

Columbines School of Botanical Studies
 Wild Food Tending Economic Botanical Survey
 Trip #3-6: Ochoco

Date: May 24-27, 2021

Abundance

- d – dominant (defines the plant community)
- a - abundant (codominant of the overstory or dominant of lower layer)
- c – common (easily seen)
- o – occasional (walk around to see)
- r – rare (trace, must search for it)

Phenology

- L - In Leaf
- FL - In Flower
- FR - In Fruit
- SN - Senescent

U: Genus	Name	Notes	Abun	Phen
Food: Roots				
Allium cf. macrum	Rock Onion	Short/early	c	SN
Allium geyeri var. tenerum	Wild Onion	Bulbils		
Allium sp.	Wild Onion	Tall	c	FL
Balsamorhiza sagittata	Arrow-Leaf Balsam Root			
Brodiaea sp. incl Dichelostemma sp., Triteleia sp.	Brodiaea			
Brodiaea sp. incl Dichelostemma sp., Triteleia sp.	Brodiaea	White		
Calochortus cf. macrocarpus	Sego Lily	No Pick	c	L
Camassia quamash ssp. brevifolia	Common Camas		a	FL
Cirsium arvense	Canada Thistle			
Cirsium scariosum	Elk Thistle			
Cirsium vulgare	Bull Thistle			
Dodecatheon pulchellum var. pulchellum	Shooting Star		o	FL
Erythronium sp.	Fawn-lily	No Pick		
Fritillaria atropurpurea	Checker Lily	No Pick	o	FL
Fritillaria pudica	Yellow Bells	No Pick	o	FR
Hypochaeris radicata	False Dandelion			
Lewisia rediviva	Bitterroot			
Lomatium cf. leptocarpum var. bicolor	Biscuit Root		c	FR
Lomatium cous	Biscuit Root, Caush		c	FR
Lomatium grayi	Pungent Biscuit Root	With Juniperus	o	FL
Lomatium macrocarpum	Big White Caush, Large Fruited Biscuit Root		c	L
Lomatium nudicaule	Wild Celery, "Come-see"		a	FL
Lomatium piperi	Sycan, "Bisquick," Biscuit Root		c	SN
Lomatium sp. (2)	Biscuit Root			
Lomatium triternatum	Luksh, Biscuit Root			
Perideridia montana (P. gairdneri)	Late Yampah		c	L
Perideridia oregana	Early Yampah			

Columbines School of Botanical Studies
 Wild Food Tending Economic Botanical Survey
 Trip #3-6: Ochoco

U: Genus	Name	Notes	Abun	Phe
Taraxacum officinale	Dandelion		o	FL
Tragopogon sp.	Salsify, Oyster Root			
Valeriana edulis	Edible Valerian			

Food: Greens and Potherbs

Allium cf. macrum	Rock Onion	Short/early	c	SN
Allium geyeri var. tenerum	Wild Onion	Bulbils		
Allium robinsonii	Wild Onion	Flat leaves, bitter roots	o	FL
Allium sp.	Wild Onion	Tall	c	FL
Berberis repens	Oregon Grape			
Bistorta bistortoides (Polygonum b.)	Mountain Bistort		c	FL
Bryoria fremontii	Black Tree Lichen		c	L
Calochortus cf. macrocarpus	Sego Lily	No Pick	c	L
Castilleja sp.	Green Paintbrush	Caution with poison soils		
Castilleja sp. (2)	Paintbrush	Caution with poison soils		
Castilleja sp. (3)	Paintbrush	Caution with poison soils		
cf. Phoenicaulis cheiranthoides	Wild Broccoli, Daggerpod			
cf. Potentilla sp.	Potentilla			
Cirsium arvense	Canada Thistle			
Cirsium scariosum	Elk Thistle			
Cirsium vulgare	Bull Thistle			
Claytonia perfoliata (Montia p.)	Miner's Lettuce			
Dodecatheon pulchellum var. pulchellum	Shooting Star		o	FL
Erythronium sp.	Fawn-lily	No Pick		
Fragaria virginiana	Wild Strawberry			
Fritillaria atropurpurea	Checker Lily	No Pick	o	FL
Fritillaria pudica	Yellow Bells	No Pick	o	FR
Gallium aparine	Bedstraw, Cleavers			
Gallium sp.	Bedstraw, Cleavers			
Heracleum maximum (H. lanatum)	Cow Parsnip			
Hydrophyllum alpestre	Waterleaf		o	FL
Hypochaeris radicata	False Dandelion			
Lactuca serriola	Prickly Lettuce			
Leucanthemum vulgare (Chrysanthemum l.)	Ox Eye Daisy			
Lomatium cf. dissectum	Biscuit Root			
Lomatium cous	Biscuit Root, Caush		c	FR
Lomatium grayi	Pungent Biscuit Root	With Juniperus	o	FL
Lomatium nudicaule	Wild Celery, "Come-see"		a	FL
Lomatium piperi	Sycan, "Bisquick," Biscuit Root		c	SN
Lomatium sp. (2)	Biscuit Root			

Columbines School of Botanical Studies
 Wild Food Tending Economic Botanical Survey
 Trip #3-6: Ochoco

U: Genus	Name	Notes	Abun	Phe
Micranthes cf. oregana (Saxifraga cf. o.)	Marsh Saxifrage		o	FL
Orthocarpus sp.	Owl's Clover			
Osmorhiza occidentalis	Sweet Root			
Perideridia montana (P. gairdneri)	Late Yampah		c	L
Perideridia oregana	Early Yampah			
Plantago lanceolata	Plantain			
Plectritis congesta	Corn Salad, Rosy Plectritis			
Prunella vulgaris	Self Heal, Heal All			
Rosa sp.	Wild Rose			
Rumex acetosella	Sheep Sorrel			
Rumex sp.	Dock			
Sambucus cerulea	Blue Elder	Flowers Only		
Sanguisorba sp.	Burnet			
Sedum stenopetalum	Stonecrop		c	L
Sidalcea sp.	Checker Mallow			
Sonchus sp.	Sow Thistle			
Taraxacum officinale	Dandelion		o	FL
Tragopogon sp.	Salsify, Oyster Root			
Trifolium macrocephalum	Big-head Clover		c	FL
Trifolium pratense	Red Clover			
Trifolium repens	White Clover			
Veronica sp.	Speedwell			
Viola adunca	Field Violet		o	FL
Viola nuttallii	Prairie Violet		o	FL

Food: Fruits

Amelanchier alnifolia	Service Berry			
Balsamorhiza sagittata	Arrow-Leaf Balsam Root			
Berberis repens	Oregon Grape			
Bistorta bistortoides (Polygonum b.)	Mountain Bistort		c	FL
Calochortus cf. macrocarpus	Sego Lily	No Pick	c	L
Dodecatheon pulchellum var. pulchellum	Shooting Star		o	FL
Erythronium sp.	Fawn-lily	No Pick		
Fragaria virginiana	Wild Strawberry			
Fritillaria atropurpurea	Checker Lily	No Pick	o	FL
Fritillaria pudica	Yellow Bells	No Pick	o	FR
Lonicera involucrata	Twinberry			
Mentzelia sp.	Blazing Star	Uncertain, Ethnobotanical Ref.		
Pinus ponderosa	Ponderosa Pine			
Ribes cereum	Wax Currant			
Rosa sp.	Wild Rose	Rosehips		

Columbines School of Botanical Studies
 Wild Food Tending Economic Botanical Survey
 Trip #3-6: Ochoco

U: Genus	Name	Notes	Abun	Phe
Rumex sp.	Dock			
Sambucus cerulea	Blue Elder			
Wyethia amplexicaulis hybrid	Mules Ear			
Wyethia helianthoides	White Mules Ear		o	FL

Food: Spices/Teas

Achillea millefolium	Yarrow			
Allium cf. macrum	Rock Onion	Short/early	c	SN
Allium geyeri var. tenerum	Wild Onion	Bulbils		
Allium sp.	Wild Onion	Tall	c	FL
Fragaria virginiana	Wild Strawberry			
Geum triflorum	Prairie Smoke		?	FL
Heracleum maximum (H. lanatum)	Cow Parsnip	Strong		
Juniperus sp.	Juniper	Fruits	a	FR
Larix occidentalis	Western Larch			
Lomatium cf. dissectum	Biscuit Root			
Lomatium cf. leptocarpum var. bicolor	Biscuit Root		c	FR
Lomatium cous	Biscuit Root, Caush		c	FR
Lomatium grayi	Pungent Biscuit Root	With Juniperus	o	FL
Lomatium macrocarpum	Big White Caush, Large Fruited Biscuit Root		c	L
Lomatium nudicaule	Wild Celery, "Come-see"		a	FL
Lomatium piperi	Sycan, "Bisquick," Biscuit Root		c	SN
Lomatium sp. (2)	Biscuit Root			
Lomatium triternatum	Luksh, Biscuit Root			
Osmorhiza occidentalis	Sweet Root			
Perideridia montana (P. gairdneri)	Late Yampah		c	L
Perideridia oregana	Early Yampah			
Pinus ponderosa	Ponderosa Pine			
Prunella vulgaris	Self Heal, Heal All			
Rosa sp.	Wild Rose			
Trifolium macrocephalum	Big-head Clover		c	FL
Trifolium pratense	Red Clover			
Trifolium repens	White Clover			
Veronica sp.	Speedwell	Simple		

Alteratives incl. Diaphoretics and Diuretics

Achillea millefolium	Yarrow	Diaphoretic		
Artemisia arbuscula	Low Sagebrush		g	L
Artemisia tridentata	Big Sagebrush			

Columbines School of Botanical Studies
Wild Food Tending Economic Botanical Survey
Trip #3-6: Ochoco

U: Genus	Name	Notes	Abun	Phe
Artemisia tripartita	Three-Tip Sagebrush		g	L
Balsamorhiza sagittata	Arrow-Leaf Balsam Root			
Berberis repens	Oregon Grape	Alterative		
Ceanothus velutinus	Red Root	Lymph		
Gallium aparine	Bedstraw, Cleavers	Diuretic		
Gallium sp.	Bedstraw, Cleavers	Diuretic		
Hypochaeris radicata	False Dandelion	Alterative		
Juniperus sp.	Juniper		a	FR
Lomatium nudicaule	Wild Celery, "Come-see"		a	FL
Paeonia brownii	Peony		?	FL
Pinus ponderosa	Ponderosa Pine			
Rumex sp.	Dock	Alterative		
Sambucus cerulea	Blue Elder	Flowers and Berries		
Taraxacum officinale	Dandelion	Alterative	o	FL
Trifolium macrocephalum	Big-head Clover	Alterative, Simple	c	FL
Trifolium pratense	Red Clover	Alterative, Simple		
Trifolium repens	White Clover			

Aromatic/Bitters

Achillea millefolium	Yarrow			
Artemisia arbuscula	Low Sagebrush		g	L
Artemisia tridentata	Big Sagebrush			
Artemisia tripartita	Three-Tip Sagebrush		g	L
Balsamorhiza sagittata	Arrow-Leaf Balsam Root			
Berberis repens	Oregon Grape	Bitter		
Heracleum maximum (H. lanatum)	Cow Parsnip	Strong aromatic		
Hypochaeris radicata	False Dandelion	Bitter		
Juniperus sp.	Juniper		a	FR
Lewisia rediviva	Bitterroot			
Lomatium cf. dissectum	Biscuit Root			
Lomatium cf. leptocarpum var. bicolor	Biscuit Root		c	FR
Lomatium grayi	Pungent Biscuit Root	With Juniperus	o	FL
Lomatium macrocarpum	Big White Caush, Large Fruited Biscuit Root		c	L
Lomatium nudicaule	Wild Celery, "Come-see"		a	FL
Lomatium sp. (2)	Biscuit Root			
Lomatium triternatum	Luksh, Biscuit Root			
Osmorhiza occidentalis	Sweet Root			
Pinus ponderosa	Ponderosa Pine			
Rumex sp.	Dock	Bitter		
Sonchus sp.	Sow Thistle			
Taraxacum officinale	Dandelion	Bitter	o	FL

Columbines School of Botanical Studies
Wild Food Tending Economic Botanical Survey
Trip #3-6: Ochoco

U: Genus	Name	Notes	Abun	Phe
----------	------	-------	------	-----

Astringents

Amelanchier alnifolia	Service Berry			
Bistorta bistortoides (Polygonum b.)	Mountain Bistort		c	FL
Ceanothus velutinus	Red Root			
cf. Potentilla sp.	Potentilla			
Fragaria virginiana	Wild Strawberry			
Geum macrophyllum	Geum, Avens			
Geum triflorum	Prairie Smoke			FL
Pinus ponderosa	Ponderosa Pine			
Ribes cereum	Wax Currant			
Rosa sp.	Wild Rose			
Rumex sp.	Dock	Mild		
Sanguisorba sp.	Burnet			
Spirea sp.	Spirea			

Calming Herbs, Nervines

Hypericum perforatum	St. John's Wort			
Lactuca serriola	Prickly Lettuce			
Paeonia brownii	Peony		?	FL
Plectritis congesta	Corn Salad, Rosy Plectritis			

Demulcents, Emollients

Penstemon sp.	Penstemon	Emollient		
Plantago lanceolata	Plantain			
Rumex sp.	Dock	Young Leaves		
Sidalcea sp.	Checker Mallow			
Viola adunca	Field Violet		o	FL
Viola nuttallii	Prairie Violet		o	FL

Pain (see Tranquilizers/Muscle Relaxants)

Heracleum maximum (H. lanatum)	Cow Parsnip			
Populus trichocarpa	Cottonwood Buds			
Spirea sp.	Spirea			

Misc.

Achillea millefolium	Yarrow	Hemostatic		
Arnica cordifolia	Arnica	Injuries	a	L
Arnica mollis	Arnica	Injuries	o	L
Artemisia arbuscula	Low Sagebrush	Incense	g	L

Columbines School of Botanical Studies
 Wild Food Tending Economic Botanical Survey
 Trip #3-6: Ochoco

U: Genus	Name	Notes	Abun Phe	
Artemisia tridentata	Big Sagebrush	Incense		
Artemisia tripartita	Three-Tip Sagebrush	Incense	g	L
Ceanothus velutinus	Red Root	Soap		
Cercocarpus ledifolius	Mountain Mahogany	Digging Sticks	o	L
Gallium aparine	Bedstraw, Cleavers	Burns		
Gallium sp.	Bedstraw, Cleavers	Burns		
Hypochaeris radicata	False Dandelion	Blood Sugar, Wine, Minera		
Juniperus sp.	Juniper	Incense	a	FR
Leucanthemum vulgare (Chrysanthemum l.)	Ox Eye Daisy	Allergies		
Pinus ponderosa	Ponderosa Pine	Incense, Fiber		
Plantago lanceolata	Plantain	Drawing Poultice		
Taraxacum officinale	Dandelion	Blood Sugar, Wine, Minera	o	FL

Topics of Botanical Interest				
Bromus tectorum	Cheatgrass			
cf. Senecio sp.	Senecio		c	L
cf. Sisymbrium sp.	Tumble Mustard			
Delphinium sp.	Larkspur	Poison Look-alike	c	FL
Festuca, Poa, etc.	Bunchgrasses			
Letharia vulpina	Wolf Lichen	Poison		
Olsynium douglasii var. inflatum (Sisyrinchium inflatum)	Grass Widow	Poison Look-like	c	FL
Ranunculus sp.	Buttercup			
Toxicoscordion paniculatum (Zigadenus p.)	Death Camas	Poison Look-alike	c	FL
Toxicoscordion venenosum var. gramineum (Zigadenus v.)	Little Death Camas	Poison Look-alike		
Veratrum sp.	False Hellebore			

Animal Interaction

Columbines School of Botanical Studies
Wild Food Tending
Field Trips #3, 4, 5 & 6
May 24 - 27, 2021
Ochoco Mountain Ponderosa Pine Forest and Scabland

Ochoco Mountains ecology, geology, history and First Peoples
Large camas meadows usurped by private cattle ranches

Botany

Keyed *Zigadenus paniculatus*

Zigadenus vs. *Camassia* field characteristics

Keyed *Camassia quamash* ssp. *brevifolia* using Flora of North America

Keyed *Lomatium cous* using a key to tuberous Lomatiums in Oregon from the article "A New Lomatium Sp. From the Ochoco Mountains of Central Oregon".
Using external resources for identification when the keys in Hitchcock prove unmanageable: county plant lists, scholarly articles, keys for smaller areas or specific characters within a genus.

Keyed by individuals: *Arnica cordifolia*, *Geum triflorum*

Ponderosa Pine Zone and Scabland Mosaic

Zigadenus ecology

Scabland ecology

Varying woody *Artemisia* spp. as indicators of soil depth and associated edible plants

Wildcrafting

How to dig roots using a cuppen (digging stick in Paiute language)

Harvested and processed *Lomatium cous*

Harvested and processed *Lomatium nudicaule* above ground

Harvested and processed *Camassia quamash* spp. *brevifolia* bulbs

Harvested and processed *Frittilaria pudica* bulb and green capsule

Harvested and processed salad greens: *Hydrophyllum alpestre*, *Viola nuttallii*

and *Viola adunca*, *Trifolium macrocephalum*, *Sedum stenopetalum*, *Allium*

spp., *Dodecatheon pulchellum*, *Bistorta bistortoides*, *Taraxacum officinale*

Tasted: *Perideridia montana* leaf and root, *Calochortus* sp. bulb and leaf,

Lomatium grayi leaf

Wild Food Preparation

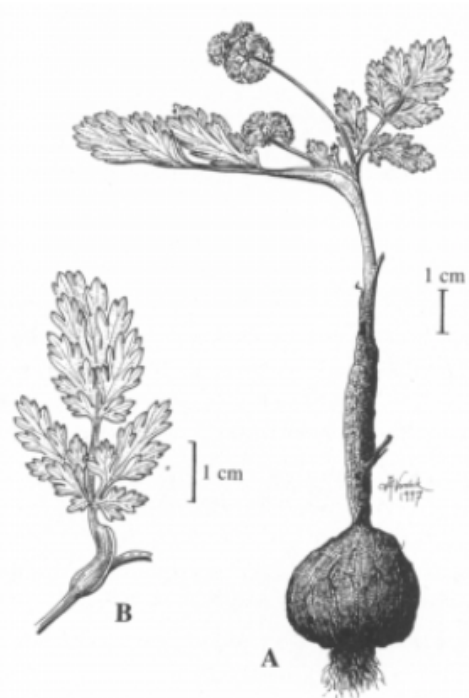
The rarity and relative specialness of finding a substantial caloric wild food that tastes "boring"

Experimenting with traditional methods of food preparation by using multiple ethnobotanical reference texts for ideas

Pit bake strategies

Inulin, increasing absorbable nutrition through pit bake

- *Lomatium cous* roots, peeled, sliced and fried in butter = “croissant root”
- Salad with *Hydrophyllum alpestre* leaves and flowers, *Viola nuttallii* and *Viola adunca* leaves and flowers, *Trifolium macrocephalum* flowers, *Sedum stenopetalum* above ground, *Allium* spp. (2) flowers and buds, *Dodecatheon pulchellum* flowers, *Bistorta bistortoides* leaves, *Taraxacum officinale* flowers, *Lomatium cous* leaves, *Lomatium nudicaule* leaves, *Fritillaria pudica* green fruits. Dressed with olive oil, apple cider vinegar, and *Lomatium cous* seeds.
- *Lomatium nudicaule* young stems eaten fresh
- *Lomatium nudicaule* immature umbels and *Fritillaria pudica* bulbs, stir fried in butter.
- *Camassia quamash* spp. *brevifolia* bulbs, pit baked for 2 days with camas greens and grass. Bulbs were partially burned, and partially sweet and brown—edible and sweet but not 100% done yet. We pulverized the burned ones to dry as a drink later, ate some of the done ones fresh, and pounded some to dry in a cake for later.



Lomatium ochocense