

working for clean rivers



Euphorbias of the Pacific Northwest

Dominic Maze
Biologist

Bureau of Environmental Services

Pull Together 2017



ENVIRONMENTAL SERVICES
CITY OF PORTLAND

NICK FISH, COMMISSIONER
MICHAEL JORDAN, DIRECTOR

working for clean rivers



Euphorbias of the Pacific Northwest (well, some of them)

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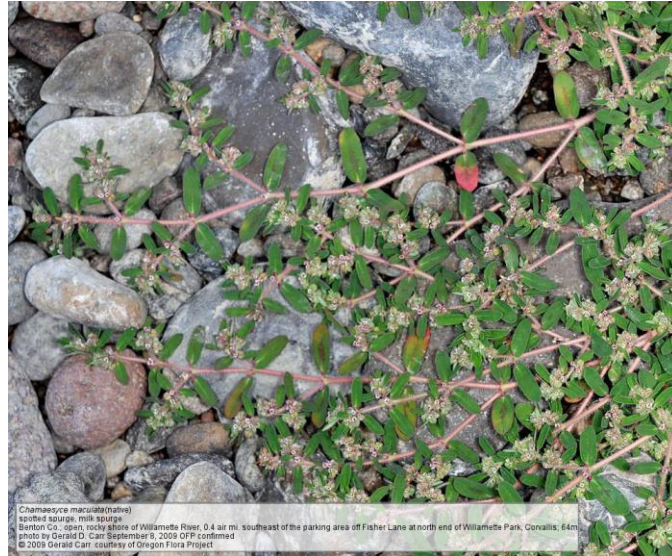


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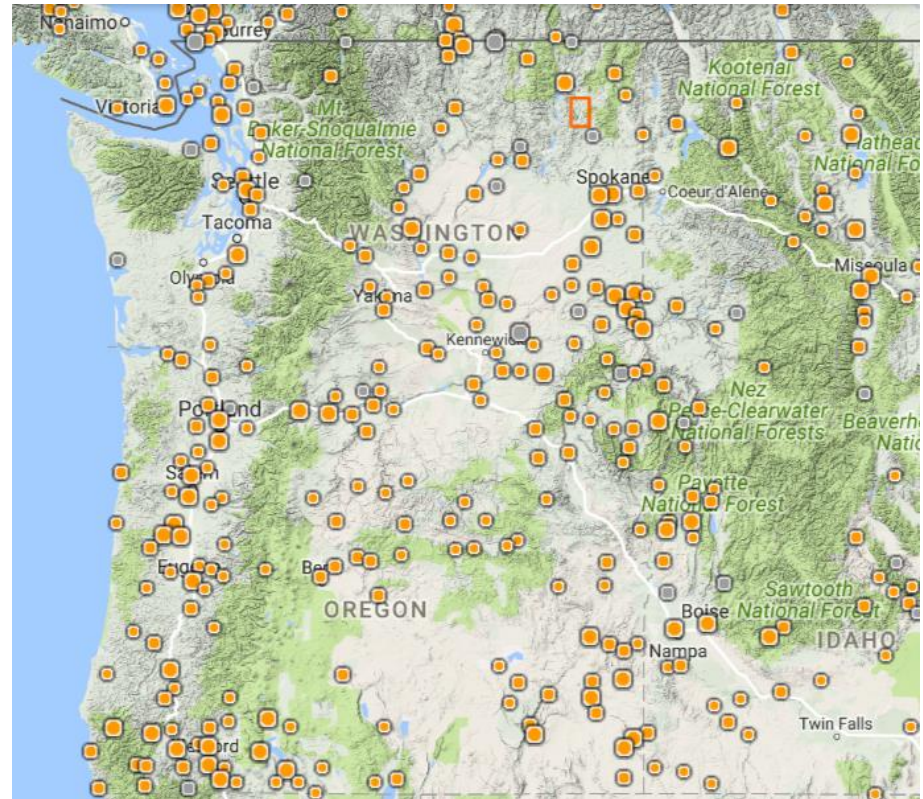
Euphorbias

- *Family vs. genus?*
- *Why do we care?*
 - *Many weeds but depends on your habitat and/or setting*
 - *Depends on what your trying to accomplish*
 - *Depends on the “target” species*
 - *Some natives*
 - *We’ll break these into two groups*



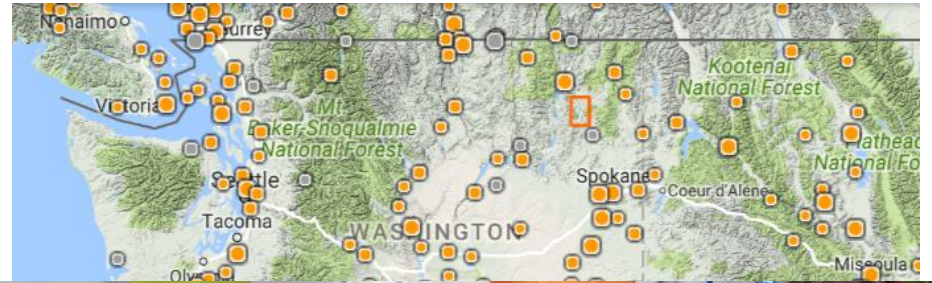
Euphorbiaceae

- Euphorbiaceae
 - *Euphorbiaceae*: large family/genus
 - rep. in West by ~10 genera



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 - In Pac NW, 4(?) genera
 - Often hotter drier regions (Cactus vs. Euphorbia)



Euphorbiaceae

- Euphorbiaceae
 - *Euphorbiaceae*: large family/genus
 - rep. in West by ~10 genera
 - In Pac NW, 4(?) genera
 - Often hotter drier regions (Cactus vs. Euphorbia)
 - Tiny (reduced) flowers. Unisexual



Euphorbia

- Euphorbia
 - *Milky sap (= toxic)*



Euphorbia



Euphorbia

- Euphorbia
 - *Milky sap (= toxic)*
 - *“Spurge”*
 - *Storied and confusing name*



Credit Wikiwand



Euphorbia

- Euphorbia
 - *Milky sap (= toxic)*
 - *“Spurge”*
 - *Storied and confusing name*
 - *Big, world-wide genus*
 - *Diverse*



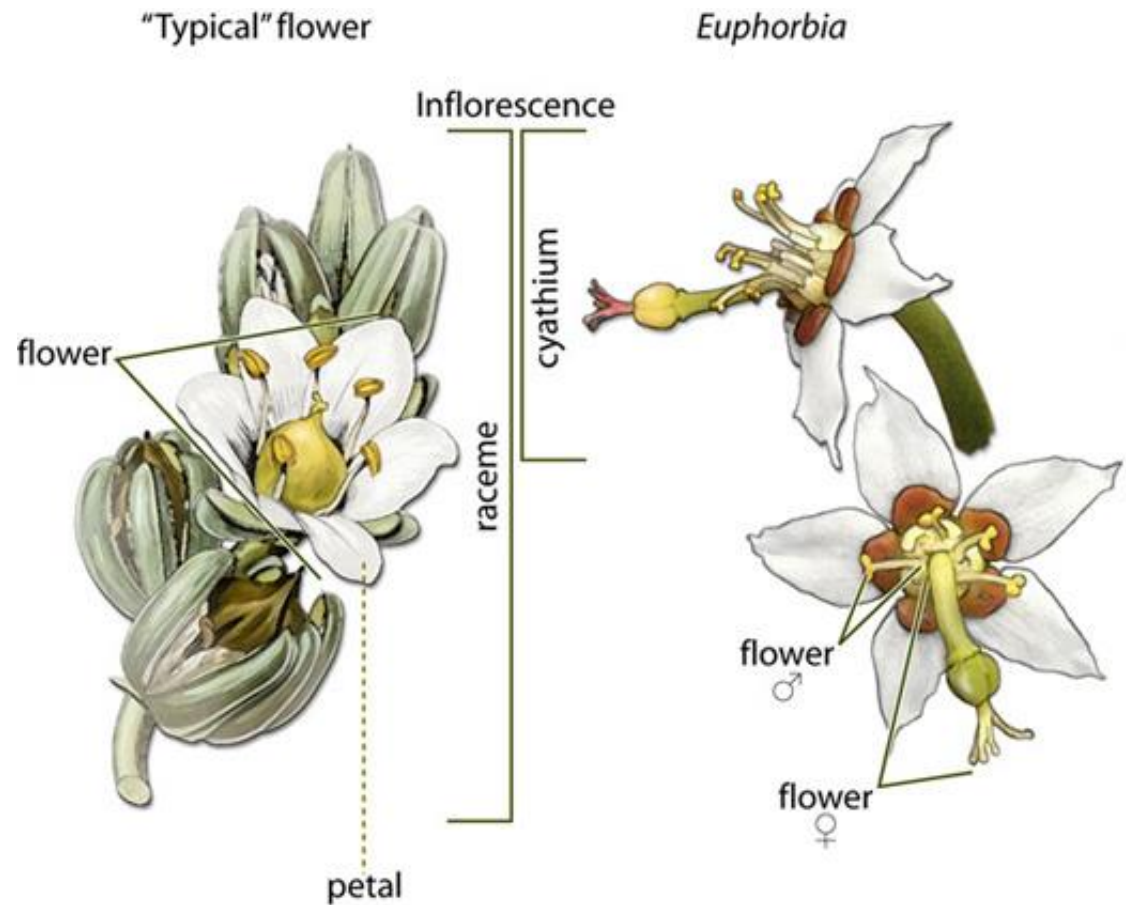
Euphorbia

- Euphorbia
 - *Modifications for success*
 - *Contrast Euphorbia with those largest families!*



Euphorbia

- Euphorbia
 - *Modifications for success*
 - *Cyathia*

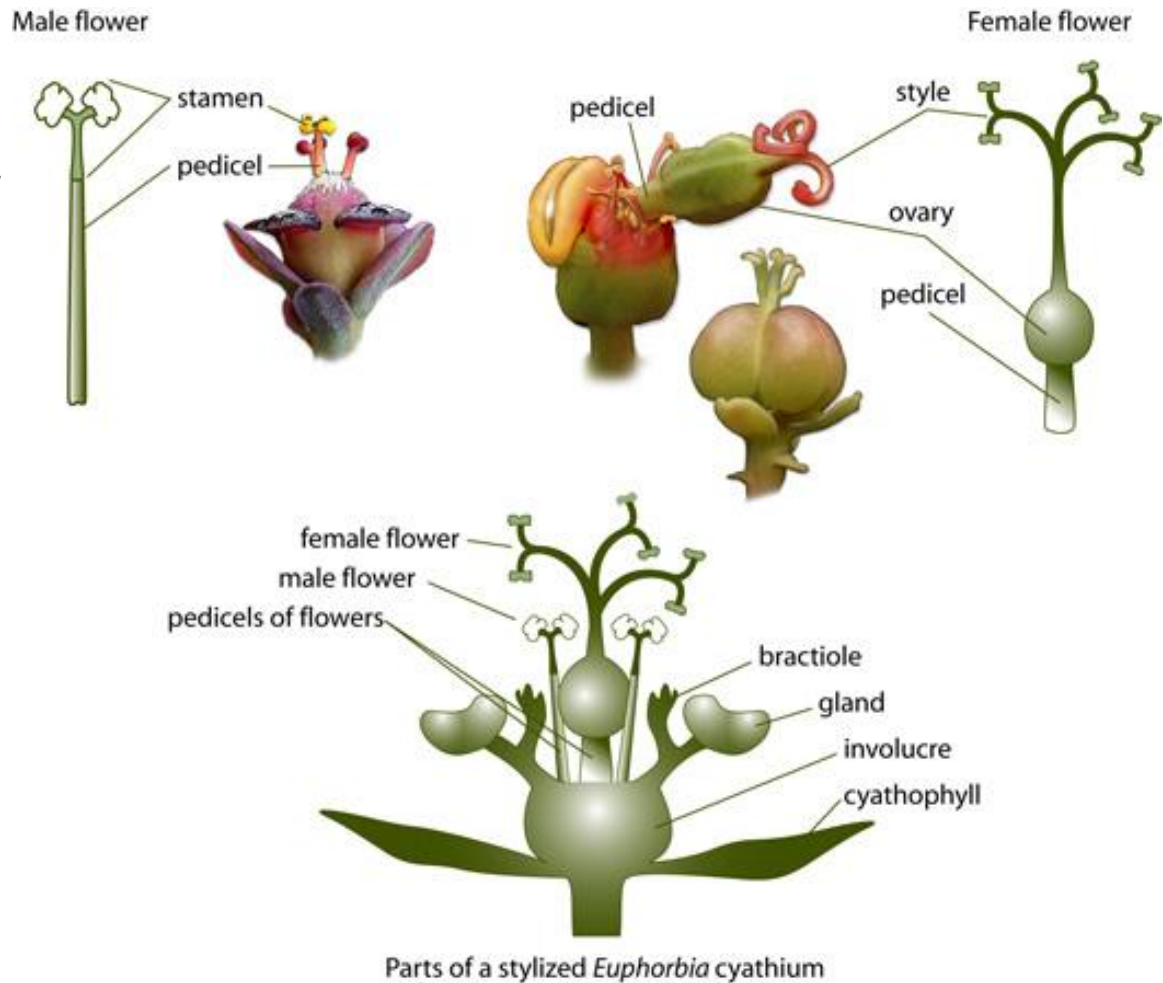


Diagrams courtesy of the Worldwide Spurge Project, 2014



Euphorbia

- Euphorbia
 - *Modifications for success*
 - *Cyathia*



Diagrams courtesy of the Worldwide Spurge Project, 2014



Euphorbia

- Euphorbia
 - *Modifications for success*
 - *Cyathia*
 - *W/ modification*



Cyathophylls



Euphorbia

- Euphorbia
 - *Modifications for success*
 - *Cyathia*
 - *W/ modification*



Cyathophylls



Euphorbia

- Euphorbia
 - *Modifications for success*
 - *Glands*
 - *W/ modification*
 - *These characters are essential to ID (along with other std. characters)*

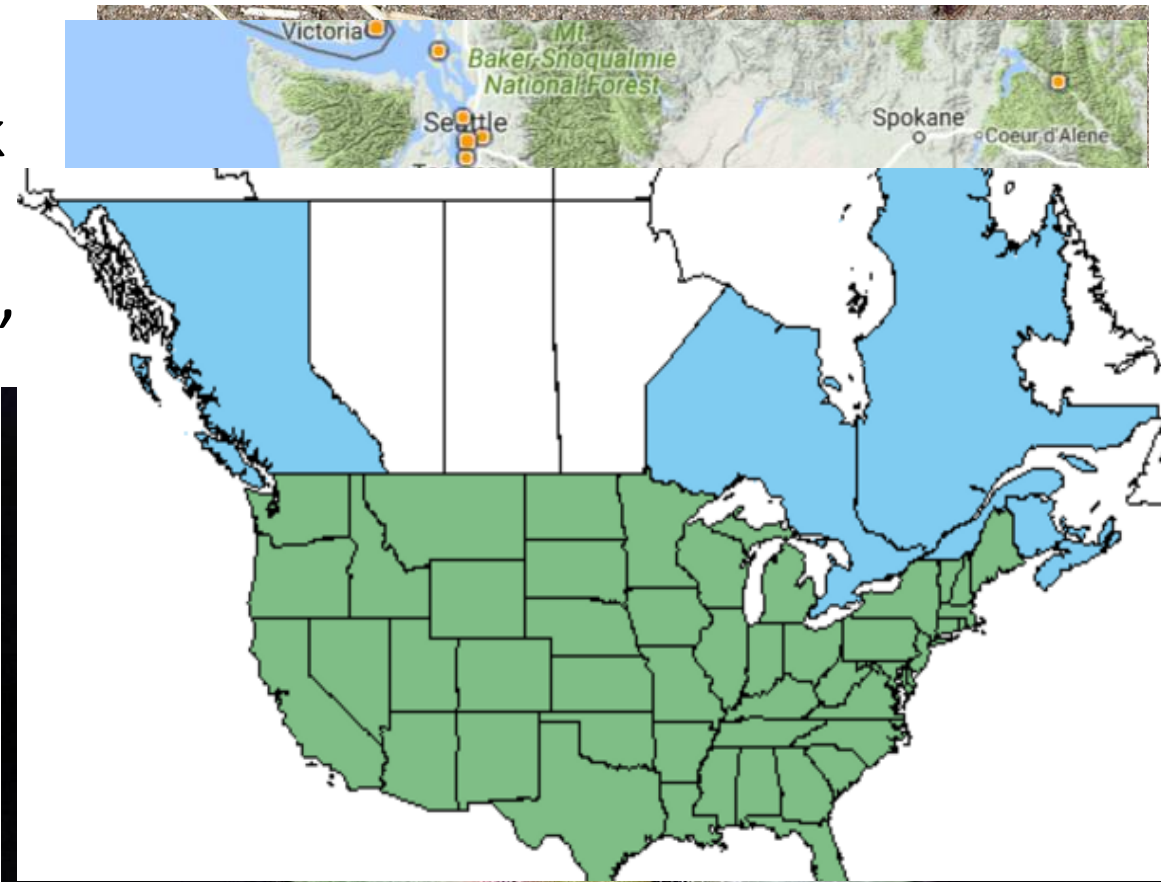


Glands



Euphorbia (formerly Chamaesyce)

- All this based on the new “Hitchcock and Cronquist”
- (Ours) low-growing, prostrate, milky sap, opp. lvs, inf. axillary,
- *E. maculata* (ann)
- Stems/lvs hairy
- Lvs often spotted
- Exotic(?)
- Management
 - Why?



Chamaesyce maculata (native)
spotted spurge, milk spurge
Benton Co.; open, rocky shore of Willamette River, 0.4 air mi. southeast of the parking area off Fisher Lane at north end of Willamette Park, Corvallis; 64m
photo by Gerald D. Carr September 8, 2009 OFP confirmed
© 2009 Gerald Carr courtesy of Oregon Flora Project



Euphorbia (formerly Chamaesyce)

- *E. glyptosperma* and *E. serpyllifolia* var. *serpyllifolia*
- Native! (another reason not to treat the former)
- Stems and lvs glabrous
- Look for these spp. Former now rare?



Chamaesyce serpyllifolia (native)
Thyme-leaved spurge
Lake Co., Dog Lake Lane, 1.5 mi. east of Drews Dam, ca. 13 air mi. west-southwest of Lakeview, 1489m, 42.123° N-120.59162° W
photo by Gerald D. Carr June 26, 2012 OFP confirmed
© 2012 Gerald Carr courtesy of Oregon Flora Project



Euphorbia

- *E. lathyris* (mole plant)
- Underreported
- Only opp. lvd “true” *Euphorbia*
- Explosive dispersal
- Toxic
- Sporadic infestations
- Management
 - Grazing?
 - Cultivation?
 - Roadside/Nat’l areas?



Euphorbia lathyris(exotic)
caper spurge, mole plant
Lane Co.; S side of Ferguson Rd., just E of jct. with Hulbert Lake Rd., 3.6 mi. NW of Junction City via Hwy 99W; 95m; 44.25246° N -123.24968° W
September 1, 2015 OFP confirmed
© 2015 Gerald D. Carr, courtesy of Oregon Flora Project

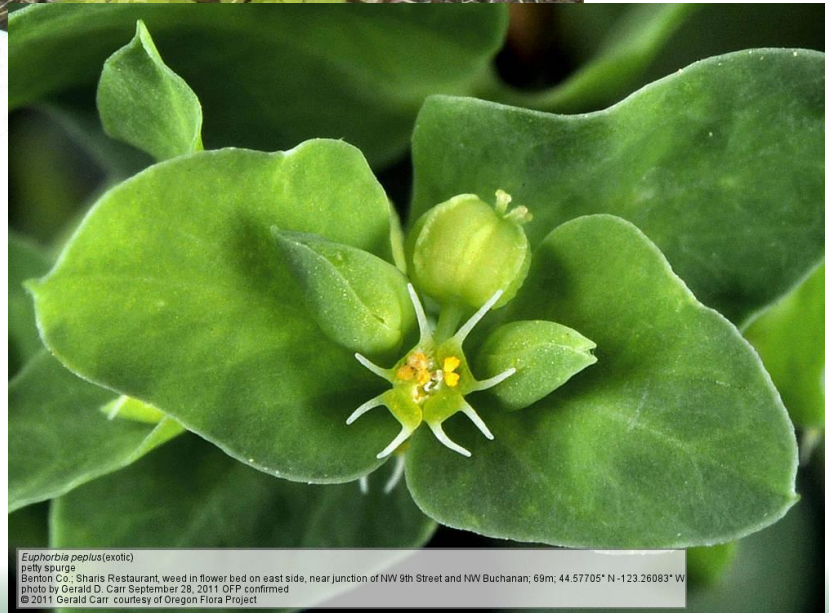


Euphorbia lathyris(exotic)
caper spurge, mole plant
Lane Co.; S side of Ferguson Rd., 3.6 mi. NW of Junction City via Hwy 99W; 95m
September 1, 2015 OFP confirmed
© 2015 Gerald D. Carr, courtesy of Oregon Flora Project



Euphorbia

- *E. peplus* (petty spurge)
- Annual
- “Fatally toxic”
- Common weed (more Westside)
- Medicinal
- Management
 - Why bother?
 - “Anthophilic”



Euphorbia peplus(exotic)
petty spurge
Benton Co.: Sharis Restaurant, weed in flower bed on east side, near junction of NW 9th Street and NW Buchanan; 69m; 44.57705° N -123.26083° W
photo by Gerald D. Carr September 28, 2011 OFP confirmed
© 2011 Gerald Carr: courtesy of Oregon Flora Project



Euphorbia

- *E. helioscopia*
(madwoman's milk)
- Annual(?)
- No "horns"
- Similar to *E. peplus*
- Probably overlooked
- Management
 - much more robust
 - site specific goals
 - annual control



Euphorbia

- *E. myrsinites*
(myrtle spurge)
- OR, WA B rank
- Glands w/ rounded “horns”, pointy grey-grn lvs, succulent
- Sidewalk weed/east side (Imnaha, Okanogan) gravelly slopes, range
- “Pediatric dermatitis”
- Management?
 - Westside still sold
 - Eastside
 - Looks like *E. rigida*



Euphorbia

- *E. virgata* (*E. esula*)
- OR, WA B rank
- A “bad weed”
 - extensive clonal col.
 - 1.5 mill ha. in US
 - Perennial w/ “horns”, linear lvs.
- \$150 mill a year
- Management?
 - Westside sparse but closely related species thriving
 - Eastside
 - Biological control: 3(4) spp. in 80/90s, “very good” control
 - mowing/burning, grazing no good



Euphorbia esula (exotic)
leafy spurge, esula spurge
Lincoln Co., Washington; 756m; 47.76099° N -118.17203° W
photo by Gerald D. Carr July 4, 2010 OFP confirmed
© 2010 Gerald Carr courtesy of Oregon Flora Project



Euphorbia

- *E. oblongata* (eggleaf spurge)
- OR A & T, WA A rank
- True ED/RR species
- Perennial w/ no “horns”
- Another “bad weed”
 - extensive clonal/sexual colonies
 - maybe a tad wetter habitat
 - both sides at risk
 - hay contaminant; livestock/ horse toxicity
- Management?
 - 2% Triclopyr
 - seedbank concerns



Euphorbia oblongata (exotic)
eggleaf spurge, Balkan spurge
Linn Co., North River Dr. shoulder, just W of its jct. with Quartzville Dr., NE end of Foster Reservoir, E of Sweet Home; 212m
June 3, 2015 OFP confirmed
© 2015 Gerald D. Carr, courtesy of Oregon Flora Project



2015/04/01



Euphorbia

- *E. oblongata*
(eggleaf spurge)
- OR A & T, WA A rank
- 3 acres in Clackamas



Euphorbia

- *E. crenulata*
(Chinese caps)
- Native!
- Annual w/ "horns",
"fat" lvs.
- Could be confused with
E. peplus, *E.*
helioscopia
- Rare, nothing after
1930; probably hiding
- Assc. w/ oak,
grassy/rocky openings



Euphorbia crenulata (native)
western wood spurge, beetle spurge
Josephine Co.; Dear Creek Center, Selma; site code: I062; 42.306301227° N-123.646886262° W
May 25, 2007
© 2007 Keir Morse courtesy of Oregon Flora Project

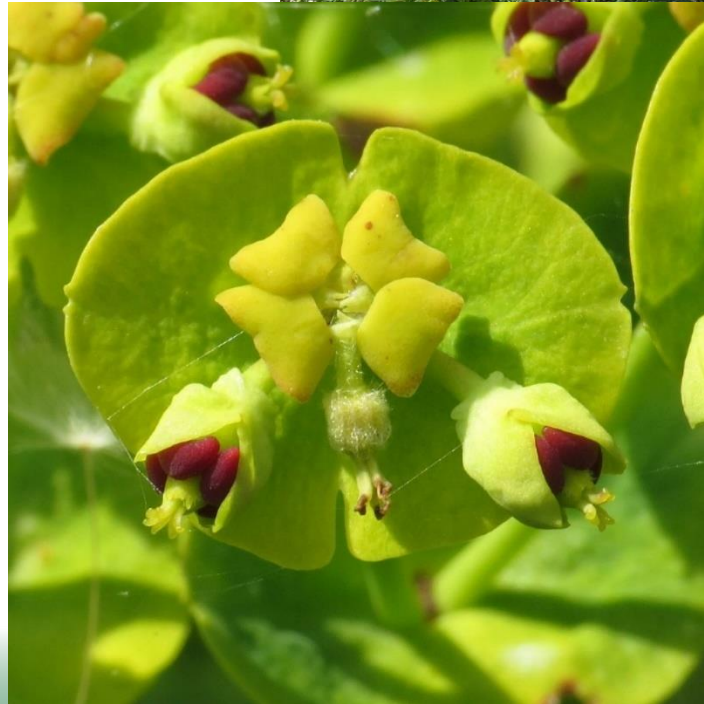


Euphorbia crenulata (native)
western wood spurge, beetle spurge
Douglas Co.; Beatty Creek, west of Cow Creek Road
photo by Gerald D. Carr April 27, 2010 OFP confirmed
© 2010 Gerald Carr courtesy of Oregon Flora Project



Euphorbia

- *E. characias*
(Albanian spurge)
- Not in most floras
- Escaped here and in SF Bay Area
- E side of the I-205 N of Clack Town Center, Rocky Butte
- Keep a lookout and collect!



Euphorbia

In a nutshell:

- All these plants bleed latex ("*Chamaesyce*" less so)
- One "showy" spp. (*E. characias*)
- No native perennial/large *Euphorbias*
- Some of these perennial/large *Euphorbias* can significantly decrease property values (horses, dairy, etc.) and have been determined to be "High Risk" ...
- The exotic annuals less so, but see previous comments
- Know what you are spraying and what is around it BEFORE you spray!



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Questions?