Pacific Marthuesz

WINTER\_TWIG ID



Adapted from Green Seattle Winter Twig ID blog post and "Winter in the Woods: A Winter Guide to Deciduous Native Plants in Western Washington." All field notes are from "Winter in the Woods". All photos are from Christine Stephens unless otherwise noted. Written and compiled and by Daniel Hachet. Designed by Daniel Hachet and Rosie Llewellyn. A special thank you to Abby Hill for providing photos and plant information, and to Jacob Childers, Ash Lehto, Heidi Taffera, and Kelsey Bray, for providing thorough feedback and edits. This book was made possible in part with support from the City of Everett and the Green Everett Partnership.

This guide is for education purposes only,



# TABLE OF CONTENTS

GENERAL		OPPOSITE BRANCHING STRUCT	<u>ΓUR</u> E
Why Winter Twig ID?	03	Oregon Ash (Fraxinus latifolia)	07
How to Use this Book	03	Big Leaf Maple (Acer macrophyllum)	80
Plant Morphology	04	Vine Maple (Acer circinatum)	09
Types of Buds	05	Red-osier Dogwood (Cornus sericea)	10
Other Used Terms	05	Red Elderberry (Sambucus racemosa)	
		Black Twinberry (Lonicera involucrata)	12
Branching Structure	06	Snowberry (Symphoricarpos albus)	13

#### ALERTNATE BRANCHING STRUCTURE

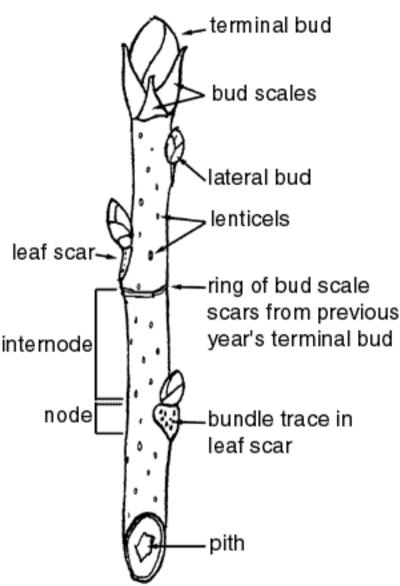
Garry Oak (Quercus garryana)	14	Salmonberry (Rubus Spectabilis)	25
Red Alder (Alnus ruba)	15	Osoberry (Oemleria cerasisformis)	26
Black Cottonwood (Populus trichocarpa)	16	Red Flowering Currant (Ribes sanguineum)	27
Bitter Cherry (Prunus emarginata)	17	Pacific Ninebark (Pysocarpus capitatus)	28
Serviceberry (Amelanchier alnifolia)	18	Oceanspray (Holodiscus discolor)	29
Pacific Crabapple (Malus Fusca)	19	Spirea (Spirea douglasii)	30
Black Hawthorne (Crataegus douglasii)	20	Bald Hip Rose (Rosa gymnocarpa)	3 I
Cascara (Rhamnus purshiana)	21	Nootka Rose (Rosa nutkana)	32
Willow (Salix, spp)	22	Swamp Rose (Rosa pisocarpa)	33
Beaked hazelnut (Corylus cornuta)	23	Gooseberry (Ribes divacartum)	34
Thimbleberry (Rubus parviflorus)	24	Red Huckleberry (Vaccinium parvifolium)	35

Learning about the different parts of a plant can deepen your understanding of how plants function in the winter. Also, winter is the most important time for planting in our parks to ensure trees and shrubs have an opportunity to establish roots before spring. It also ensures the roots don't dry out. By identifying trees and shrubs in your park, you'll be able to better understand the site conditions, and find the ideal location to plant each plant.

# HOW TO USE THIS BOOK

This book is intended to be a field guide to identify common Pacific Northwest native plants during the winter. This guide is organized by species - first by branching structure (opposite or alternate), then by height (tree versus shrub). Plants commonly confused are grouped together for comparison purposes and to ensure accuracy in identification. Groups of plants are also organized loosely by height.

## PLANT MORPHOLOGY



from: https://www.clemson.edu/cafls/index.html

**Terminal Bud:** The bud that forms at the end of the twig, after a full year of growth.

Lateral Buds: The other buds along the length of the twig.

Pseudo-Terminal Bud: A lateral bud at the end of a twig where the branch has broken or died. It can be distinguished from a terminal bud by the presence of a leaf scar (see below).

Bud Scales: Pseudo-leaves that protect the vascular tissue inside the bud.

Lenticels: Dot-like pores that allow for gas exchange. Depending on the plant, these may or may not be visible.

Leaf Scar: A structure below the bud where the previous year's leaf was attached.

Bundle Scar: Markings inside the leaf scar from where the veins of the previous leaf were connected to the twig.

Ring Scar: The scar from the previous year's terminal bud.

**Node:** The location on the stem where buds and leaves attach.

**Internode:** The space between two nodes.

Pith: The soft tissue in the center of the twig.

Appressed buds: buds are tightly pressed into the stem

Naked buds: buds have no bud scales to protect the leaves

Stalked buds: buds are on/supported by a short stem

Catkins: Male counterpart to a tree cone. They are slender, conical and contain pollen.

**Pubescence:** Soft fine short fuzzy hairs found somewhere on a plant.

Remnant: Imagine a pair of berries produced in the fall, that stay on the plant during the winter. For this guide, we use the term remnant to talk about parts of the plant that may remain during the winter. This could be leftover fruit, seeds or leaves.

Sepals: A modified leaf made to enclose a fruit or flower.

Spurs: A short branch that grows slowly every year.

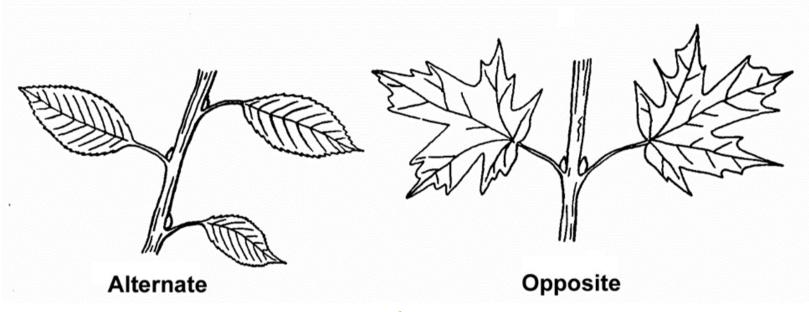
Thicket Forming: This is a growth pattern common to many shrubs in the Pacific Northwest. Plants grow closely together and branches between plants are interlocked, this creates a thicket or an (almost) impenetrable wall of branches.

OTHER

USED

TERMS

# BRANCHING STRUCTURE



from: https://growingstories.wordpress.com/201 2/10/16/foliage-games-and-activities/

# BRANCHING STRUCTURE

Alternate: Each node has only one bud or leaf.

Subalternate: Each node has only one bud or leaf. However, here is an uneven spacing between nodes.

Opposite: Pairs of buds or leaves occur at each node.

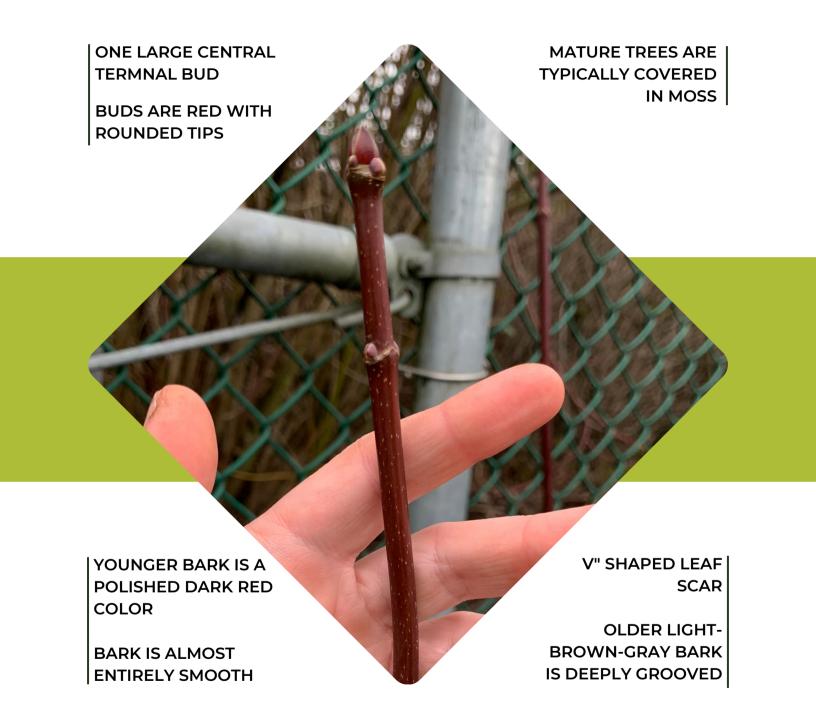
#### OREGON ASH (FRAXINUS LATIFOLIA)



#### **FIELD NOTES:**

Commonly confused with big-leaf maple, has a different bark color and bud shape comparably.

#### BIG-LEAF MAPLE (ACER MACROPHYLLUM)



#### **FIELD NOTES:**

Big-leaf Maple appears almost identical to Vine Maple. However, Big-leaf Maple has different terminal buds than vine maple.

#### VINE MAPLE

(ACER CIRCINATUM)

OLDER SHRUBS HAVE GRAY SMOOTH BARK

YOUNGER
GROWTH IS RED
TO GREEN AND
SMOOTH

BUDS ARE SQUAT AND HUG CLOSE TO THE BRANCH

NUMEROUS SMALL GRAY LENTICELS

VINE MAPLE GROW UP TO 30FT TALL V-SHAPED BRANCHES OF A MATURE VINE
MAPLE IN THE WINTER,
THERE WILL PROBABLY
BE WINGED MAPLE
SEEDS COVERING THE
GROUND

VINE MAPLE IS
COMMONLY CONFUSED
WITH BIG LEAF MAPLE DUE
TO THEIR NEAR IDENTICAL
APPEARANCE. BIG-LEAF MAPLE
HAS DIFFERENT TERMINAL
BUDS THAN VINE MAPLE.

VINE MAPLES IS ALSO COMMONLY CONFUSED WITH RED OSIER DOGWOOD. VINE MAPLES HAVE SHORTER MORE OVAL BUDS THAN RED OSIER DOGWOOD.

#### RED-OSIER DOGWOOD

(CORNUS SERICEA)



#### RED-ELDERBERRY

(SAMBUCUS RACEMOSA)

BUDS ARE LARGE AND SWOLLEN, COMING TO A POINT AT THE TOP

BUDS ARE GREEN TO PURPLE WINTER IN THE WOODS
NOTES ELDERBERRY
BRANCHES CURVE
DOWN CREATING A
"FOUNTAIN LIKE"
GROWTH PATTERN

BUDS ARE COMPOUND -YOU CAN SEE MULTIPLE LAYERS.

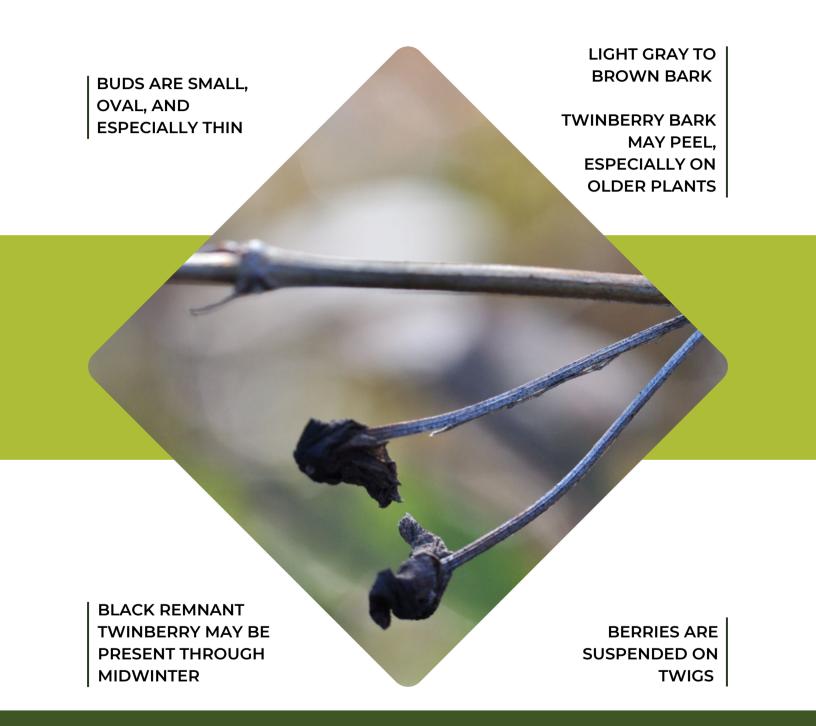
RAISED LENTICELS GIVE BARK A WARTY APPEARANCE

AS NOTED IN "WINTER IN THE WOODS", BLUE ELDERBERRY AND RED ELDERBERRY ARE EASILY CONFUSED. THE KEY DIFFERENCE IS THEIR LEAF SCAR.

BLUE ELDERBERRY HAS A BROAD "V" SHAPED LEAF SCAR WHEREAS RED ELDERBERRY HAS A SHIELD SHAPED LEAF SCAR.

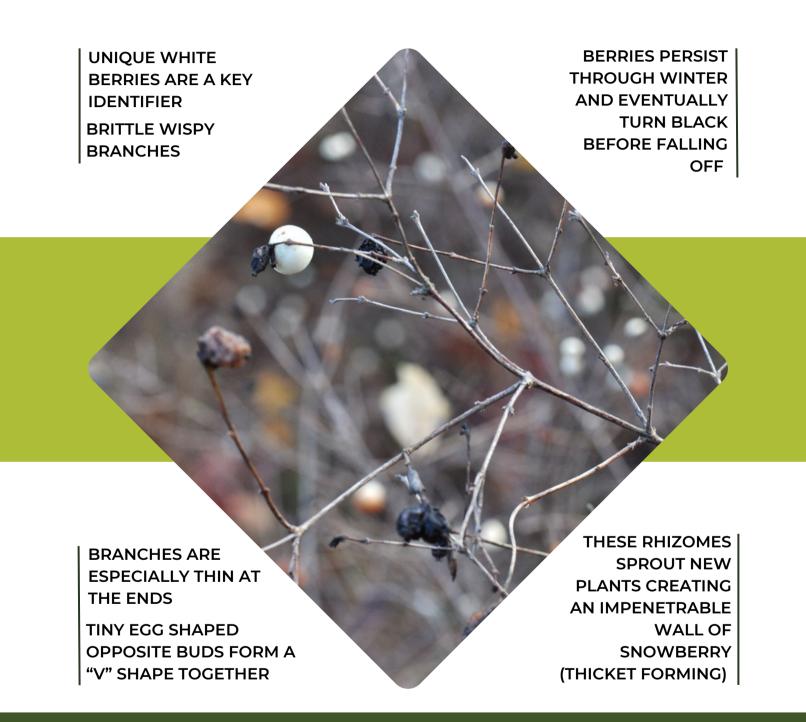
#### BLACK TWINBERRY

(LONICERA INVOLUCRATA)



#### SNOWBERRY

(SYMPHORICARPUS ALBUS)

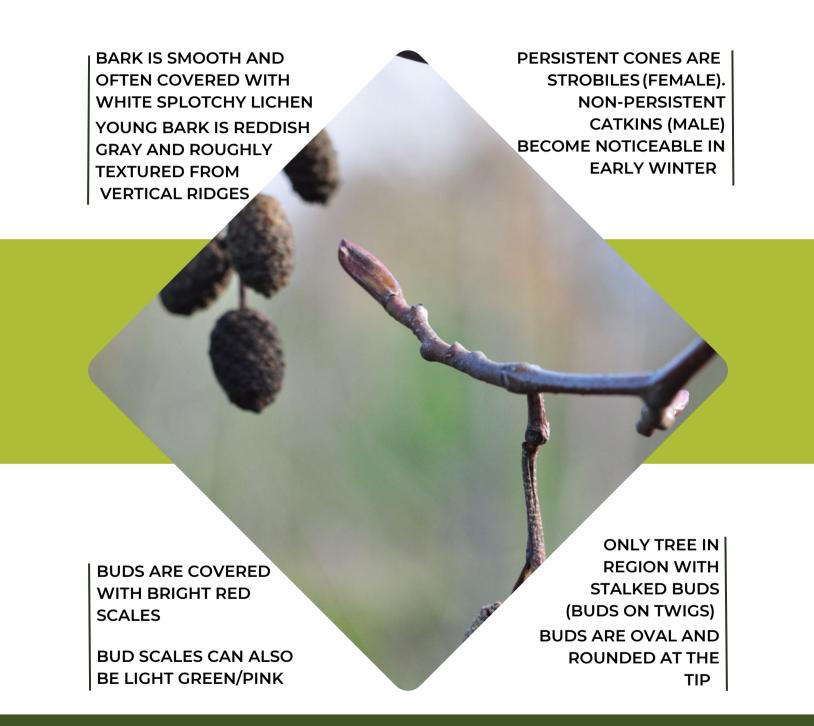


#### GARRY OAK

(QUERCUS GARRYANA)



### RED ALDER (ALNUS RUBRA)



#### BLACK COTTONWOOD

(POPULUS TRICHOCARPA)



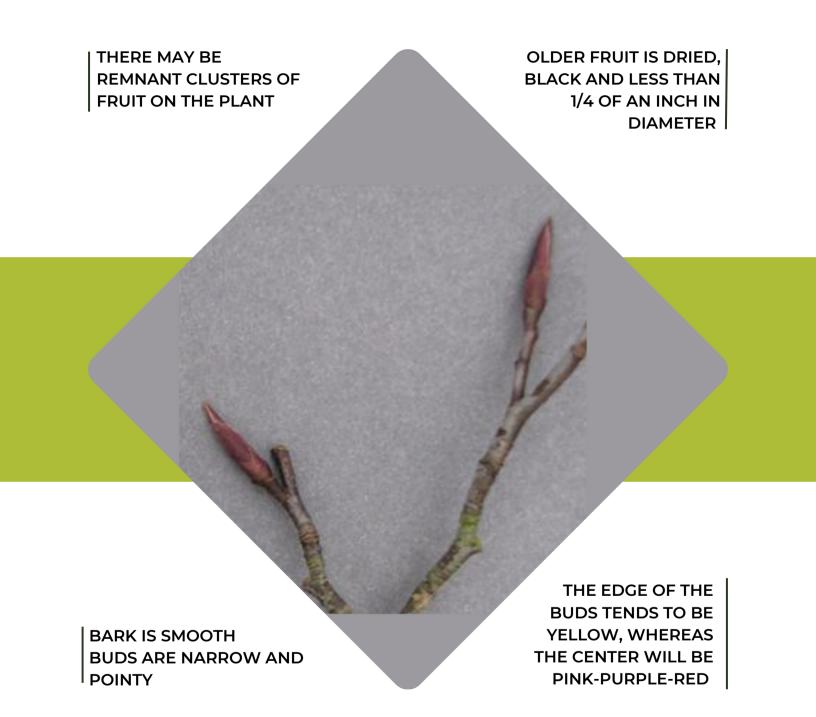
#### BITTER CHERRY

(PRUNUS EMARGINATA)



#### SERVICEBERRY

(AMELANCHIER ALNIFOLIA)



#### FIELD NOTES FROM "WINTER IN THE WOODS":

THIS PLANT IS EASILY CONFUSED WITH OSOBERRY, CRABAPPLE, AND BITTER CHERRY. UNLIKE THE ABOVE PLANTS, THIS PLANT'S BUDS ARE DIRECTLY ATTACHED TO THE STEM (SPUR SHOOTS). ON OLDER PLANTS, THERE ARE SEVERAL CONSECUTIVE RINGS ON THE SPURS RIGHT BEFORE THE BUDS OF THE PLANT. THESE RINGS ARE CAUSED BY BUD SCARS. THE RINGS BEFORE A BUD CAN MAKE THE SPURS LOOK LIKE A SCREWDRIVER.

#### PACIFIC CRABAPPLE

(MALUS FUSCA)



#### **FIELD NOTES:**

BLACK HAWTHORNE IS COMMONLY CONFUSED WITH ENGLISH HAWTHORNE AND PACIFIC CRABAPPLE. CRABAPPLE HAS MORE EGG-SHAPED BUDS. ALSO, HAWTHORNE HAS SPIKES, WHEREAS CRABAPPLE HAS "BLUNT SPURS."

#### BLACK HAWTHRONE

(CRATAEGUS DOUGLASSI)



#### **FIELD NOTES:**

BLACK HAWTHORNE IS COMMONLY CONFUSED WITH ENGLISH HAWTHORNE AND PACIFIC CRABAPPLE. CRABAPPLE HAS MORE EGG-SHAPED BUDS. ALSO, HAWTHORNE HAS SPIKES, WHEREAS CRABAPPLE HAS "BLUNT SPURS."

PHOTO BY ABBY HILL

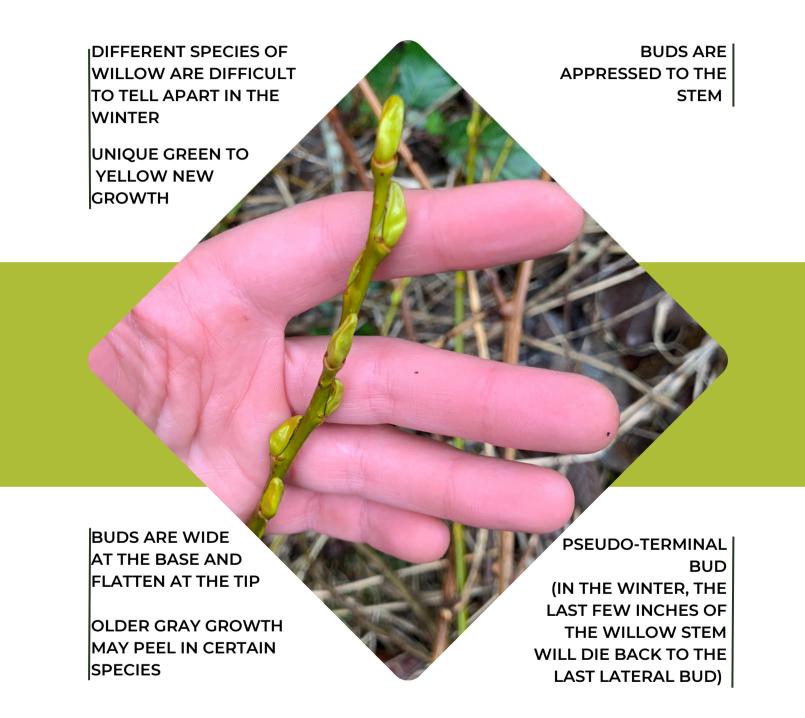
#### CASCARA (RHAMNUS PURSHIANA)



#### **FIELD NOTES:**

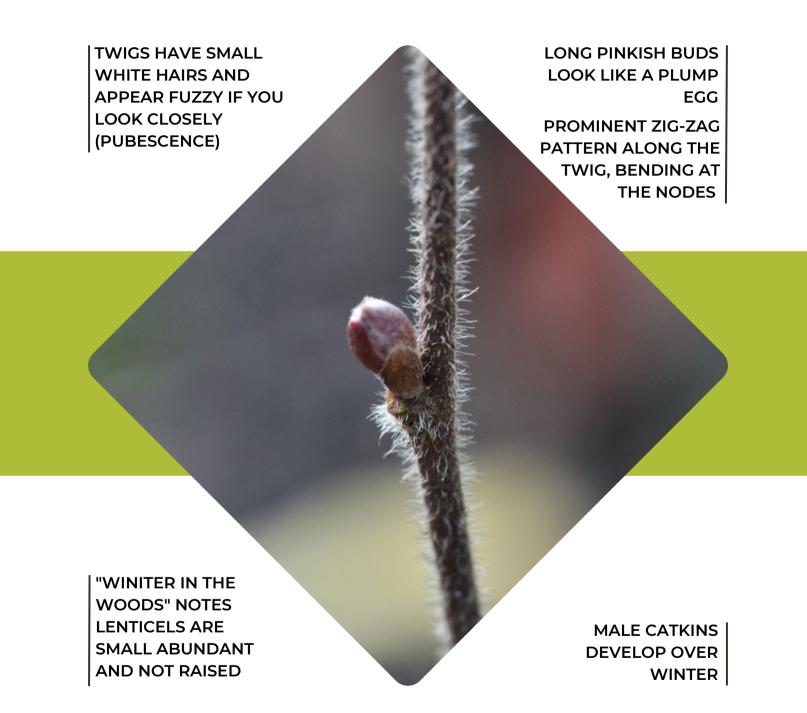
CASCARA IS COMMONLY CONFUSED WITH RED ALDER FROM A DISTANCE SINCE BOTH TREES HAVE A SIMILAR SHAPE. HOWEVER, UP CLOSE BUDS ARE DISTINCT.

#### WILLOW (SALIX SPP)



#### BEAKED HAZELNUT

(CORYLUS CORNUTA)

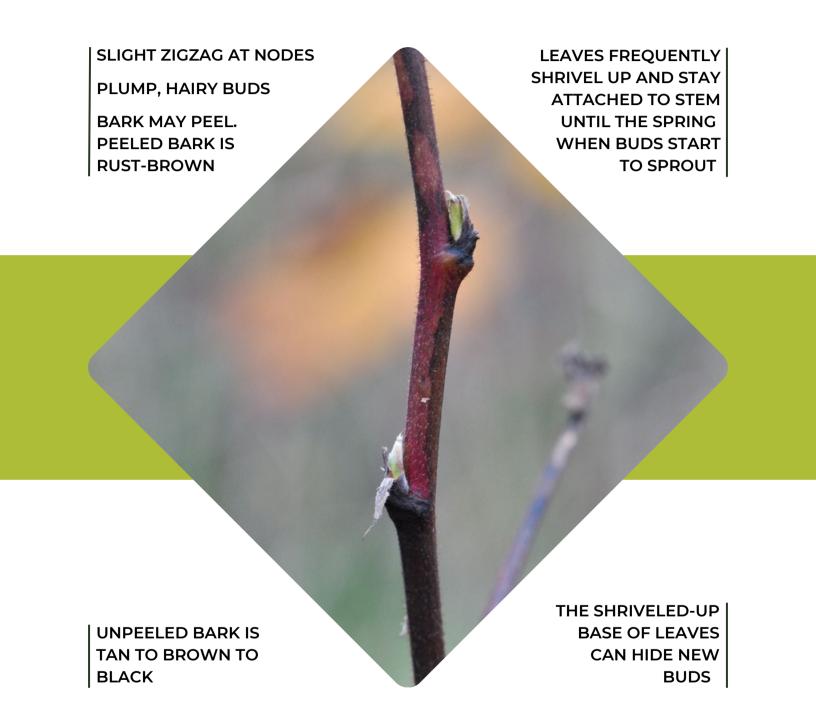


#### **FIELD NOTES:**

BEAKED HAZELNUT IS COMMONLY CONFUSED WITH THIMBLEBERRY. BUT NOTE HAZELNUTS PUBESCENCE, SHORTER AND MORE ROUNDED BUDS, AND MORE BRANCHED GROWTH PATTERN. ALSO CONFUSED WITH NON-NATIVE HAZELNUT WHICH HAVE CLUSTERS OF THREE OR MORE CATKINS. CATKINS ARE LONGER AND BRIGHT YELLOW.

#### THIMBLEBERRY

(RUBUS PARVIFLORUS)



#### **FIELD NOTES:**

THIMBLEBERRY CAN BE CONFUSED FOR HAZELNUT – SEE HAZELNUT ABOVE FOR TIPS TO DIFFERENTIATE. YOUNG SALMONBERRY LACKING PRICKLES AND THIMBLEBERRY ARE OFTEN CONFUSED. SALMONBERRY HAVE MORE VIBRANT ORANGE TWIGS, COMPARED TO THIMBLEBERRIES BROWN-TAN BARK. ONE COULD SAY SALMONBERRIES APPEAR MORE "ALIVE" ALSO, THIMBLEBERRY HAVE PLUMPER BUDS.

#### SALMONBERRY

(RUBUS SPECTABILLIS)



#### **FIELD NOTES:**

YOUNG SALMONBERRY LACKING PRICKLES AND THIMBLEBERRY ARE OFTEN CONFUSED. SALMONBERRY HAVE MORE VIBRANT ORANGE TWIGS, COMPARED TO THIMBLEBERRIES BROWN-TAN BARK. ONE COULD SAY SALMONBERRIES APPEAR MORE "ALIVE". ALSO, THIMBLEBERRY HAVE PLUMPER BUDS.

#### OSOBERRY

(OEMLERIA CERASIFORMIS)



#### RED FLOWERING CURRANT

(RIBES SANGUINEUM)



#### FIELD NOTES:

RED FLOWERING CURRANT, COMMONLY CONFUSED WITH OSOBERRY. HAS "ARTICHOKE SHAPED" BUDS, WHEREAS CURRANT HAS RED BUD SCALES IN A DISORGANIZED PATTERN. NEW GROWTH OSOBERRY HAS SMOOTH SHINY BARK AND MORE PROMINENT LENTICELS. CURRENT'S NEW GROWTH IS REDDISH AND PUBESCENT.

#### PACIFIC NINEBARK

(PHYSOCARPUS CAPITATUS)



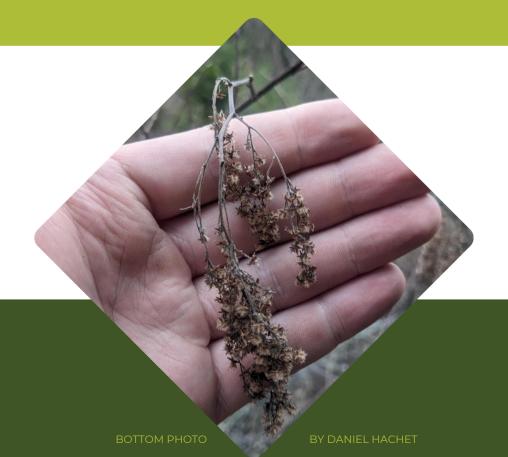
PACIFIC NINEBARK HAS A UNIQUE BARK MAKING IT EASIER TO IDENTIFY.

HOWEVER, AS NOTED IN
"WINTER IN THE WOODS"
NINEBARK AND SPIREA
HAVE SIMILAR BUDS

#### OCEANSPRAY

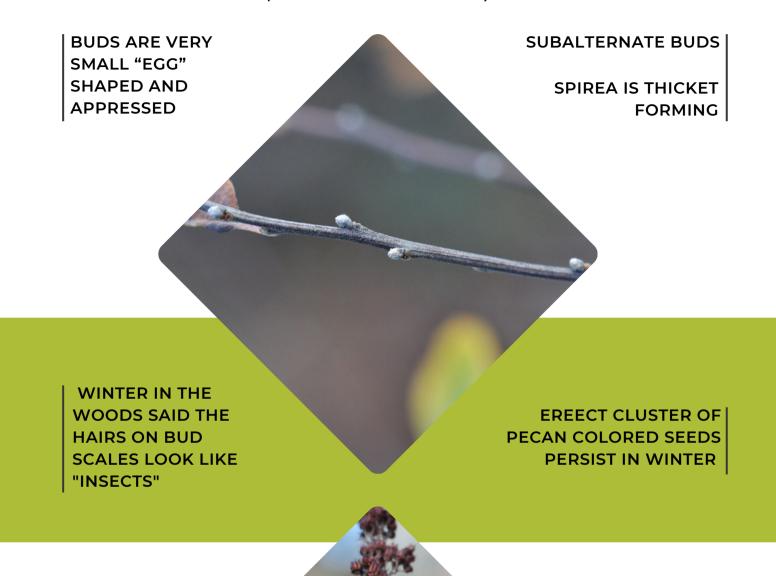
(HOLODISCUS DISCOLOR)





#### SPIREA

(SPIREA DOUGLASSI)

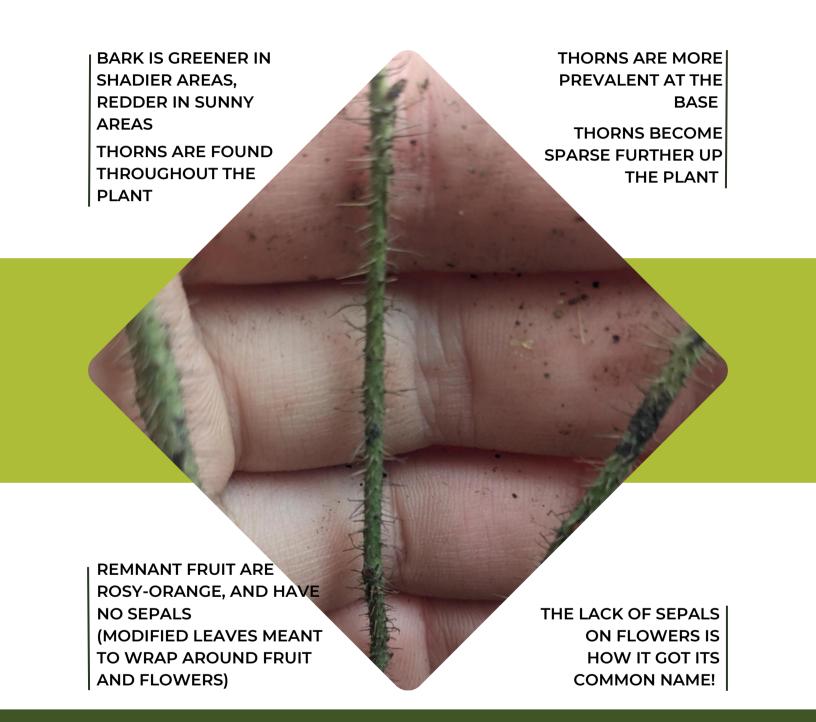


SPIREA AND OCEANSPRAY
HAVE SIMILAR SEED
BUNDLES. HOWEVER,
SPIREA SEED BUNDLES ARE
ERECT COMPARED TO
OCEANSPRAY'S DROOPY
BUNDLES

ALSO, OCEANSPRAY HAS GRAY DULL BROWN BARK COMPARED TO SPIREA'S TAWNY BARK COLOR.

#### BALD HIP ROSE

(ROSA GYMNOCARPA)



#### **FIELD NOTES:**

BALD HIP ROSE IS COMMONLY CONFUSED WITH SALMONBERRY, AND OTHER NATIVE ROSES. BALD HIP ROSE IS NOT THICKET FORMING UNLIKE OTHER TYPES OF ROSE. ALSO, BALD HIP ROSE HAS THORNS FOUND THROUGHOUT THE PLANT, COMPARED TO NOOTKA ROSE AND SWAMP ROSE WHICH HAVE PERPENDICULAR PAIRS OF THORNS RIGHT BELOW THE NODE. BALD HIP ROSE STEM COLOR (GREEN/RED) IS DISTINCTLY DIFFERENT THAN SALMONBERRY STEM COLOR (ORANGISH BROWN).

#### NOOTKA ROSE

(RIBES SANGUINEUM)

NOOTKA ROSE AND SWAMP ROSE LOOK VERY SIMILAR, MAKING THEM HARD TO DIFFERENTIATE, BOTH NOOTKA ROSE AND SWAMP ROSE HAVE PERPENDICULAR PAIRS OF THORNS BELOW EVERY NODE. HOWEVER, NOOTKA ROSE HAVE STRONGER, WIDER THORNS THAN SWAMP ROSE. SWAMP ROSE THORNS ARE MORE NEEDLE LIKE. ALSO, NOOTKA ROSE AND SWAMP **ROSE TEND TO OCCUPY DIFFERENT** HABITATS. NOOTKA ROSE PREFERS **UPLAND AREAS WHEREAS SWAMP ROSE PREFER WET SWAMPY** AREAS. HOWEVER, NOOTKA ROSE **CAN GROW IN WETLAND ENVIRONMENTS AS WELL.** 



#### SWAMP ROSE

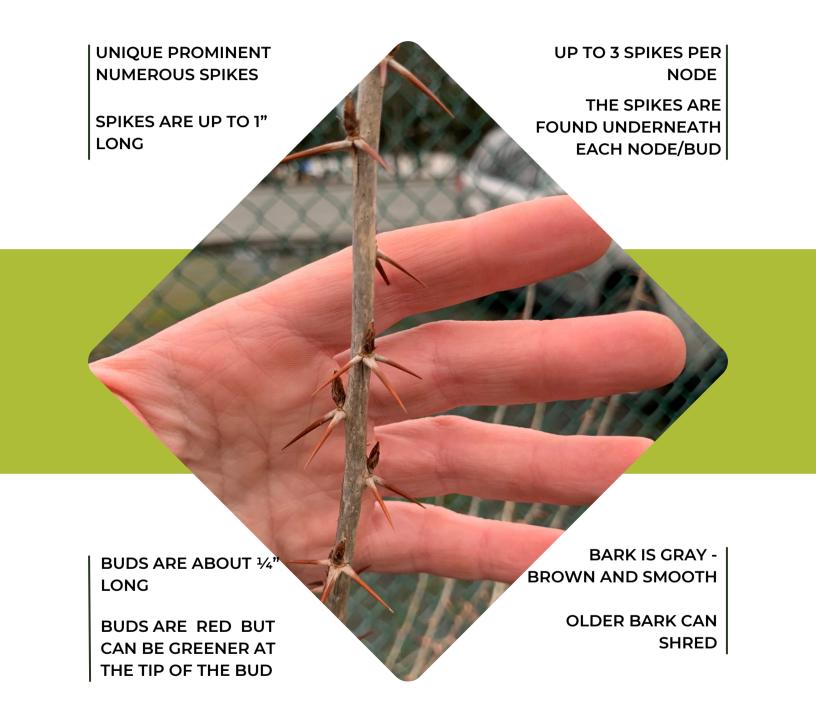
(ROSA PALUSTRIS)



ANOTHER WAY TO
DIFFERENTIATE THE ROSES
ARE THE HIPS OR FRUIT.
SWAMP ROSE PRODUCE THEIR
HIPS IN CLUSTERS OF UP TO
FIVE. NOOTKA ROSE HIPS ARE
LARGER AND ARE NOT
CLUSTERED (PRODUCED
INDIVIDUALLYY). BOTH
NOOTKA ROSE AND SWAMP
ROSE HAVE SEPALS AROUND
THE HIPS. BALD HIP ROSE IS
UNIQUE IN ITS LACK OF
SEPALS AROUND THE HIPS.

#### GOOSEBERRY

(RIBES DIVACARTUM)



#### RED HUCKLEBERRY

(VACCINIUM PARVIFOLIUM)

