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Serviceberry Amelanchier alnifolia

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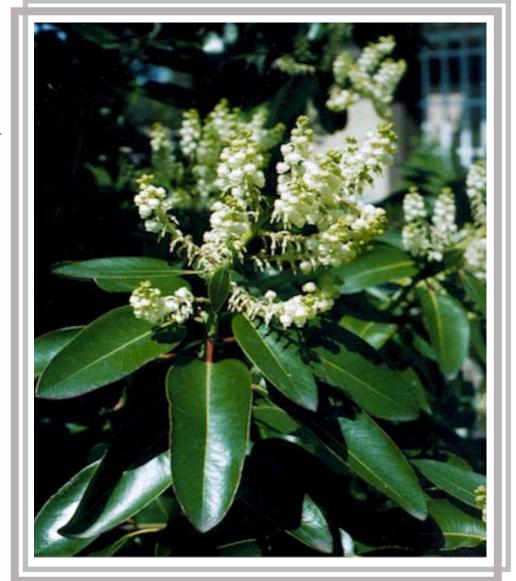
### About this Journal

This Journal was created under the direction of Wally Hansen – a dedicated Grower, Aficionado and Passionate Lover of Northwest Native Plants. We honor him by continuing his dream.

Just as is our website, this Journal is not 'commercial.' Our goals are:

- **A** To generate interest, even passion, concerning the magnificent Native Plants of the Pacific Northwest.
- **B** To help you create your own Native Plant Gardens, large or small, for home or work.
- **C** To help you propagate and "grow on" those species that interest you the most.
- **D** To inform both Home Gardeners and interested Professionals of many disciplines concerning trends and news items from my little corner of the world.
- **E** To help the reader enjoy native plants more by understanding the historical and cultural role of native plants (i.e.—use by Native Americans, pioneers, early botanists, etc.).

Pacific Madrone (Arbutus menziesii) Photo credit: Professor Wilbur Bluhm





## On the Cover: Pacific Rhododendron (Rhododendron macrophyllum)



What a gorgeous bloom! Very often used in the landscape, this native of the Pacific northwest grows wild all along the western coastal corridor of North America. Shade-grown specimins may be as tall as 26 feet, while those growing in sun are somewhat shorter and bushier. Hardy and drought tolerant, a second flowering in fall is not unusual.



Map of native range from USDA PLANTS Database at http://plants.usda.gov/core/profile?symbol=rhma3



## Garden chores to do now

### Pearly bits of wisdom and just plain common sense

- 1 If needed, trim roses now. This is the time to adjust the shape or size while the plants are just ready to break dormancy.
- **2** Check garden tools. Clean, sharpen, replace handles, whatever maintenance needs to be done. While you are anticipating the spring garden, give the tools you will be using some extra love. Paint handles your favorite color, add a design, put an eyehook in the handle for hanging. Then turn your attention to a great



storage

space for them. A large bucket of sand with a bit of oil mixed in is a great place for garden tools. Rinse off the dirt and stick the business end in the bucket for storage. Rust begone!

- 3 Have your soil tested. Your county extension office will have a list of places that test, often for free or low cost.
- 4 Plant trees and deciduous shrubs.
- **5** Monitor Rhododendron, Salal (Gaultheria shallon) and Huckleberries (Vaccinium) for root weevils. Wally wrote this back in 2000:

Watch for neat square notches in the leaves. This is caused by the insect form of the root weevil - notched leaves may be unsightly but not serious damaged. - The real trouble-makers are the grubs that hatch from the eggs that the flies deposit in the soil at the base of the shrub. These nasty little varmints eat up the roots and may "do in" the plant. Orthene is the best spray for the fly in July and August. To go after the grubs, I suggest beneficial nematodes when the soil is 50 degrees or warmer. They can be purchased in packages, contained on small sponges. Put the sponge in water, stir and pour about one quart around each plant. These beneficial nematodes eat up the grubs.

More about these pests: Oregon State University published a paper titled "Speak No Weevil: What Rhododendron Growers Said About Their Root Weevil Management." Authors R.L. Rosetta and S.E. Svenson give details of a very interesting study done in 1998. www.extension.oregonstate.edu/catalog/html/sr/sr1065-e/07.pdf

6 – Use some of that pent-up energy to bring some outside in--cut some branches for bouquets. They will make the house smell better and if they take root, keep them watered until you can get out to plant.



# So glad you asked!

### Readers speak up: Questions, suggestions, pats and pans

#### Our photo library:

I see on your database website that you have generously placed photos into community commons. I want to thank you a LOT for doing so – having authored the NW Native Plant Picks on the Portland Nursery website for the last few years, getting a range of photos is sometimes a challenge. I have some, but not enough to satisfy the need.

My question for you is how would you like to be credited for any photos we use in the future? -- Peggy

Great question! Wally's daughter, Diana Hansen-Young, asked for this and it was a stellar idea. Sharing the thousands of photos in our library gives an additional layer to our service of making northwest native plants into old friends.

Please credit photos thus:

Photo credit: The Wild Garden, www.nwplants.com

#### Vaccinium membranaceum:

I ordered 2 of these plants from you a couple of years ago and one actually is doing very well. Wonder if I could order a couple more plants. I think I've figured out the best place in the garden for them. --Caroline

Are you still actively selling native plants? -- Barbara

To all who have similar questions, the nursery closed permanently in November of 2010. Thank you for your interest in native plants. Keep gardening!



Vaccinium membranaceum Mountain Huckleberry in autumn



## Wildlife Corner

#### Out back with the animals

The joint is jumpin' as Fats Waller used to say. A couple of cold days here and there hasn't made a dent in the action.

More birds come every day and the variety has noticeably expanded.

The four resident squirrels are enjoying the bounty of the outdoor cafe. I keep a horseshoe on the lid of the container where we keep the various kinds of food for everyone. But one day last week I found the horseshoe on the deck so I put it back in place, never giving it another thought. The next day it was again on the deck. Again, I put it to rights and added a big clay pot full of flotsam and jetsam, just for good measure.

Next morning the clay pot was broken and stuff scattered everywhere. Well, the gloves were thrown down, this could not be ignored. I stacked a goodly amount of heavy objects (bricks, tire irons, pieces of chain, etc.) atop the container and waited to see what would happen. Oddly, the garden was rather still. I believe the wild ones were waiting for the story to unfold.

Next day Jeff stopped by and went to lay out fresh food. In a moment or two he came charging through the door completely bumfuzzled, drew me outside to show what he'd found. Two squirrels--that's right, not one but two!--were snuggled inside the container, apparently taking up residence there.



The reluctant squirrel. She's a little smaller than the other three, and lost part of her tail about a month ago. I think one of the stray cats almost got her.



Wildlife Corner, continued

He yelled at the squirrels to get out. They ignored him. He poked around in the bin with a stick as he continued to holler. Nothing doing. He tipped the can and one squirrel jumped out but the other one really did not want to leave this warm, dry nest full of food. A bit more tipping and yelling and some poking finally prodded the second one out.

What a trip! And where was my camera? We were so engaged in the event neither of us thought to take a photo. Next time. I told Jeff I was going to try luring them back into the food bin. He

allowed as how I'd be getting them out by myself if I did that. Hmmm.







## Evergreen winter

### Native plant winter all-stars

Here in the Pacific northwest, the winter garden need not be leafless. Although many of our native trees and shrubs have interesting, colorful bark and pleasing forms when their leaves have fallen, there are a plethora of pllants that are evergreen--and they are not limited to conifers!

#### Blueblossom, California Lilac, Ceanothus thrysiflorus, USDA 8-10

Blueblossom reigns with grace and majesty from southwestern Oregon to southern California. The flowers resemble the top of the "thyrsus" - the staff of Dionysus, that unruly Greek God of wine. This is a compact form which grows rapidly to about 6' tall and 5' wide--ideal for gardens close to buildings. Covered with bright, evergreen leaves and

> beautiful, deep lilac blue flowers in spring which are intense—vibrant! Goodl in sun or shade, requires minimum care or water.: a must for west

side gardens.

#### Bog Rosemary, Andromeda polifolia var. polifolia, USDA 2-9

Outstanding evergreen native for wet sites, Found across North America and is hardy. This low-growier has soft pink flowers that hang like fairy bells from the narrow, leathery leaves. Spreads by rhizomes and contains dangerous toxic compounds so must not be

> eaten. Prefers sun, likes moisture and acidity--add a mixture of wet peat moss and compost to the planting

hole. Its beauty interrupts the vast swamplands where it grows, much as the beauty of its namesake, the Greek heroine, stood out against the ocean when her parents ruthlessly tied her to the rocks as a sacrifice to the sea-monster.

Photos this side: Flower credit, H Zell; Leaves credit B Gilwa

More





Buckbrush, Wild Lilac, Ceanothus cuneatus var. cuneatus, USDA 8-10

This is one of the taller forms of ceanothus. The small rounded leaves are grayish green and deeply veined. It is found in dry regions of Oregon and on down through Baja California. Its main requirements are full sun, dry soil with perfect drainage, and no additional water once established. This shrub will be covered in white fragrant flower clusters in early Spring. The flowers are later followed by 3 horned fruit capsules. This is a great ceanothus for naturalizing dry slopes in mild climate areas. Ceanothus cuneatus is known for its nitrogen fixing abilities, valuable in areas needing regeneration.

Center photo this side: credit to Little Mountain 5



The appearance of this shrub is more like the rhododendrons we term azaleas. It has small deciduous leaves, reaches 3-6'and has an open branching habit. Cascade Azalea has a limited range within British Columbia, Washington, Oregon, Idaho, and

Montana at sub alpine to alpine elevations along moist forest slopes and stream banks. The creamy bell shaped summer flowers are replaced by brown fruit capsules

that pair up with brightly colored fall foliage. Not being a poisonous member of the rhododendron family,

Native Americans utilized parts of this plant medicinally as a tea or gargle for stomach and throat issues and a dressing for skin injuries.

Photos this side: center photo credit, WalterSiegmund, Flower credit, WalterSiegmund

⇒ More⇒









Cascade Oregon Grape, Mahonia [Berberis] nervosa, USDA zones 6-9

Cascade Oregon Grape is an excellent ground cover in partially shaded areas. This species has the same beautiful flowers and fruit as Tall Oregon Grape but has longer leaves and reaches heights of only 2.' The flowers are highly aromatic and, like all Mahonias, the autumn display is spectacular, with burgundy, red, gold and bronze. This plant is widespread in open forest areas or in the understory from BC to California and in Idaho as well.



Coyote Bush, Baccharis pilularis, USDA zones 8-9

Coyote Bush is a tough evergreen shrub with thick shiny triangular leaves. Its native territory is primarily the California and Oregon coast. Little can deter this plant from growing, not heat, wind or lack of water; it is even fire and deer resistant. This 1-2 foot tall plant will

Photo below: J Smith make a great ground or bank cover, or when grown singly will develop into a small rounded

shrub. The flowers are yellow and the

female plants will produce fuzzy seed heads. Early Native Americans used parts of this plant to make a tea which relieved poison oak rash.

Bloom photo credit D. Hochmayr









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Creeping Oregon Grape, Mahonia [Berberis] repens, USDA 4-10

Superior ground cover recommended to cover large open areas not suitable for lawn. Growing a mere 12-18" tall and spreading by rhizomes, tolerates sun or shade and is drought resistant after established. In the wild, this variety flourishes in areas that have been recently logged as well as forested areas along the Pacific coast and throughout the southwestern States. It has dull green holly-like leaves, fragrant yellow flowers and blue-purple edible fruits. This species is considered endangered and is protected

by the state of California. Vibrant fall color!

Photo credit: Michael G Alder

Evergreen Huckleberry, Vaccinium ovatum, USDA 6-9

Superb shrub is happy in sun or shade. The delicious fruit for pies, jam and unique toppings is an added bonus. In forested areas it can reach 15' and spreads to form beautiful, dense stands. The glossy, dark green leaves

are small and the new shoots are a bronzy red. In full sun, it dwarfs to 3-5,' and the mature foliage often turns reddish purple. Hummingbirds love the small, pink-white flowers like fairy bells. Late in the summer, black-purple fruits form. Native only to the Pacific Coast, it likes acidic soil and can tolerate salt spray and strong winds. Pamper it with a layer of mulch and you will be richly rewarded with a first class ornamental shrub for the native garden.

Fruit photo credit: Gordon Leppig & Andrea J Pickart; bottom photo credit Franz Xaver





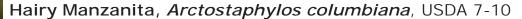
Flower photo credit: Stan Shebs

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#### Fremont Silk-Tassel, Garrya fremontii, USDA 7-10

This delightful evergreen shrub is somewhat similar to Garrya elliptica, but has smaller winter catkins. Found in Washington, Oregon and California, on steep, rocky slopes. At maturity, Fremont Silk-Tassel will reach heights of 3 - 9' and widths of 8-10.' Bright green foliage with light undersides contrasts with the decorative, yellow flowers and the subsequent purple berries. Fremont Silk-Tassel is a critical browse plant for many wildlife species.





The finest and most widespread of the tall manzanitas, this evergreen shrub grows quickly to 8 – 10.' Found in rocky areas and steep slopes, from the California coast to BC, Hairy Manzanita is hardy. It likes full sun, well-drained, acidic soil, a southern or western exposure and is highly

drought tolerant. Hairy green leaves form at the end of the twigs, followed by delightful clusters of fragrant, white to light pink flowers. Later in the year dark, rust-colored, edible fruits form. The reddish brown bark peels and is smooth

and lustrous underneath. Hairy Manzanita is one of the best ornamental natives, easily withstanding stress from city life as much as it does in the wild.

Photo at left courtesy of Noah Elhards



Photo credits: Sten Porse



One of the finest evergreen ground covers, Kinnikinnick has long, trailing branches, thickly clothed with dark green, leathery leaves. In winter the leaves often become a regal burgundy color. The white – pink, urn-shaped flowers are followed by vibrant red berries which birds love. This fast-growing plant is found from Alaska to New Mexico and east to Virginia in dry, sunny and often sterile locations. Native groups smoked Kinnikinnick and the berries are still used medicinally to treat bladder and kidney disorders. Truly, the leaves of Bearberry plant still fill many a pipe today. Gardeners love Kinnikinnick for landscaping steep banks, rockeries and open spaces in urban settings where it anchors the soil by rooting at intervals along the prostrate stems.

#### Labrador Tea, Ledum glandulosum, USDA 4-9

Rhododendron neoglandulosum (formerly Ledum glandulosum) is a species of rhododendron known by the common names western Labrador tea and trapper's tea. A delightful evergreen shrub, reminiscent of a Rhododendron. Indeed they are both members of the acid-loving heather family. It is at home in bog lands with low nutrients from the Pacific coast to the Rocky Mountains. Labrador Tea forms many branches and grows

to 3.' There is a characteristic rust-colored "fur" on the undersides of the 2  $\frac{1}{2}$ " long, drooping leaves. The plant emits a

lovely, spicy odor and rewards its keepers with clusters of decorative, white flowers in late summer.

As the name implies,

Native Peoples and early settlers made tea from the leaves but great care must be taken in identification as this plant has several toxic look-

alikes.











**≯**More□

#### Mahala Mat, Ceanothus prostratus, USDA 5-8

It is unusual for a ceanothus to be found growing at subalpine levels, but Mahala Mat is most comfortable there providing it receives an insulating layer of snow in winter. High winds and high temperatures are not favorable for this low growing evergreen groundcover; it needs a partial sun situation with good drainage. When content Mahala Mat will form a dense matte of glossy serrated leaves and produce pale blue flower clusters and bright red horned fruit. Ceanothus prostratus is native to the dry mountainous regions of Washington, Oregon and California and can be occasionally found in Idaho and Nevada. This is a very attractive plant given

the proper growing conditions. It has gained favor as a ground cover in many

Massive plant at maturoity photo credit: Robert H Ruf USFS

#### Oregon Box, Paxistima myrsinites, USDA 3-9

commercial situations.

This low evergreen native is similar to Japanese holly and boxwood. It grows prostrate to 3'

high, with dark, leathery leaves 1" across and tiny red flowers. Found on dry, rocky slopes from the Rocky Mountains to the Pacific coast. In the wild, Oregon Box provides valuable winter browse for wildlife. For the garden, select a sunny to partially shaded site and ensure excellent drainage. Used around conifers, borders and paths, Oregon

year-round greenery with little to and care

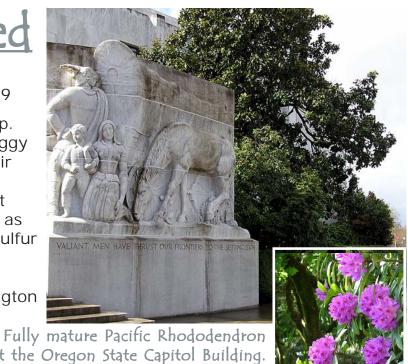


Photo credit Dr Thomas G Barnes, USFWS

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Pacific Rhododendron, Rhododendron macrophyllum, USDA 6-9

A large, evergreen shrub with thick, oblong leaves and a rounded top. They grow compact and dense in the open, and incredibly tall and leggy in the shade during their very long lives; expect heights of 7-8.' Their shape makes them amenable to underplanting with ferns or smaller flowering plants. In early spring or summer they erupt in flamboyant clusters of large, rose-purple/white flowers- every bit as spectacular as the cultivated varieties. They need an acidic soil, so add elemental sulfur and peat moss to the planting hole and/or mulch with shredded oak leaves or pine needles. They add a welcome splash of colour under conifers. Native from southern BC to California, they are the Washington State flower.



at the Oregon State Capitol Building



Pacific Wax Myrtle, Myrica californica, USDA 7-10

An outstanding evergreen shrub, Pacific Wax Myrtle is typical of dune landscapes but is perfect for most native gardens. A dense, bushy shrub to 15,' it has clean, glossy, green leaves throughout the year. Small flowers form before the leaves and are followed by purple nutlet fruits that are attractive to birds and from which you can render wax. This shrub is found from Washington to southern California and in isolated places on Vancouver Island, in full sun or shade. It "fixes" nitrogen and therefore tolerates poor soil. Use as a specimen or hedging plant, as it survives high winds.

Photo credit: Ben Cody



Salal, Gaultheria shallon, USDA 8-10

This sturdy evergreen shrub is found widely along the Pacific coast. Salal grows from 3 - 6, mostly under evergreens where it spreads guickly to form dense thickets. Its dark green, lustrous leaves are popular among commercial florists. White or pink flowers in late spring attract hummingbirds. The fruits are plentiful and delicious, prized by hikers, small children, Native groups and bears. Use Salal under evergreens & deciduous trees where most shrubs will not survive or as a low-maintenance ground cover. Salal is extremely adaptable, thriving in sun, shade, humus, infertile, dry or moist soils. It requires little care once established. Salal (Gaultheria shallon), found by Captain Lewis on January 20, 1806, at Fort

> Clatsop in Oregon. This plant is still found in abundance at Fort Clatsop and throughout the

Pacific northwest today.

Natural groundcover at Stuart Island

Silk-Tassel, Garrya elliptica, USDA 7-10

This regal evergreen shrub reaches 8,' remaining dense and shrubby as it grows. The leaves are glossy green with gray undersides. The late winter months see the branches adorned with long, pendant male catkins to 10" - a unique and airy display. Purple gray flowers follow. Coast Silk-Tassel is an excellent choice for coastal gardens as it favors moderate temperatures, full sun and tolerates mild summer drought and salt spray. It is found growing between western Washington and southern California.

Photo credit: Codiferous





Snowbrush, Ceanothus velutinus, USDA 7-10

This evergreen shrub will greet you with an intoxicating, spicy fragrance when you brush against it or on hot summer days. It reaches heights of 2-8,' with dark green, sticky leaves and small white flowers in tidy 5" 'pom poms.' Found widely in the West, from British Columbia down through the western United States in USDA zones 7-10. Snowbrush is a pioneer following fire as the fire stimulates seed germination: another example of nature's supreme sagacity, as the Snowbrush "fixes" nitrogen and nitrogen is much in demand after the devastation of fire!



Photos from USDA-NRCS PLANTS database

#### Tall Oregon Grape, Mahonia [Berberis] aquifolium, USDA 5-10

This superb evergreen shrub is the State flower of Oregon. Hardy in USDA zones 5-10, it is at home along the Pacific coast from BC to northern California. Oregon Grape can reach 10' tall, but is usually 5' in gardens. In spring, large clusters of small golden flowers unfurl from shiny green,

holly-like foliage. New growth is copper

color in the spring. The blue fruits are tart and improve after frost. They are often gathered for jelly or wine. Used to treat a wide variety of ailments, Oregon Grape species contain the extremely potent alkaloid, berberine, (also found in goldenseal) which is antiseptic and stimulates the liver and spleen. Use this plant for hedges, borders and drifts. It flourishes in sun or shade and is highly drought tolerant: perfect for the northwest.





Western Azalea, Rhododendron occidentale, USDA 5-10

One of the most stunning, native flowering shrubs in the Pacific northwest, the Western Azalea is deciduous and grows in an open form with multiple stems to 10.' Showy, fragrant white to pink flower clusters open in June through July. They are reminiscent of day lilies and emit a wonderful fragrance that travels for a considerable distance. Western Azalea is native only to southern Oregon and northern California but is hardy between USDA 5-10. It thrives in a consistently moist, acidic soil in sun or shade.



Mature plant photo credit: Daderot; flower photo credit Miquel viera

White Sage, Salvia apiana, USDA 8-11

Salvia apiana (White sage, bee sage, or sacred sage in English, gaashil to the Luiseno,

shihtaay or pilhtaay to the Kumeyaay, kasiile to the Tongva, we'wey to the Chumash, gas'ily to the Cahuilla, shaltai to the Paipai, Ihtaay to the Cochimi) is an evergreen perennial shrub

> that is native to the southwestern United States and northwestern Mexico, found

mainly in the coastal sage scrub habitat of Southern California and Baja California, on the western edges of the Mojave and Sonoran deserts. Prefers a sunny location, well draining soil, and good air circulation. It

easily hybridizes with other Salvia species, particularly Salvia leucophylla and Salvia clevelandii. Bumblebees, hawk moths, and wasps pollinate white sage, and hummingbirds also appear to like the plant.

Photoa, left, credit:Stan Shebs











#### Woolly Blue Curls, Trichostema lanatum, USDA 8-11

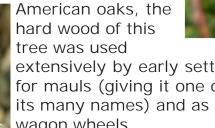
Trichostema lanatum is a small evergreen shrub or sub-shrub native to arid coastal chaparral regions of California and the northern parts of Baja California. Trichostema lanatum is many-branched and grows to 5 ft tall, with narrow, pointed green leaves. The smooth-petaled blue flowers are borne in dense clusters, with the stem and calyces covered in woolly hairs of blue, pink, or white. Spanish explorers in California called the plant romero, the Spanish term for rosemary, and that common name is still sometimes used

Photo credit: Stan Shebs

#### Canyon Live Oak, Quercus chrysolepis, USDA 5-10

A fine evergreen, broad-leaved tree, this oak is found from south-western Oregon, throughout California and east to Nevada and Arizona. It grows on dry, rocky slopes and in canyons. A mature tree will reach 30 - 80' and develop a wide, majestic crown. The yellow-green, 3" leaves are white underneath and can be either smooth or

> serrated. Plant this beauty in a dry, welldrained site, in sun or partial shade. Do not over-water, fertilize or use any insecticide or fungicide on it. Probably the most ancient of



extensively by early settlers for mauls (giving it one of wagon wheels.

Photo, far left, credit: Stan Shebs





Giant or Golden Chinkapin, *Chrysolepis chrysophylla var. chrysophylla*, USDA 8-9

Over time, Chinkapin can become quite large but is slow growing, so expect it to remain smaller making it a great under-story tree. They are found at the edge of the forest where light is filtered. It is a broadleaf evergreen tree with long thin dark glossy leaves that are golden underneath. After two years, Chinkapin will produce creamy catkin like flowers followed by a nut in a spiny outer casing. The smooth young bark is eventually replaced with rough reddish plated bark. Found at low to middle elevations between the coast and Cascade Mountains from southern Washington down through northern California.



Photo, top, credit: themodoccypress; bottom credit: Miquel Vieira

Huckleberry Oak, Quercus vaccinifolia, USDA 7-10



A delightful, shrubby evergreen oak, very similar in appearance to the tree, Canyon Live Oak, but reaching only 4 - 5.' Native to dry sites at high elevations in California, Nevada and Oregon, Huckleberry Oak is hardy in USDA zones 7-10. In the wild, bears, deer and a variety of birds feed on the



acorns. This is an excellent choice for containers or small gardens. It is also an invaluable species for erosion control and is extremely resistant of drought and high winds.

Mature plant, left, photo credit: Mike



#### Mountain Hemlock, Tsuga mertensiana, USDA zones to 5

An outstanding, slow growing, beautiful small evergreen, 10 - 80 ft, native to the high mountains. Gray green foliage, often glaucous. Ideal for small gardens, bonsai.

Mature tree, top, photo credit: Iwona Erskine-Kellie

#### Oregon Myrtle, Umbellularia californica, USDA zones to 7

An outstanding broad-leaved evergreen tree, Oregon Myrtle is a treasure in the landscape, with its glossy green leaves, dark berries and aromatic foliage. Found only in California and Oregon, this tree is hardy to USDA

zone 7. In the interior of its range, it grows slowly, but on the coast it grows quickly to reach heights of 60 - 100' and a width of

20,' with multiple stems and beautiful patterns in the wood. It will be quite stunted in full sun. This tree is a riparian species and is superb species for wetland restoration projects or as a hedge in a moist, shaded site. The fragrant foliage has been used medicinally but is toxic to some people.



Photo far left, credit:
Schmiebel. "This California Bay Laurel on Permanente Creek,
Rancho San Antonio Park, in Santa Clara County is the third
largest in the State. Since this photograph, the tree was split, and
half the tree broke off and fell in a storm. The other half is still
thriving, and has more or less resumed the original canopy shape."







#### Pacific Madrone, Arbutus menziesii, USDA 7-9

A beautiful, elegant broad-leaved evergreen, 30 - 70 ft, Pacific Madrone is famous for it's smooth, reddish brown trunk, it's large evergreen leaves and small red berries. This native tree often grows on dry bluffs and poor soil, and the trunk often bends at graceful angles. It is superb as a single tree or in drifts. Madrone does best in a south or west exposure, well drained. Do not over-water or fertilize. Salal (Gaultheria shallon) does nicely below Madrone. Constantly changing, Arbutus menziesii sheds bark, berries and leaves. This northwest native tree is nearly impossible to survive when dug in the wild. A must for every garden.

#### Sadler's Oak, Quercus sadleriana, USDA zones to 5

This shrubby evergreen oak is native to Oregon and California, but is hardy to USDA zone 5. It grows to 5 - 10' with a spread of 3.' Sadler's Oak is best planted in partial sun and watered only moderately until established. Do not fertilize. This is an excellent variety for small gardens.

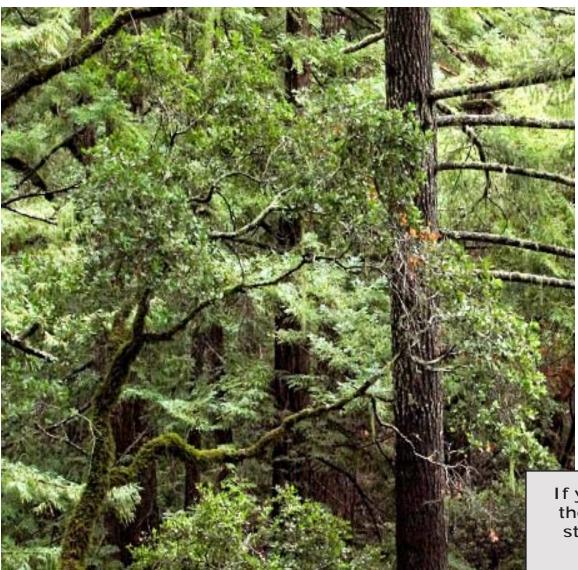






Mature plant and seedling closeup photos courtesy of ks





Shrub Tan Oak, *Notholithocarpus* [Lithocarpus] *densiflorus*, USDA zones to 7

This shrubby form of Tan Oak, with its greenish gray leaves, grows only 3 - 5' tall. It is perfect for small gardens.

Gorgeous photo of a mature plant taken by Miguel Vieira at Big Basin State Park. Leaf closeup credit to Joseph O'Brien USFS



If you're not in a hurry, many of these native evergreens can be started from seed. That's how nature does it!



# Landscape perfection

### **Rhododendrons of the Pacific Northwest**

Virginia Tech hosts the American Rhododendron Society's Journals. The Summer 1991 issue, Volume 45, Number 3, "Northwest Natives as Companion Plants: a Starter Kit," Bob Rose's article, One View, begins thus:

"Once the rhododendrons have been selected, ..."

See the entire journal here (http://scholar.lib.vt.edu/ejournals/JARS/v45n3/v45n3-rose.htm)

Maybe these photos and botanical prints illustrating our Pacific northwest Rhodies will inspire.

Cascade azalea or White Rhododendron

Rhododendron albiflorum

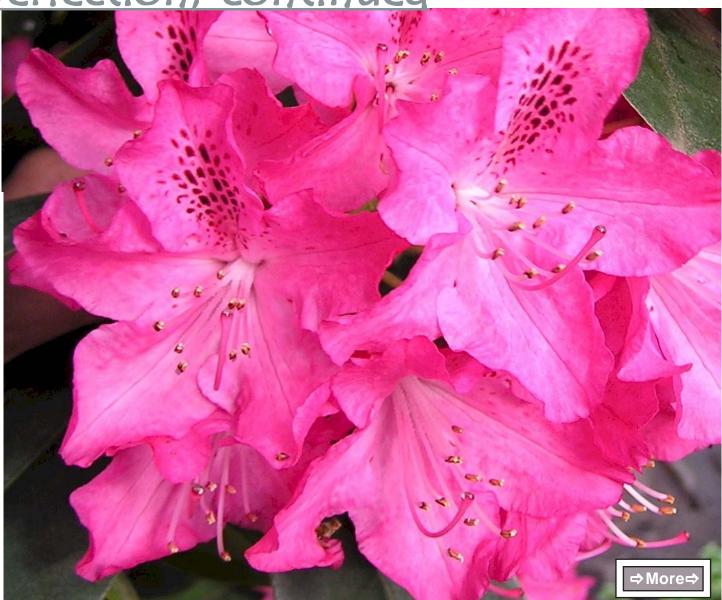
Photo credit: Walter Siegmund





Pacific Rhododendron
Rhododendron
macrophyllum







Trapper's Tea, Western Labrador Tea Rhododendron neoglandulosum

Photo credit: JW Stockert





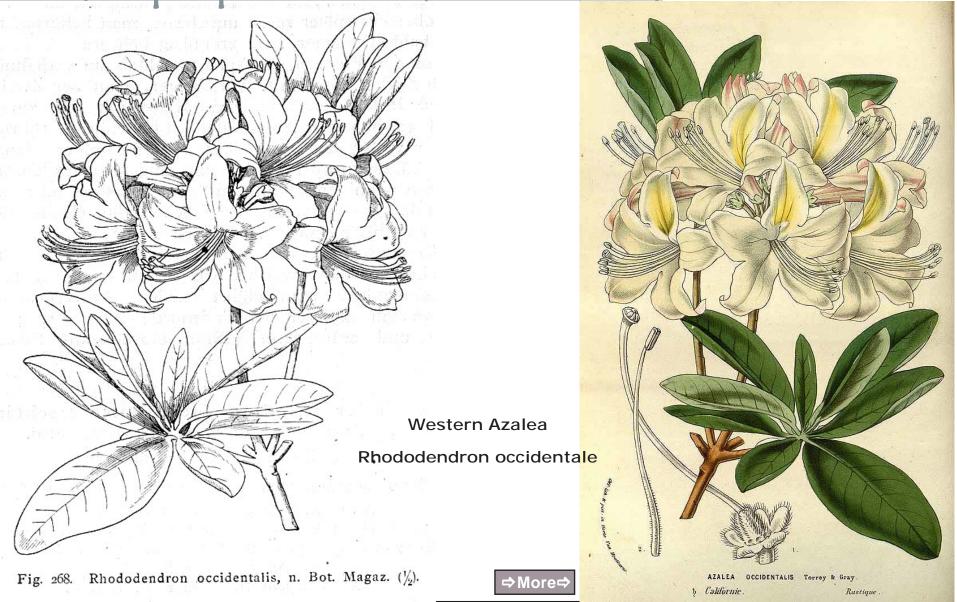


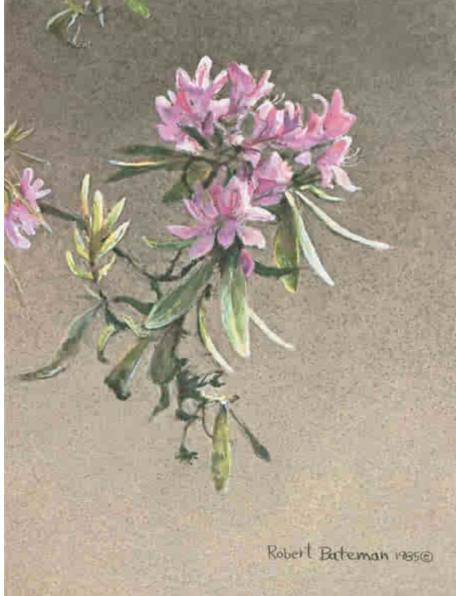
Western Azalea Rhododendron occidentale

Photo credit: Professor Wilbur Bluhm









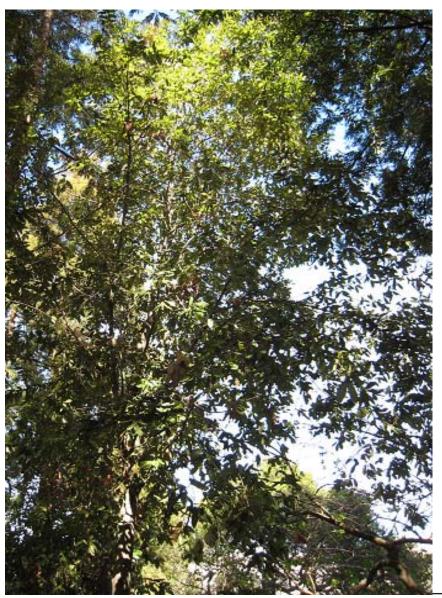
#### Rhododendron Study

"My first view of rhododendrons in the wild was one of the most exhilarating moment of my life. The entier skyline was a blazing, snowy array of the Himalayas...a white wall featuring the famous sacred mountain, Kachanjunga. This spectacle was eclipsed by the great rhododendron trees gnarled, ancient trunks and rhythmic branches all covered with what looked like thousands of bunches of red roses."

Robert Bateman



## Botanical news



# Tanoak or Tanbark-Oak: same common name, new scientific designation

Notholithocarpus densiflorus, commonly known as Tanoak or Tanbark-Oak, is an evergreen tree in the beech family (Fagaceae), native to the western United States, in California as far south as the Transverse Ranges, north to southwest Oregon, and east in the Sierra Nevada. It can reach 130 ft tall (though 49–82 ft is more usual) in the California Coast Ranges, and can have a trunk diameter of 24–75 in.

Tanbark-Oak was recently moved into a new genus, Notholithocarpus, based on multiple lines of evidence. It is not related to the Asian tropical stone oaks, Lithocarpus as was previously considered, but instead is an example of convergent morphological evolution. The North American Tanbark-Oak is most closely related to the north temperate oaks, Quercus.

Notholithocarpus densiflorus var. echinoides

Members of populations in interior California (in the northern Sierra Nevada) and the Klamath Mountains into southwest Oregon are smaller, rarely exceeding 9.8 ft in height and often shrubby, with smaller leaves, 1.6–2.8 in long; these are separated as "Dwarf Tanoak", Notholithocarpus densiflorus var. echinoides. The variety intergrades with the type in northwest California and southwest Oregon. Tanoak does grow on serpentine soils as a shrub.

Mature tree.

Photo credit: Nautical2k



### Botanical news, continued

Some California Native Americans prefer this nut to those of many Quercus acorns because it stores well due to the comparatively high tannin content. The Concow tribe call the nut hä'-hä (Konkow language). The Hupa people use the acorns to make meal, from which they would make mush, bread, biscuits, pancakes, and cakes. They also roast the acorns and eat them.

The name Tanoak refers to its tannin-rich bark, a type of tanbark, used in the past for tanning leather before the use of modern synthetic tannins.

Tanoak provides habitat and food for a variety of forest-dwelling mammals and birds. As a consistent acorn producer, Tanoak acorns may be especially important when oak acorn crops are scant. Studies in northern California showed that abundance of 12 bird, 7 mammal, and 5 salamander species increased with increasing Tanoak canopy volume. Northern flying squirrels, Allen's chipmunks, and dusky-footed woodrats were especially dependent on tanoak mast and/or nesting cover. Mule deer consume Tanoak browse and acorns. Chipmunks, squirrels, and northern raccoons also eat Tanoak acorns. In addition to the acorns, the ectomycorrhizal fungi infecting Tanoaks are important foods for northern flying squirrels. Many bird species consume Tanoak acorns including the acorn woodpecker, Steller's jay, and varied thrush. Chickadees and other gleaning birds forage on Tanoak.

Ralph and others provide inventories of breeding birds and small mammals using Douglas-fir/Tanoak habitat in southwestern Oregon and northwestern California. Rosenberg and Raphael provide a survey of vertebrates using Douglas-fir/Tanoak habitat on the Six Rivers, Klamath, and Shasta-Trinity National Forests, California. Welsh and Lindi give an inventory of herptiles using Douglas-fir/Tanoak habitats in Oregon and northern California.

Acorn and acorn cups. Photo credit: Andy Blackledge



Photo credit: Joseph O'Brien, USDAFS



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### Botanical news, continued



Photo credit: JeffreyAMai, Tanoaks killed by blight



Photo credit: Joseph O'Brien, USDA Forest Service, trees killed by Phytophthora ramorum

Young Tanoaks may tolerate browsing better, or are selected less often, than associated oaks. In the Santa Lucia Mountains, Tanoak seedlings were "heavily browsed" by mule deer. Despite that, Tanoak seedlings were growing faster and showing better survivorship than valley oak and interior live oak seedlings.

**Damaging agents:** Tanoak is one of the species most seriously affected by sudden oak death (*Phytophthora ramorum*), with high mortality reported over much of the species' range.

Tanoaks are windfirm and fairly resistant to insect and fungal attacks until fire or other injury damages the bole. Several root- and stem-rotting fungi may infest injured Tanoaks. Of these, *Armillaria mellea* generally causes greatest damage. Several insects feed on Tanoak, but their damage is usually minor. California oakworms (*Phryganidia californica*) may cause local defoliations. Until the mid-1990s, Tanoak was relatively disease-free. Since then, the forest disease sudden oak death has become an extremely serious threat to Tanoak

Tanoak is more susceptible to damage and death from *Phytophthora ramorum*, the fungus-like water mold causing sudden oak death disease, than any other known North American plant. Moist, mixed-evergreen and redwood/tanoak forests are the water mold's primary habitat in North America. *Phytophthora ramorum* infection is nearly always fatal to Tanoaks, although mature trees may take several years to die. All sizes and ages of Tanoak are susceptible to leaf, branch, bole, bark, and/or root infection. Sudden oak death disease has caused extensive mortality of Tanoaks in Oregon and coastal California. Tanoaks in large, continuous forests may be more susceptible to infection than Tanoak in fragmented forests, where spread of the water mold's spores is apparently more limited. Field monitoring in Marin County, California, showed a progression of total infection rates (Tanoak + all oak species) of 39.0% in 2000 to 62.4% in 2003, with a consummate rise in mortality from 3.8% to 9.4%. Fuel loads may increase as a result of mortality from sudden oak death disease.

### Botanical news, continued

Phytophthora ramorum is apparently nonnative, although its geographic origin is uncertain. Based on genetic studies that showed a "limited gene pool" for North American Phytophthora ramorum populations compared to European populations, Garbelotto and others speculate that the water mold is "an introduced organism, but its actual origin and global genetic structure remain unknown."



"Tanoak seedlings and saplings are typically top-killed by even lowseverity surface fire."



Photo credit: Joseph O'Brien, USDA Forest Service, tree killed by Phytophthora ramorum

#### References:

Wikipedia, http://en.wikipedia.org/wiki/Notholithocarpus

U.S. Forest Service, http://www.fs.fed.us/database/feis/plants/tree/litden/all.html#Damaging agents

Manos, Paul S.; Cannon, Charles H.; Oh, Sang-Hun (2008). "Phylogenetic relationships and taxonomic status of the paleoendemic Fagaceae of Western North America: recognition of a new genus, Notholithocarpus" (PDF). Madrono 55 (3): 181–190. doi:10.3120/0024-9637-55.3.181. http://www.ecologicalevolution.org/content/pdf/Manos09\_Notholithocarpus.pdf

Photo credit: Joseph O'Brien, USDA Forest Service Tip Death Due To Phytophthor ramorum



## This & That

### **Notes from Jennifer**



Bulbs at the eye doctor's office today were pushing up about 2" tall all along the sidewalk, fat and sassy and ready to celebrate.

I'm all set to go gathering whatever the recent sunshine has encouraged to grow. I know for sure the Indian Plums (Oemleria cerasiformis) and Western Hazelnuts (Corylus cornuta) are in bloom, andat least some of the willows are growing little fuzzy bumps along their stems. The treasure hunt will have to wait for the next dry day which is not expected tomorrow. If we find enough healthy specimens, I will start them at the side yard to begin a living fence.

Lots of 'photo ops' this week. There is a new camera in my immediate future, and I can't wait! (I need some suggestions if some of you wouldn't mind sharing.)

Until next time, good luck and good gardening!

Jennifer

This little bird seems to be imagining him-self to be an eagle.



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