERIA SHALLON	+		+	2		1		+		+			2	+	+
9	4	SEQUOIA SEMPERVIRENS	1		+	+		+	3	1	+	1				2	
9	34	OXALIS OREGANA	3	2	+	+	+		+	+		+		+			
9	5	UMBELLULARIA CALIFORNICA	2	2	+	+	+			+	+			2			+
8	36	DISPORUM SMITHII	+	+	+	+	+	+					+		+		
8	38	VANCOUVERIA HEXANDRA	+	+	+	+	+	+	+					+			
7	30	XEROPHYLLUM TENAX			+	1					+		+		+	1	1
7	2	ALNUS RUBRA	+	1	+	+	+							+	+		
7	3	TSUGA HETEROPHYLLA	1		+	+	+		1	+		2					
6	37	BLECHNUM SPICANT	1	+	+	+			+			+					
6	41	VIOLA GLABELLA					+	+	+	+					+	+	
5	24	ADENOCAULON BICOLOR	+		+	+		+				+					
5	28	RUBUS URSINUS			+	+							+		+		+
5	47	MONTIA SIBIRICA	+	+			+		+			+					
5	10	CORYLUS CORNUTA VAR CALIFORN	+				+	+						1	+		
4	22	TRIENTALIS LATIFOLIUM			+	+								+	+		
4	23	VIOLA SEMPERVIRENS			+	+		+					+				
4	45	SMILACINA RACEMOSA		+				+				+	+				
4	51	ATHYRIUM FILIX-FEMINA	1	+			+					+					
3	48	POLYPODIACEAE SPP											+	+	+		
2	9	CASTANOPSIS CHRYSOPHYLLA													+		1
2	59	LUZULA SPP							+					+			
2	20	ACER CIRCINATUM		+										+			
2	57	MAIANTHEMUM DILATUM	+									+					
2	61	ACKLYS TRIPHYLLA						1				+					
2	63	SMILACINA STELLATA		+								+					
1	16	ARCTOSTAPHYLOS COLUMBIANA															3
1	17	ROSA GYMNOCARPA						+									
1	18	HOLODISCUS DISCOLOR						+									
1	19	RHUS DIVERSILOBA						+									
1	21	RIBES BRACTEOSUM		1													
1	42	BOSCHNIAKIA HOOKERI													+		
1	43	WHIPPLEA MODESTA						+									
1	44	CAMPANULA PRENANTHOIDES						+									
1	49	HIERACIUM ALBIFLORUM					+										
1	52	GRAMINEAE B					+										
1	54	TIARELLA TRIFOLIATA	1														
1	55	CAREX SPP	+														
1	60	TIARELLA UNIFOLIATA								+							
1	62	CLINTONIA UNIFLORA										+					
1	64	CARDAMINE ANGULATA												+			
1	65	HYDROPHYLLUM TENUIPES		+													
			1	2	3	4	5	6	7	8	9	0	1	2	3	4	5

Tabular Arrangement of Floristic Community Data for the

Winchuck Slope Candidate Natural Area Preserve

Fidelity Weighting

	A					B							C		
FIELD DATA NUMBER	J9	M7	M4	J8	M1	J1	J2	J7	M2	M3	M5	M6	J6	J4	J5
SERIAL NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MONTIA SIBIRICA	+	+	+	+	+										
ATHYRIUM FILIX-FEMINA	1	+	+	+											
ADIANTUM PEDATUM	+	+		+											
MAIANTHEMUM DILATUM	+		+												
MIMULUS GUTTATUS	+	+													
ASARUM CAUDATUM	+	+													
STACHYS SPP	+	+													
MIMULUS GUTTATUS	+	+													
SMILACINA STELLATA		+	+												
LOTUS PARVIFOLIUS													+	+	+
ARBUTUS MENZIESII													+	+	+
PSEUDOTSUGA MENZIESII	3	1	3	3	3	1	3	3	3	2	3	3	1	3	+
VACCINIUM OVATUM	2		2	+	2	+	2	1	3	5	4	2	3	+	3
LITHOCARPUS DENSIFLORA			+	1	1	1	1	3	+	1	1	1	3	1	1
POLYSTICHUM MUNITUM	3	5	3	5	4	4	2	2	1	+	1	3	+		
RHODODENDRON MACROPHYLLUM	+		1		+	+	3	1	+	3	1		3	3	2
TRILLIUM OVATUM	+	+	+	+	+	+	+	+	+		+	+			
BERBERIS NERVOSA			+	+	+	+	1	1	+	+	+		+		
VACCINIUM PARVIFOLIUM	1	2	1		+	+	+		3	1	1		+		
GALIUM SPP	+	+	+	+		+	+	+	+		+	+			
PTERIDIUM AQUILINUM				1		+	+	+			+	+	+	+	+
GAULTHERIA SHALLON	+		+			+	2	1	+				2	+	+
OXALIS OREGANA	3	2	+	+	+	+	+		+			+			
SEQUOIA SEMPERVIRENS	1		1		3	+	+	+	1	+				2	
UMBELLULARIA CALIFORNICA	2	2		+		+	+		+	+		2			+
DISPORUM SMITHII	+	+		+		+	+	+			+		+		
VANCOUVERIA HEXANDRA	+	+		+	+	+	+	+				+			
XEROPHYLLUM TENAX						+	1			+	+		+	1	1
ALNUS RUBRA	+	1		+		+	+					+	+		
TSUGA HETEROPHYLLA	1		2	+	1	+	+		+						
BLECHNUM SPICANT	1	+	+		+	+	+								
VIOLA GLABELLA				+	+			+	+				+	+	
ACER MACROPHYLLUM	2	2		1		+	+	+							
RUBUS URSINUS						+	+				+		+		+
ADENOCAULON BICOLOR	+		+			+	+	+							
CORYLUS CORNUTA VAR CALIFORN	+			+				+				1	+		
TRIENTALIS LATIFOLIUM						+	+					+	+		
VIOLA SEMPERVIRENS						+	+	+			+				
BROMUS VULGARIS	+					+	+	+							
RUBUS SPECTABILIS	1	3				+	+								
SMILACINA RACEMOSA		+	+					+			+				
POLYPODIACEAE SPP											+	+	+		
GRAMINEAE A	+			+				+							
LISTERA CORDATA						+	+								
OSMARONIA CERASIFORMIS						+	+								
LUZULA SPP					+							+			
ACHLYS TRIPHYLLA			+					1							
ACER CIRCINATUM		+										+			
ARCTOSTAPHYLOS COLUMBIANA															3
ROSA GYMNOCARPA								+							
HOLODISCUS DISCOLOR								+							
RHUS DIVERSILOBA								+							
RIBES BRACTEOSUM		1													
BOSCHNIAKIA HOOKERI													+		
WHIPPLEA MODESTA								+							
CAMPANULA PRENANTHOIDES								+							
HIERACIUM ALBIFLORUM				+											
GRAMINEAE B				+											
TIARELLA TRIFOLIATA	1														
CAREX SPP	+														
TIARELLA UNIFOLIATA								+							
CLINTONIA UNIFLORA			+												
CARDAMINE ANGULATA												+			
HYDROPHYLLUM TENUIPES		+													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	

APPENDIX 2

Preliminary list of Vascular Plants in the Proposed Winchuck Slope Natural Area Preserve

This list was prepared from collected and observed plant species during two field visits to the parcel, early July, 1974 and early May, 1975. A more complete seasonal sampling would provide a more comprehensive list. Nomenclature follows Hitchcock, (1973).

Scientific Name	Common Name
Acer circinatum Pursh	vine maple
Acer macrophyllum Pursh	bigleaf maple
Achlys triphylla (Smith) DC.	deerfoot vanillaleaf
Adenocaulon bicolor Hook.	trail plant
Adiantum pedatum L.	western maidenhair-fern
Alnus rubra Bong.	red alder
Arbutus menziesii Pursh	Pacific madrone
Arctostaphylos columbiana Piper	hairy manzanita
Asarum caudatum Lindl.	wild ginger
Athyrium filix-femina (L.) Roth	ladyfern
Berberis nervosa Pursh	Oregongrape
Blechnum spicant (L.) With.	deerfern
Boschniakia hookeri Walpers	ground-cone
Bromus vulgaris (Hook.) Shear	Columbia brome
Campanula prenanthoides Dur.	California harebell
Cardamine angulata Hook.	seaside bittercress
Carex spp	sedge
Castanopsis chrysophylla (Dougl.) A.DC.	golden chinkapin
Clintonia uniflora (Shult.) Kunth	queencup beadlily
Corylus cornuta Marsh. var californica (DC.) Sharp	western hazel
Disporum smithii (Hook.) Piper	Smith's fairybells
Galium spp	bedstraw

APPENDIX 2 (cont.)

Scientific Name	Common Name
Gramineae A	grass A
Gramineae B	grass B
Hieracium albiflorum Hook.	white hawkweed
Holodiscus discolor (Pursh) Maxim.	creambush oceanspray
Hydrophyllum tenuipes Heller	slender-stemmed waterleaf
Lithocarpus densiflora (Hook. & Arn.) Rehd.	tanoak
Listera cordata (L.) R. Br.	heartleaf twayblade
Lotus crassifolius (Benth.) Greene	thick-leaved lotus
Luzula spp	woodrush
Maianthemum dilatum (Wood) Nels. & Macbr.	false lily-of-the-valley
Mimulus guttatus DC. var. guttatus	yellow monkey-flower
Montia sibirica (L.) How.	western springbeauty
Osmaronia cerasiformis (T. & G.) Greene	Indian plum
Oxalis oregana Nutt. ex T. & G.	Oregon oxalis
Polypodiaceae spp.	fern
Polystichum munitum (Kaulf.) Presl	swordfern
Pseudotsuga menziesii (Mirb.) Franco	Douglas-fir
Pteridium aquilinum (L.) Kuhn	bracken fern
Rhododendron macrophyllum G. Don	Pacific rhododendron
Rhus diversiloba T. & G.	Pacific poison oak
Ribes bracteosum Dougl.	stink currant
Rosa gymnocarpa Nutt.	baldhip rose
Rubus spectabilis Pursh	salmonberry
Rubus ursinus Cham. & Schlecht.	trailing blackberry
Sequoia sempervirens (D. Don) Endl.	coast redwood
Smilacina racemosa (L.) Desf.	western Solomon-plume
Smilacina stellata (L.) Desf.	starry Solomon-plume
Stachys rigida Nutt.	rigid betony
Tiarella trifoliata L.	three-leaved coolwort
Tiarella unifoliata Hook.	western coolwort
Trientalis latifolium Hook.	starflower
Trillium ovatum Pursh[1]	white trillium

APPENDIX 2 (cont.)

Scientific Name	Common Name
Tsuga heterophylla (Raf.) Sarg.	western hemlock
Umbellularia californica (Hook. & Arn.) Nutt.	California laurel
Vaccinium ovatum Pursh	evergreen huckleberry
Vaccinium parvifolium Smith	red huckleberry
Vancouveria hexandra (Hook.) Morr. & Dec.	white inside-out-flower
Viola glabella Nutt.	wood violet
Viola sempervirens Greene	evergreen violet
Whipplea modesta Torr.	Whipple vine
Xerophyllum tenax (Pursh) Nutt.	common beargrass

1 Trillium kurabayashii recently described as a species distinct from T. chloropetalum has been reported from northern Del Norte County, California and this endemic might be present in the candidate area.

APPENDIX 3

Tentative List of Terrestrial Animals in the Proposed Winchuck Slope Natural Area Preserve

This list together with footnotes was prepared by Chris Maser based on field examination of the candidate area and upon a three month field study in a very similar area nearby.

Order	Scientific Name	Common Name
	CLASS MAMMALIA	
Insectivora	Neürotrichus gibbsi	shrew-mole
	Scapanus orarius	coast mole
	Sorex pacificus	Pacific shrew
	Sorex trowbridgi	Trowbridge shrew
Chiroptera	Eptesicus fuscus	big brown bat
	Lasionycteris noctivagans	silvery-haired bat
	Lasiurus cinereus	hoary bat
	Myotis californicus	California myotis
	Myotis evotis	long-eared myotis
	Myotis lucifugus	little brown myotis
	Myotis thysanodes	fringed myotis
	Myotis volans	long-legged myotis
	Myotis yumanensis	Yuma myotis
	Plecotus townsendi	western big-eared bat
Lagomorpha	Sylvilagus bachmani	brush rabbit

APPENDIX 3 (Cont.)

Rodentia	Aplodontia rufa	mountain beaver
	Arborimus longicaudus[1]	red tree vole
	Clethrionomys californicus	California red-backed vole
	Erethizon dorsatum	porcupine
	Eutamias townsendi	Townsend chipmunk
	Glaucomys sabrinus	northern flying squirrel
	Microtus longicaudus	long-tailed vole
	Microtus oregoni	Oregon vole
	Neotoma fuscipes	dusky-footed wood rat
	Peromyscus maniculatus	deer mouse
	Sciurus griseus	western gray squirrel
	Spermophilus beecheyi	Calif. ground squirrel
	Tamiasciurus douglasi	Chickaree
	Zapus trinotatus	Pacific jumping mouse
Carnivora	Bassariscus astutus[2]	ringtail
	Canis latrans	coyote
	Felis concolor	mountain lion or cougar
	Lynx rufus	bobcat
	Martes americana[3]	marten

[1]Southernmost population of red tree vole. The preservation of this vole at the southern extreme of its distribution is critical since logging has, and is, destroying the species habitat over most of its distribution. The species occurs only in western Oregon. It does not inhabit timber of less than 25-30 years of age. The red tree vole in California is a different species (Appendix 9).

[2]The best population of ringtails within Oregon occurs in this area (App 9).

[3]Coastal populations of marten are threatened due to habitat loss. Protection of this segment of coastal marten habitat is advisable. Maser found marten sign within the Winchuck drainage.

APPENDIX 3 (Cont.)

	Mustela erminea	short-tailed weasel or ermine
	Mustela frenata	long-tailed weasel
	Spilogale putorius	spotted skunk
	Ursus americanus	black bear
Artiodactyla	Cervus canadensis	wapiti or elk
	Odocoileus hemionus	black-tailed deer

CLASS AMPHIBIA

Salientia	Ascaphus truei	tailed frog
	Hyla regilla	Pacific treefrog
	Rana boylei	yellow-legged frog
Caudata	Aneides ferreus	clouded salamander
	Batrachoceps attenuatus[4]	California slender salamander
	Dicamptodon ensatus	Pacific giant salamander
	Ensatina eschscholtzi	Oregon salamander
	Plethodon dunni	Dunn salamander
	Plethodon elongatus[5]	Del Norte salamander
	Taricha granulosa	rough-skinned newt

[4]A peripheral species at the northern edge of its distribution. Protection of its habitat is essential.

[5]Although this species does occur to the north, the best populations within the state are in the Winchuck drainage.

APPENDIX 3 (Cont.)

CLASS REPTILIA

Squamata	Gerrhonotus coeruleus	northern alligator lizard
	Scelorporus occidentalis	western fence lizard
Serpentes	Charina bottae	rubber boa
	Thamnophis couchi[6]	western aquatic garter snake
	Thamnophis ordinoides	northwestern garter snake
	Thamnophis sirtalis	common garter snake

[6]Near northern limits of its range.

APPENDIX 4

Birds Expected in the Winchuck Slope Area

Jim Collins, Fish and Wildlife Department, has provided a bird list for the Winchuck Slope Natural Area Preserve candidate. The list has been reviewed and amended by Chris Maser and represents a list of birds expected for the area rather than a "sighting" report. Some of the listed birds may be winter or summer residents only and others may only stop on their migration.

Order	Scientific Name	Common Name
Falconiformes	Accipiter cooperi	Cooper's hawk
	Accipiter gentilis	goshawk
	Accipiter striatus	sharp-shinned hawk
	Buteo jamaicensis	red-tailed hawk
	Cathartes aura	turkey vulture
	Falco sparverius	sparrow hawk (American kestrel)
Galliformes	Bonasa umbellus	ruffed grouse
	Lophortyx californica	California quail
Columbiformes	Columbia fasciata	band-tailed pigeon
	Zenaidura macroura	mourning dove
Strigiformes	Aegolius acadicus	saw-whet owl
	Asio otus	long-eared owl
	Bubo virginianus	great horned owl
	Glaucidium gnoma	pygmy owl
	Otus asio	screech owl
	Strix occidentailis	spotted owl
Caprimulgiformes	Chordeiles minor	common nighthawk

APPENDIX 4 (Cont.)

Apodiformes	Chaetura vauxi	Vaux's swift
	Selasphorus rufus	rufous hummingbird
	Stellula calliope	calliope hummingbird
Coraciiformes	Megaceryle alcyon	belted kingfisher
Piciformes	Asyndesmus lewis	Lewis' woodpecker
	Colaptes auratus	common flicker
	Dendrocopos pubescens	downy woodpecker
	Dendrocopus villosus	hairy woodpecker
	Dryocopus pileatus	pileated woodpecker
	Sphyropicus varius	yellow-bellied sapsucker
Passeriformes	Bombycilla cedrorum	cedar waxwing
	Carpodacus mexicanus	house finch
	Certhia familiaris	brown creeper
	Contopus richardsoni	western wood pewee
	Corvus brachyrhynchos	common crow
	Corvus corax	common raven
	Cyanocitta stelleri	Steller's jay
	Dendroica coronata	yellow-rumped warbler
	Dendroica townsendi	Townsend's warbler
	Empidomax difficilus	western flycatcher
	Empidomax oberholseri	dusky flycatcher
	Hesperiphona vespertina	evening grosbeak
	Hylocichla ustulata	Swainson's thrush
	Iridoprocne bicolor	tree swallow
	Ixoreus naevius	varied thrush
	Junco hyemalis	dark-eyed junco
	Melospiza melodia	song sparrow
	Nuttallornis borealis	olive-sided flycatcher
	Parus atricapillus	black-capped chickadee
	Parus rufescenis	chestnut-backed chickadee
	Passerella iliaca	fox sparrow

APPENDIX 4 (Cont.)

Passerifores (Cont.)	Pipilo erythrophthalmus	rufous-sided towhee
	Piranga ludoviciana	western tanager
	Psaltriparus minimus	common bushtit
	Regulus calendula	ruby-crowned kinglet
	Regulus satrapa	golden-crowned kinglet
	Sitta canadensis	red-breasted nuthatch
	Sitta carolinensis	white-breasted nuthatch
	Spinus pinus	pine siskin
	Tachycineta thalassina	violet-green swallow
	Troglocytes troglodytes	winter wren
	Turdus migratorius	robin
	Vireo huttoni	Hutton's vireo
	Vireo solitarius	solitary vireo
	Zonotrichia atricapilla	golden-crowned sparrow
	Zonotrichia leucophrys	white-crowned sparrow

APPENDIX 5

Dr. David McCorkle has provided the following information concerning insects collected or observed at the Winchuck Slope proposed natural area on July 1, 1974.

Lepidoptera

Parnassius clodius, foodplant: Dicentra formosa

Limenitis bredowii, foodplant: tanoak

Callophrys dumetorum, larvae found on Lotus crassifolius along exposed parts of road through the area. Larva of another Lycaenid also found on L. crassifolius. Will identify next spring when it ecloses from the pupa.

Coleoptera

Several Coleoptera were collected but have not yet been identified.

Other invertebrates observed

Harpaphe haydeniana, the black and yellow diplopod was extremely abundant especially along the stream margin. This species thrives in old growth forests but is apparently exterminated by clearcutting.

APPENDIX 6

Fire Protection Arrangement of the Coos Forest Protective Association for the Winchuck Area

DISPATCH PLAN | (Chetco Ranger Station) 1974 DISTRICT AREA Brookings TYPE Plan 1 AC 1-2 LOW

ATTACK UNIT	DISPATCH	MOVE UP	AVAILABLE	REMARKS
1 Pumper (Large w/3 men)	x			
1 Pumper (Small w/2 men)		x		To Station
Suppression Crew - 10 men			x	Alert
S. O. Grants Pass			x	Notify
District Personnel				Alert
Coos FPA				Notify

DISTRICT AREA TYPE Plan 2 AC 3L-3H MODERATE

ATTACK UNIT	DISPATCH	MOVE UP	AVAILABLE	REMARKS
1 Pumper (Large w/3 men)	x			
1 Pumper (Small w/2 men)	x			
1 Pumper (Small w/ 2 men)		x		Standby
Suppression Crew - 10 men			x	Alert
District Personnel			x	Notify
S. O. Grants Pass			x	Notify
Coos FPA				Notify

DISTRICT AREA TYPE Plan 3 AC 4-5 HIGH

ATTACK UNIT	DISPATCH	MOVE UP	AVAILABLE	REMARKS
1 Pumper (Large w/3 men)	x			
2 Pumpers (Small w/2 men)	x			
Suppression Crew - 10 men		x		To Ranger Station
Smokejumpers & Retardant			x	Alert
Helicopter - Agness			x	Alert
District Personnel			x	Alert
S. O. Grants Pass			x	Notify
Coos FPA			x	Notify

DISPATCH PLAN | (Gold Beach) 1974 DISTRICT Coos AREA Brookings TYPE Plan 1 AC 1-2 LOW

ATTACK UNIT	DISPATCH	MOVE UP	AVAILABLE	REMARKS
1 Pumper (Small w/driver)	x			From Brookings
1 Pumper (Large w/3 men)		x		
Coos Bay				Notify
Chetco Ranger Station				Notify
Use Plan 2 if fire is in slash				

APPENDIX 6 (cont)

DISTRICT AREA TYPE Plan 2 AC 3L-3H MODERATE

ATTACK UNIT	DIS-PATCH	MOVE UP	AVAIL-ABLE	REMARKS
2 Pumpers (Small w/drivers)	x			Brookings & Gold Beach
1 Pumper (Large w/3men)	x			
1 Pumper (Large w/3men)		x		
TD-15 Bulldozer w/transport			x	
Coos Bay				Notify
Chetco Ranger Station				Notify
Use Plan 3 if fire is in slash.				

DISTRICT AREA TYPE Plan 3 AC 4-5 HIGH

ATTACK UNIT	DIS-PATCH	MOVE UP	AVAIL-ABLE	REMARKS
2 Pumpers (Small w/driver)	x			Brookings & Gold Beach
2 Pumpers (Large w/3men)	x			
TD-15 Bulldozer w/transport	x			From Bandon
1 Pumper (Large w/3 men)		x		Bandon to Gold Beach
Coos Bay				Notify
Chetco Ranger Station				Notify

DISPATCH PLAN (Coos Bay) 1974 DISTRICT Coos AREA Brookings TYPE Plan 1 AC 1-2 LOW

ATTACK UNIT	DIS-PATCH	MOVE UP	AVAIL-ABLE	REMARKS
Notify Gold Beach				If you receive 1st call
Use Plan 2 if fire is in slash.				

DISTRICT AREA TYPE Plan 2 AC 3L-3H MODERATE

ATTACK UNIT	DIS-PATCH	MOVE UP	AVAIL-ABLE	REMARKS
Notify Gold Beach				If you receive 1st call
Observation Aircraft			x	
Use Plan 3 if fire is in slash.				

DISTRICT AREA TYPE Plan 3 AC 4-5 HIGH

ATTACK UNIT	DIS-PATCH	MOVE UP	AVAIL-ABLE	REMARKS
Notify Gold Beach				If you receive 1st call
Observation Aircraft	x			

APPENDIX 7

Estimated Economic Value of Land and Timber on the Winchuck Slope Candidate Natural Area Preserve

The following data were prepared by Donald E. Matlick, Forester with the Coos Bay Office of the Forestry Department. This is not an appraisal but a rough estimate.

Value of Land

Comparing nearby lands which are similar to the Winchuck Tract in use and quality, the value of each acre of land near this tract is valued at approximately $80.

The State Department of Revenue has recently set values for land within tax zone "A" of Curry County using site class as their criteria. Using data obtained from the tract, the site class was found to vary from site II to the upper level of site III. Oregon Department of Revenue would appraise this forest land at $67 per acre.

Comparison of Similar Lands

40 acres for	$ 3,080	= $ 77/acre
40 acres for	$ 4,400	= $110/acre
358 acres for	$ 19,350	= $ 54/acre
		$ 80/acre average

Zone "A" - Curry County

Site II and II+	= $74/acre
Site II- and III+	= $67/acre
Site III	= $55/acre

Two Site Determinations Were Taken,

DBH age	Total Height	Site Class
74	154	II
74	146	II

Site class determinations could not be taken in the reproduction areas, but due to their south slope aspect, I will estimate upper level site III.

APPENDIX 7 (cont)

Quantity of Merchantable Timber

Different Stands on the Tract

1. Large Douglas-fir with scattered Redwood
   Average DBH = 28"
   40 trees/acre
   50 MBF/acre (gross)
   46 MBF/acre (net)
   36 total acres
   Approximate age = 110 years

2. Douglas-fir with scattered Redwood
   Average DBH = 20"
   100 trees/acre
   44 MBF/acre (gross)
   40 MBF/acre (net)
   85 total acres
   Approximate age = 80 years

3. Scattered old-growth Douglas-fir and Redwood
   Average DBH = 42"
   70 MBF/acre (gross)
   45 MBF/acre (net)
   8 total acres
   Approximate age = 325 years

4. Mixed Douglas-fir, Red Alder, Bigleaf Maple
   12 MBF/acre (net) total
   - 8 MBF/acre hardwoods
   - 4 MBF/acre Douglas-fir
   19 total acres

5. 41 total acres reproduction
   - 26 acres - 30 years old
   - 15 acres - 15 years old

All volumes per acre were estimated by Frank Vetter and Don Matlick. All volume is reported in Scribner Log Rule.

Total Merchantable Conifer Volume

36 acres	x 46 MBF/acre	=	1,656 MBF
85 acres	x 40 MBF/acre	=	3,400 MBF
8 acres	x 45 MBF/acre	=	360 MBF
19 acres	x 4 MBF/acre	=	76 MBF
			5,492 MBF

Total Merchantable Hardwood Volume

19 acres	x 8 MBF/acre	=	152 MBF

APPENDIX 7 (cont)

Timber Value

All timber values are based upon Jan. 1975 market values in Southwestern Oregon, Jan. 1975 logging costs, and rough field estimations of merchantable volume. The area was not cruised for volume or grade.

Merchantable Timber Value

5,492 MBF merchantable conifer timber
152 MBF merchantable hardwood timber

Pond Value Douglas-fir

3% SM	x	$ 180/MBF	=	$ 5.40
17% 2S	x	$ 165/MBF	=	$ 117.15
26% 3S	x	$ 135/MBF	=	$ 35.10
				$ 157.65 = Pond Value

Logging Costs/MBF - General

On Truck Costs	=	$35.00/MBF
Road Use Fees	=	$ 2.50/MBF
Hauling Costs	=	$ 9.00/MBF
		$46.50/MBF = Logging Costs

Stumpage Price

$ 157.65	Pond Value (Conifer)	$ 95.00	Pond Value (Hardwood)
- 46.50	Logging Costs	-61.50	Logging Costs
$ 111.15	Stumpage (Conifer)	$ 33.50	Stumpage (Hardwood)

Total Conifer Value

5,492 MBF x $ 111.15/MBF = $ 610,436.00

Total Hardwood Value

152 MBF x $ 33.50/MBF = $ 5,092.00

Reproduction Values

The method I generated the reproduction values from is to find the total future value at harvest and discount to the present. Two types of reproduction are present, 15 years old and 30 years old. I derived volume per acre from Technical Bulletin No. 201, and assume site class III where the reproduction stands.

80 Year Rotation

SM - 3%	x	$180	=	$ 5.40
2S - 71%	x	$165	=	$117.15
3S - 26%	x	$135	=	$ 35.10
				$157.65

$ 157.65	
- 42.00	Logging Costs
$ 115.65	Stumpage Value

APPENDIX 7 (cont)

30 Year Old Reproduction

	45,700	B.F. @ 80 years
x	.8	(conversion to 32' logs net from 16' logs gross)
	36,560	
x	1.00	(normality after 5 decades)
	36,560	B.F.
x	115.65	
	$ 4,228.16/acre	Future Value
-	30.00	Administrative Costs ($6/yr)
	$ 4,198.16/acre	Future Value

$ 4,276.70 x (.1407) = $ 590.68 per acre Present Value

$ 590.68 x 26 acres total = $15,357.68 Total Present Value

15 Year Old Reproduction

	36,560	B.F. (taken from above)
x	1.13	(normality after 6.5 decades)
	$41,312.80	
x	115.65	Stumpage Values
	$ 4,777.83	Future Value
-	39.00	Administrative Costs ($6/yr)
	$ 4,738.83	Future Value

$ 4,738.83 x (.07813) = $ 370.24 per acre Present Value

$ 370.24 x 15 acres = $ 5,553.60 Total Present Value

Note: (.1407) and (.07813) is value multiplied by to reduce future value to present value assuming a 4 percent return.

APPENDIX 7 (cont)

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D. Burrell Birch, Oregon State Forestry Dept., Jan. 27, 1975.
E. Staff of Chetco R.D., Siskiyou Nat'l. Forest, Brookings, OR, Jan. 23, 1975.
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II. Forest Valuation, Chapman and Meyer, 1947, McGraw-Hill Book Co.

III. "Technical Bulletin 201", U.S.D.A., Richard McArdle, Walter Meyer, Donald Bruce, May 1961.

IV. Board Foot Volume Talbes, Mason, Bruce, and Girard.

V. Interviews and Consultation with Frank Vetter, Forest Technician, Oregon State Forestry Department, Coos Bay.

APPENDIX 8

Statutory Regulations

ELLIOTT STATE FOREST; COMMON SCHOOL FOREST LANDS

530.410 [Amended by 1955 c.121 §1; repealed by 1957 c.240 §10]

530.420 [Repealed by 1957 c.240 §10]

530.430 [Amended by 1953 c.76 §2; 1955 c.121 §2; repealed by 1957 c.240 §10]

530.440 [1955 c.121 §3; repealed by 1957 c.240 §10]

530.450 Withdrawal from sale of Elliott State Forest. Any lands in the national forests on February 25, 1913, selected by, and patented to, the State of Oregon, for the purpose of establishing a state forest, hereby are withdrawn from sale except as provided in ORS 530.510. The state forest shall be known as the Elliott State Forest.
[1957 c.240 §1]

530.460 Lands suited for growing forest products to be designated Common School Forest Lands and withdrawn from sale. (1) The Division of State Lands and the State Board of Forestry shall designate and set aside those lands owned by the State of Oregon, under the jurisdiction of the division, which are primarily suited for the growing of timber and other forest products.

(2) The state-owned lands shall be designated and set aside pursuant to ORS 530.470 and 530.480, and when so designated and set aside, shall be known as the Common School Forest Lands and hereby are dedicated for the primary purposes stated in subsection (1) of this section and shall be withdrawn from sale except as provided in ORS 530.450 to 530.520.
[1957 c.240 §2; 1967 c.396 §5]

530.470 Determination of lands to be designated Common School Forest Lands. (1) Periodically as is necessary, the Division of State Lands and the State Board of Forestry shall proceed to designate and set aside Common School Forest Lands as rapidly as forestry data and information are obtained from field examinations of the lands eligible for dedication under ORS 530.450 to 530.520.

(2) Any lands so designated and set aside may, at any time, be returned to their original status by similar actions of said agencies, if said lands are to be used for higher and better use for the general public, including the sale of said lands where lawful.
[1957 c.240 §3; 1967 c.396 §6]

530.480 Legal descriptions of lands; resolutions of State Land Board and State Board of Forestry. As the Common School Forest Lands are determined as required by ORS 530.450 to 530.520, such lands shall be described by legal subdivision. The State Land Board and the State Board of Forestry, respectively in their regular meetings, shall by separate board resolutions designate and set aside such lands as a part of the Common School Forest Lands; lands in the Elliott State Forest, as determined by ORS 530.450, shall be similarly described and reserved. A copy of each board resolution certified by the Director of the Division of State Lands or the State Forester, respectively, together with the description of the lands involved, shall be filed with the Secretary of State, who shall keep such copies and descriptions in conjunction with the auditing records of the State Forestry Department Account.
[1957 c.240 §4; 1969 c.594 §53]

530.490 Management, control and protection of Common School Forest Lands and Elliott State Forest; easements. (1) Notwithstanding the provisions of any other law, or authority granted thereunder, after the board resolutions and legal descriptions are filed with the Secretary of State as required by ORS 530.480, the State Forester hereby shall be authorized, under the supervision of the State Board of Forestry and the regulations of said board, to manage, control and protect the Common School Forest Lands. Also, notwithstanding the provisions of any other law, or authority granted thereunder, the State Forester hereby is authorized, under the supervision of the State Board of Forestry and the regulations of said board, to manage, control and protect the Elliott State Forest lands. In each instance the State Forester shall manage, control and protect such forests and forest lands so as to secure the greatest permanent value of the lands to the whole people of the State of Oregon, particularly for the dedicated purposes of the lands and the common schools to which the resources of the lands are devoted.

APPENDIX 8 (cont)

(2) Easements on, over and across the Common School Forest Lands and the Elliott State Forest lands may be granted as follows:

(a) Permanent easements determined by the State Forester and State Board of Forestry as necessary to accomplish the dedicated purposes of such lands may be granted by the Division of State Lands.

(b) Easements other than permanent may be granted by the State Forester under joint rules of the State Board of Forestry and Division of State Lands.

(3) The authority granted the State Forester in this section shall not supersede the authority of the Division of State Lands to grant easements on or leases for the Common School Forest Lands and Elliott State Forest lands for grazing purposes or for the exploration and development of minerals, oil or gas, and any consideration received by the division therefor shall be excepted from the provisions of ORS 530.520; provided, however, the division shall cooperate with the forestry program of the State Forester in granting such easements and leases and make provisions therein for continuing the primary purposes for which such land has been dedicated.
[1957 c.240 §5]

530.500 Authority of State Forester in management, protection, utilization and conservation of lands and waters. In order to accomplish the purposes of ORS 530.490, the State Forester may:

(1) Protect the lands from fire, disease and insect pests, cooperate with the counties and with persons owning lands within the state in such protection and enter into all agreements necessary or convenient therefor.

(2) Sell forest products from the lands and execute contracts thereby required.

(3) Permit the use of the lands for other purposes, including but not limited to fish and wildlife environment, landscape effect, protection against flood and erosion, recreation and production and protection of water supplies when such use is not detrimental to the purpose for which such lands are dedicated.

(4) Contract with other governmental bodies for the protection of water supplies to facilitate the multiple use of publicly owned water supplies for recreational purposes as well as a source of water for domestic and industrial use.

(5) Grant permits and licenses on, over and across the lands.

(6) Reforest the lands and cooperate with persons owning timberlands within the state in such reforestation, and make all agreements necessary or convenient therefor.

(7) Do all things and make all rules and regulations, not inconsistent with law, necessary or convenient for the management, protection, utilization and conservation of the lands.

(8) Require such undertakings as in his opinion are necessary or convenient to secure performance of any agreement authorized in ORS 530.450 to 530.520.
[1957 c.240 §6; 1959 c.141 §2; 1967 c.396 §7; 1969 c.194 §1]

530.510 Exchanges of land. The State Forester may propose and initiate any exchange of land of the Elliott State Forest or Common School Forest Lands, or propose and initiate any exchange of timber on such lands, for land of approximately equal aggregate value, when any such exchange is in the furtherance of the purposes of ORS 530.450 to 530.520. However:

(1) Any exchange of land of the Elliott State Forest must be for the consolidation of the forest;

(2) The State Land Board and the State Board of Forestry shall, each separately, approve such exchanges by resolutions of the respective boards; and

(3) The county court or board of county commissioners of the county, or counties, in which such land is situated, shall approve such exchange, and after such approval the exchanges shall be consummated by legal conveyance from the Division of State Lands.

(4) Under the authority granted in this section, in addition to land to be exchanged, a monetary consideration may be provided or received where necessary to make the values comply with this section. No exchange shall be made until title to the lands to be received has been approved by the Attorney General. All lands received in exchange shall have the same status and be subject to the same provisions of law as the lands given in exchange therefor.
[1957 c.240 s.9; 1959 c.141 s.5; 1967 c.396 s.8; 1969 c.194 s.2; 1969 c.594 s.59]

APPENDIX 9

Distribution of Ringtail and Red Tree Vole

Olterman and Verts (1972) discuss the distribution of the Ringtail (Bassariscus astutus) and the Red Tree Mouse (Arborimus longicaudus). The following description is taken from their discussion.

RINGTAIL (*Bassariscus astutus*)

Museum Records—*Curry County:* Port Orford, 2. *Douglas County:* Riddle, 2; Tiller, 1; 25 mi. S.E. Glide, 1. *Jackson County:* Beagle, 3; Evans Creek, 1; Prospect, 1; China Gulch (Rogue River), 1. *Josephine County:* Galice, 1.

Other Records—*Coos County:* Bandon, 1 (*Western World*, 1971:5). *Curry County:* Gold Beach, 1 (Bailey, 1936:318).

Ringtails were reported as "common in Rogue River Canyon" in 1909, "well known to hunters and trappers" near Grants Pass in 1914, and "common on the west side of the Cascades" in 1914 (Bailey, 1936:318). In addition to the records that can be substantiated by specimens (Fig. 15), reports of ringtails from east of Steens Mountain and from the west side of Klamath Lake were received by Bailey (1936:318). Bailey (1936:318) regarded the Steens Mountain account as questionable, but the reports from Upper Klamath Lake were considered valid.

The ringtail was reported as "not common" in the vicinity of Oregon Caves in 1949 (Roest, 1949: 34). D. L. Hammer reported seeing ringtails between Powers and Bandon in Coos County, but he felt that they were not abundant in that area. Sherrell (1970:90) was told of specimens being trapped "along Euchre Creek; at Whale's Head Cove, T40S, R14W, Sec. 3; and around old cabins on the Pistol River" in Curry County. He believed the animals to be presently less abundant than they were in the past. D. L. Eastman neither saw nor received reports of ringtails around Upper Klamath Lake. F. H. Fick trapped ringtails along the Illinois River in Josephine County and considered them to be "locally abundant" in that area.

Fur-catch reports (Table 2) indicated that 64 ringtails were taken by trappers in Oregon during the period 1955-1970, and all except two were from counties in the southwestern portion of the state. One animal was reported from Marion County. However, that report was regarded by C. E. Kebbe to be either a case of misidentification on the part of the reporting trapper, or more likely, an error in transcribing data from report cards to tally sheets. The Lane County report may be valid, but records that would identify the reporting trapper were destroyed.

Trappers reported that practically all ringtails trapped in Oregon were caught incidental to other trapping efforts, and that most of them were released or discarded because of the low value of their fur (Table 3). For this reason, fur-catch reports probably did not reflect the actual number of ringtails caught.

Ringtails were protected in Oregon since 1970 (Oregon State Game Commission, 1970b:2). Populations are probably not greatly affected by man's activities; however, the animal is at the northern extent of its geographical range in the state and ecological conditions are probably less than optimal for the species.

At present, the ringtail does not appear to be in danger of extirpation, but we believe that it should be classified as a rare species in Oregon.

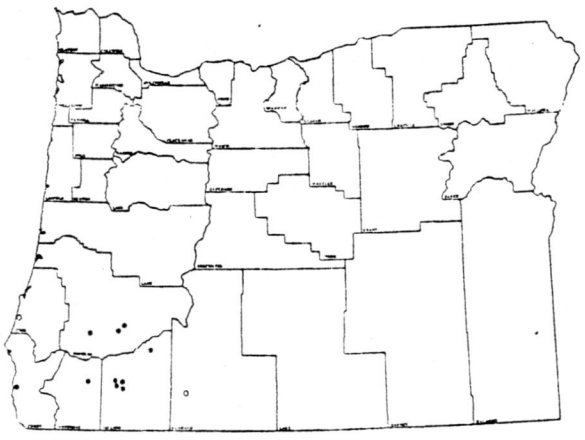

Figure 15. Sites at which specimens of *Bassariscus astutus*, deposited in museums and private collections, were collected in Oregon. Open symbols depict literature citations.

APPENDIX 9 (Cont.)

9. Red Tree Mouse (*Arborimus [Phenacomys] longicaudus*)

Museum Records—*Benton County:* 4 mi. S. Alpine, 1, Near Blodgett, 1; Corvallis, 1; S.W. Corvallis, 2; 6 mi. N. Corvallis, 9; 3-4 mi. W. Camp Adair, 8; MacDonald Forest, 6; 3 mi. S. Monroe, 1; 4½ mi. S. Monroe, 1; 4½ mi. S.W. Monroe, 36; 5¾ mi. W. Monroe, 1. *Clackamas County:* Schoenborns Ranch, 8 mi. S.E. Molalla, 43; Molalla, 1. *Coos County:* 8 mi. S.E. Bandon, 1; 1 mi. N.W. Bill's Peak, 1; Marshfield, 2. *Curry County:* N. side of Rogue River, 2 mi. E. Hwy. 101, 1; 20 mi. E. Gold Beach, 1; Mouth of Lobster Creek, 20 (8) mi. E. Gold Beach, 2; Rogue River, 20 miles above Gold Beach, 2; Gold Beach, 1; Agness, 8; Port Orford, 1. *Douglas County:* 3 mi. E. Elkton, 5; Near Roseburg, 1. *Hood River County:* 1 mi. E. Cascade Locks, 2. *Josephine County:* 23 mi. E. Gold Beach, 1; Oregon Caves Nat'l Monument, 1. *Lane County:* 5 mi. S. Alpine, 1; 3 mi. W. Cheshire, 5; 5½ mi. S.W. Cheshire, 1; 5½-6 mi. N.W. Cheshire, 2; 6¾ mi. W.N.W. Cheshire, 1; 6 mi. N.N.E. Coburg, 1; 6 mi. N.E. Coburg, 4; 17 mi. S.E. Cottage Grove, 1; 2½ mi. S.W. Donna, 1; 7 mi. N.W. Elmira, 1; Eugene, 1; 2 mi. E. Lorane, 1; 5 mi. N. Lorane, 6; Meadows [Meadow, T18S, R8W], 1; 6 mi. S.W. Monroe, 1; 1½ mi. N.W. Noti, 1; 4.5 mi. W. Vida, 1; ¼ mi. N.E. Walterville, 1. *Lincoln County:* Near Nashville, 1. *Linn County:* 4½ mi. S. Sodaville, 1. *Polk County:* 2 1/6 mi. S.W. Airlie, 1; Near Falls City, 1; Stodt Mountain, between Grande Ronde and Valsetz, 1. *Tillamook County:* 8 mi. S.E. Hebo, 4; Cape Lookout, 1; Fall Creek at Netarts Bay, 1; Netarts, 3; Neskowin, 1; Oceanside, 7; Tillamook, 1. *Washington County:* 3 mi. E. Gaston, 3; 4 mi. E. Gaston, 3; 5 mi. E. Gaston, 2; 8 mi. E. Gaston, 2. *Yamhill County:* 9 mi. W. Carlton, 2; 4 mi. N. Newberg, 11; 7 mi. N.W. Newberg, 1.

The red tree mouse occurs from the Pacific Coast to the west slope of the Cascade Mountains in Oregon (Fig. 32). Bailey (1936:198) believed that *Phenacomys silvicola* was one of the rarest mammals in Oregon, but of *Phenacomys longicaudus* he said, " . . . when their tree dwelling habits became known, they were found to be common over a wide extent of country . . ." (Bailey, 1936: 195). Maser and Storm (1970:63) stated, "*Arborimus longicaudus*, long considered to be a rare species, is reasonably common though difficult to collect."

Maser (1966:217a) noted that fire and logging may destroy large portions of tree mouse habitat. However, he believed that if a few "old growth" trees were left, a reservoir population of mice would be available to reestablish the species after regrowth attained suitable size. The nests of red tree mice were reported to be rare in trees smaller than 7 to 8 inches in diameter (Maser, 1966:46).

We located 233 specimens of the red tree mouse from Oregon, most of which were taken by a few collectors who were familiar with the ecology of the species. C. O. Maser and M. L. Johnson collected many specimens of the species and reported that they were relatively easily collected in many scattered localities.

The species occupies a large range in Oregon and we do not consider it to be either rare or endangered at the present time.

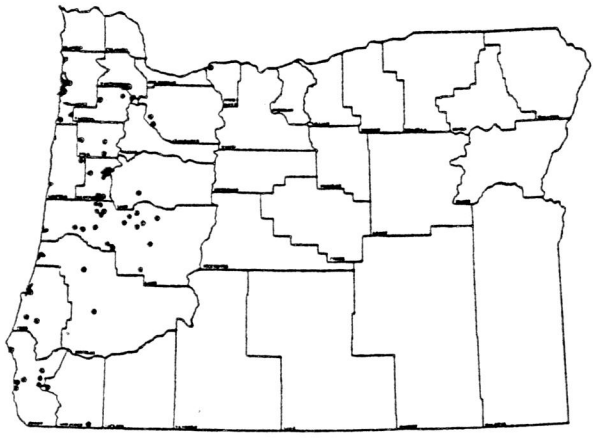

Figure 32. Sites at which specimens of *Arborimus (Phenacomys) longicaudus*, deposited in museums and private collections, were collected in Oregon.

NATURAL AREA PRESERVES ADVISORY COMMITTEE

GOALS

1. Cooperate in developing a coordinated program of preserving representative samples of Oregon's typical and unique ecosystem types or natural features by dedicating natural area preserves on public lands.

2. Provide educational and research opportunities in Oregon through access to natural area preserves as basic resources.

3. Compile and periodically update a comprehensive list of natural area locations in Oregon, and maintain a list of natural area preserves needs.

4. Assure perpetual protection to dedicated natural area preserves and maintain preserves in as nearly a natural condition as possible.

5. Encourage the establishment of natural area preserves on qualified areas that appropriate local governments, resource agencies or citizens recommend to the State Land Board and advisory committee.

6. Recommend natural area preserves in suitable locations throughout the state, including those within and near Oregon's population centers.

7. Publish and disseminate appropriate information about natural area preserves.