

MYRTLE ISLAND RESEARCH NATURAL AREA¹

California-laurel with scattered old-growth Douglas-fir growing on a small island in the Umpqua River.

The Myrtle Island Research Natural Area was established on September 14, 1951, to preserve an old-growth stand of California-laurel (*Umbellularia californica*). The 11.3-ha. (28-acre) island is located in Douglas County, Oregon, and is administered by the Roseburg District (Roseburg, Oregon), Bureau of Land Management. The natural area occupies lot 9 of section 20 and lot 11 of section 21, T. 24 S., R. 7 W., Willamette meridian. It lies at 43°29' N. latitude and 123°34' W. longitude.

ACCESS AND ACCOMMODATIONS

Primary access is by State Highway 138 via either Sutherlin or Elkton. Between July and September, the island can be reached from the north shore of the river by wading (fig. MY-I). To reach the vicinity, leave State Highway 138 at Bullock Bridge, cross the bridge, and turn left on Cougar Creek Road. Drive along the river to the sign which marks the end of the county road (about 7.7 km. or 4.8 miles from the bridge); you are opposite Myrtle Island at this point. To approach the island by boat, leave State Highway 138 about 0.5 km. (0.3 miles) south of Bullock Bridge and drive along the Tyee Road

on the south side of the Umpqua River for about 7.9 km. (4.9 miles) to a short spur road down to the riverbank. A boat can be placed in the river at this site which is a short distance upstream from the island.

Travel on the island is not difficult although there are no trails.

The nearest commercial accommodations are in Sutherlin.

ENVIRONMENT

The Myrtle Island Research Natural Area is a typical river island with a series of more or less identifiable terrace levels. Topography is gentle with the only steep slopes located along the edge of the river or as short pitches between terraces. The elevation of the natural area is about 97.5 m. (320 ft.). The surface of the island varies from about 1.5 to 12 m. (5 to 40 ft.) above water level during the summer months.

The natural area is made up of fluvial deposits of gravel, sand, and finer materials. River action is constantly changing the form of the island, eroding it in some areas and depositing new materials in others.

The natural area is located in the mild moist climatic region typical of western Oregon. However, it is within one of the valley systems located between the Coast Ranges and Cascade Range and is, therefore, subject to the somewhat warmer and drier climate typical of these areas. The summer dry period is especially pronounced. Representative climatic data from the Roseburg weather station which is about 32 km. (20 miles) southwest are as follows (U.S. Weather Bureau 1965):

Mean annual temperature12.1°C. (53.7°F.)
Mean January temperature 5.2°C. (41.1°F.)
Mean July temperature19.9°C. (67.8°F.)
Mean January minimum	
temperature 1.6°C. (34.9°F.)
Mean July maximum temperature	...28.0°C. (82.4°F.)

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

Average annual precipitation.....830 mm. (32.66 in.)
 June through August
 precipitation 47 mm. (1.85 in.)

Temperatures are probably slightly lower and precipitation slightly higher on the natural area.

The soils on the natural area are all alluvial. They vary widely in stone content, texture, and depth. The best soils are found on the high terraces where stands of California laurel occur. The soils there are deep, loamy sands with no horizon development. Deposition of soil parent materials is still actively occurring all over the island. Recent depositions of coarse gravels and stones on the western point of the island and finer materials on the higher terraces probably occurred during floods in the winter of 1964-65.

BIOTA

Estimated areas by cover types are:

Name	Area
California-Laurel-Douglas-fir	8.1 ha. (20 acres)
Other alluvial communities	3.2 ha. (8 acres)

The area seems to best fit Kuchler's (1964) Type 29, California Mixed Evergreen Forest (*Quercus-Arbutus-Pseudotsuga*) and does lie within the Interior Valley (*Pinus-Quercus-Pseudotsuga*) Zone of Franklin and Dyrness (1969).

California-laurel is the most abundant single tree species present on the island. With Douglas-fir (*Pseudotsuga menziesii*) it forms dense forests on the upper, older island surfaces (fig. MY -2). Occasional bigleaf maple (*Acer macrophyllum*) and one or two western red cedar (*Thuja plicata*) and incense-cedar (*Libocedrus decurrens*) are also present. The stand in the eastern two-thirds of the forested tract has the largest and oldest trees with California laurel reaching 50- to 60-cm. (20 to 25-inches) d.b.h. and 15 to 21 m. (50 to 70 ft.) tall. The Douglas-fir average about 100-cm. (40-in.) d.b.h. and 38 to 46 m. (125 to 150 ft.) tall. The forest stand in the western third of the tract is composed of considerably smaller and younger trees.

The understory in the forested portion of

the island is typically sparse with *Polystichum munitum* and *Rhus diversiloba* being the most important species. Other species present include *Trientalis latifolia*, *Oxalis suksdorfii*, *Corylus Cornuta* var. *californica*, *Acer circinatum*, *Galium triflorum*, and several species of grass. Strong successional trends are absent. Reproduction of the scattered old-growth Douglas-fir is lacking. Other tree species also do not appear to be reproducing beneath the dense canopy of California laurel. The only exception to this statement is in the California-laurel stand at the extreme eastern point of the island. In this localized area, reproduction of Oregon ash (*Fraxinus latifolia*) is scattered abundantly through the understory of *Rhus diversiloba* and *Polystichum munitum*.

A variety of open woodland, shrub, and weed communities occupies the western tip and northern shore of the island (fig. MY -2). These are for the most part lower lying areas which are subject to more frequent and severe disturbance by high waters. Included here is a stunted stand of Oregon white oak (*Quercus garryana*) and Oregon ash with a weedy understory; shrubby thickets of willows (*Salix* spp.) and white alder (*Alnus rhombifolia*); and a variety of herbaceous communities dominated by a rich collection of both native and alien grasses and weeds.

The mammals believed to utilize the natural area as residents or transients are listed in table MY -1. At one time, there was a small herd of wild angora goats which lived on the island but they are believed to have been eliminated by the flood of 1964. Several species of aquatic birds such as mallard ducks (*Anas platyrhynchos*) are found in the marshy areas adjacent to the northwest corner of the island.

HISTORY OF DISTURBANCE

Fire scars on old Douglas-fir indicate that ground fires have burned through at least part of the island sometime in the past. Axe marks also were noted in the bark of a few old-growth fir trees.

The entire island is subject to flooding

during peak runoffs. During the flood of the winter of 1964-65, all surfaces of the island were apparently under several feet of water. Extensive disturbance of the vegetation and deposition of coarse materials occurred at the western end of the island. This flood also eroded some of the southern banks of the island. Damage appears to have been minor in the California-laurel stands themselves although debris was lodged several feet up in the branches of many trees and shrubs (fig. MY -2).

RESEARCH

There is no research in progress on the Myrtle Island Research Natural Area. As the only island in the regional research natural area system, it offers special opportunities to study soil and vegetation development in relation to geomorphological processes. The general sparsity of ground vegetation under the groves of California-laurel, coupled with the high content of aromatic compounds in leaves and litter of this species, suggests the area may also be a fertile field site for allelopathic studies.

MAPS AND AERIAL PHOTOGRAPHS

Special maps and most recent photographs available are the following: *Topogmphy* 15' Tyee, Oregon quadrangle, scale 1: 62,500,

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

LITERATURE CITED

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Table MY-1. — Tentative list of mammals for Myrtle Island Research Natural Area

Order	Scientific name	Common name
Insectivora	<i>Neurotrichus gibbsi</i>	shrew mole
	<i>Scapanus orarius</i>	coast mole
	<i>Scapanus townsendi</i>	Townsend mole
	<i>Sorex pacificus</i>	Pacific shrew
	<i>Sorex trowbridgii</i>	Trowbridge shrew
Chiroptera	<i>Antrozous pallidus</i>	pallid bat
	<i>Eptesicus fuscus</i>	big brown bat
	<i>Lasionycteris noctivagans</i>	silver-haired bat
	<i>Lasiurus borealis</i>	red bat
	<i>Lasiurus cinereus</i>	hoary bat
	<i>Myotis californicus</i>	California myotis
	<i>Myotis evotis</i>	long-eared myotis
	<i>Myotis lucifugus</i>	little brown myotis
	<i>Myotis thysanodes</i>	fringed myotis
	<i>Myotis volans</i>	long-legged myotis
	<i>Myotis yumanensis</i>	Yuma myotis
	<i>Plecotus townsendi</i>	Townsend big-eared bat
Lagomorpha	<i>Sylvilagus bachmani</i>	brush rabbit
Rodentia	<i>Aplodontia rufa</i>	mountain beaver
	<i>Castor canadensis</i>	beaver
	<i>Clethrionomys californicus</i>	California red-backed vole
	<i>Eutamias townsendi</i>	Townsend chipmunk
	<i>Glaucomys sabrinus</i>	northern flying squirrel
	<i>Microtus oregoni</i>	Oregon or creeping vole
	<i>Microtus townsendi</i>	Townsend vole
	<i>Neotoma fuscipes</i>	dusky-footed wood rat
	<i>Peromyscus maniculatus</i>	deer mouse
	<i>Sciurus griseus</i>	western gray squirrel
	<i>Tamiasciurus douglasi</i>	chickaree
Carnivora	<i>Bassariscus astutus</i>	ringtail or miner's cat
	<i>Canis latrans</i>	coyote
	<i>Felis concolor</i>	mountain lion or cougar
	<i>Lutra canadensis</i>	river otter
	<i>Lynx rufus</i>	bobcat
	<i>Mustela erminea</i>	short-tailed weasel or ermine
	<i>Mustela frenata</i>	long-tailed weasel
	<i>Mustela vison</i>	mink
	<i>Procyon lotor</i>	raccoon
	<i>Spilogale putorius</i>	spotted skunk or civet cat
Artiodactyla	<i>Ursus americanus</i>	black bear
	<i>Odocoileus h. columbianus</i>	black-tailed deer

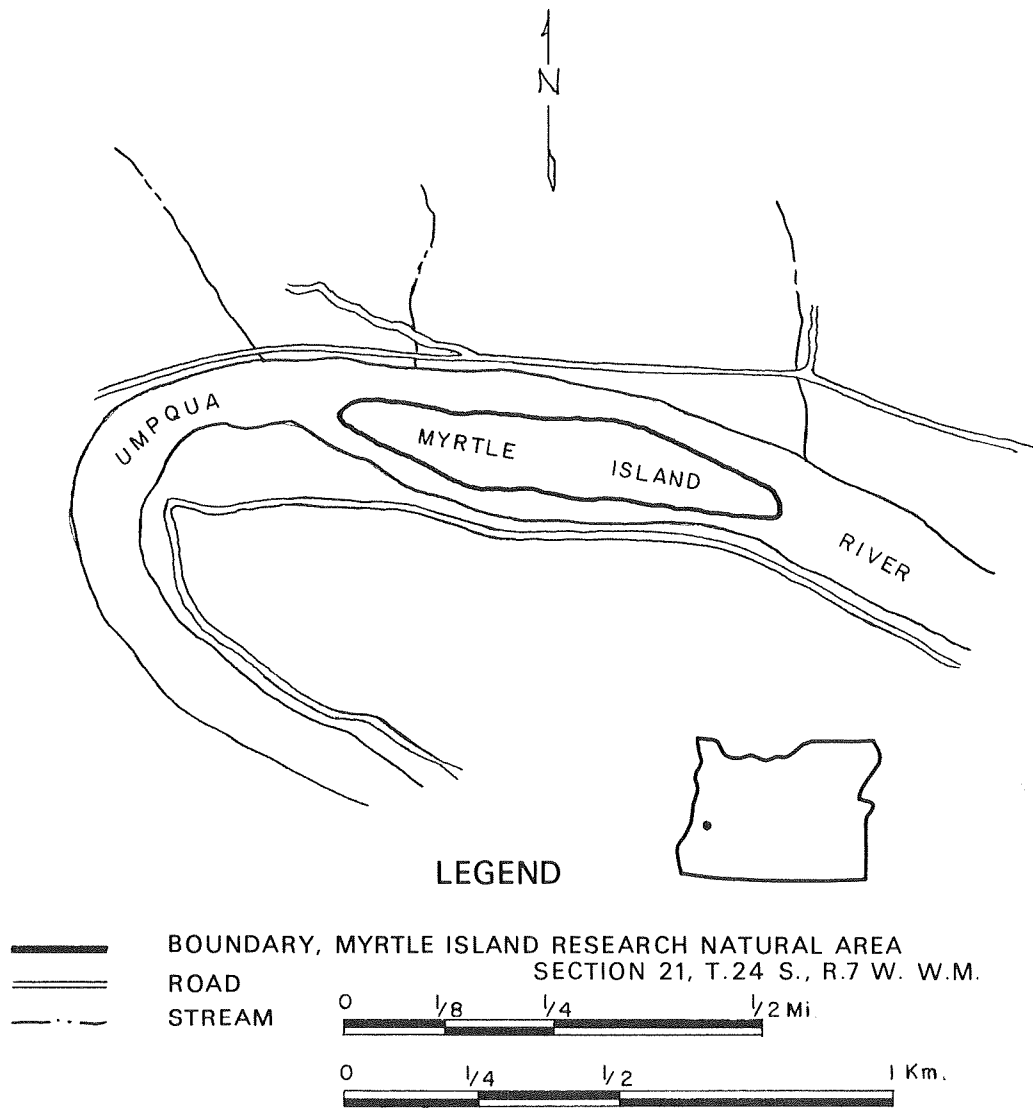


Figure MY-1.- Myrtle Island Research Natural Area,
Douglas County, Oregon.

*Figure MY-2.-Communities of the Myrtle Island Research Natural Area. Upper left: Old-growth Douglas-fir and California-laurel with a sparse understory typical of most of the island stands. Upper right: Grove of California-laurel with relatively dense understory of *Polystichum munitum*. Lower left: Seral shrub and herb community growing on stony materials deposited at the west end of the island in 1964. Lower right: Young stand of California-laurel showing damage suffered and debris deposited by flood waters.*

