

Oregon Department of Agriculture  
Plant Pest Risk Assessment for  
Oblong Spurge, *Euphorbia oblongata*  
2008 (Revised 2013)

Names: Oblong spurge, *Euphorbia oblongata*, a.k.a. eggleaf spurge  
Family: Spurge, *Euphorbiaceae*

**Findings of This Review and Assessment:** *Euphorbia oblongata*, has been determined to be a category “**A**” rated noxious weed as defined by the Oregon Department of Agriculture (ODA) Noxious Weed Policy and Classification System. This determination was based on a literature review and analysis using two ODA evaluation forms. Using the Noxious Qualitative Weed Risk Assessment v.3.8, oblong spurge scored **58** indicating a Risk Category of “**A**”; and a score of **18** with the Noxious Weed Rating System v.3.2, indicating an “**A**” rating. Oblong spurge scored a very high “A” ranking.

**Introduction:** Oblong spurge is a weedy escaped ornamental species of *Euphorbia* known from only one site in Salem and one ornamental planting in Eugene, Oregon. Suspected to have been introduced from California in contaminated flax or machinery that was used at the State Penitentiary flax mill in the early part of the 1900’s, it has slowly expanded its territory on the penitentiary property. Growing up to 3’ tall, this species is capable of forming dense stands in more arid climates and could be expected to be a troublesome weed to control should it spread and establish in eastern Oregon. Oblong spurge has a great capacity to infest riparian areas in Washington and Oregon. It is well adapted to a wide range of range, shrub and pine forest environments. In California, it has been found associated with French broom, blackberry and in dry drainages along roadsides.



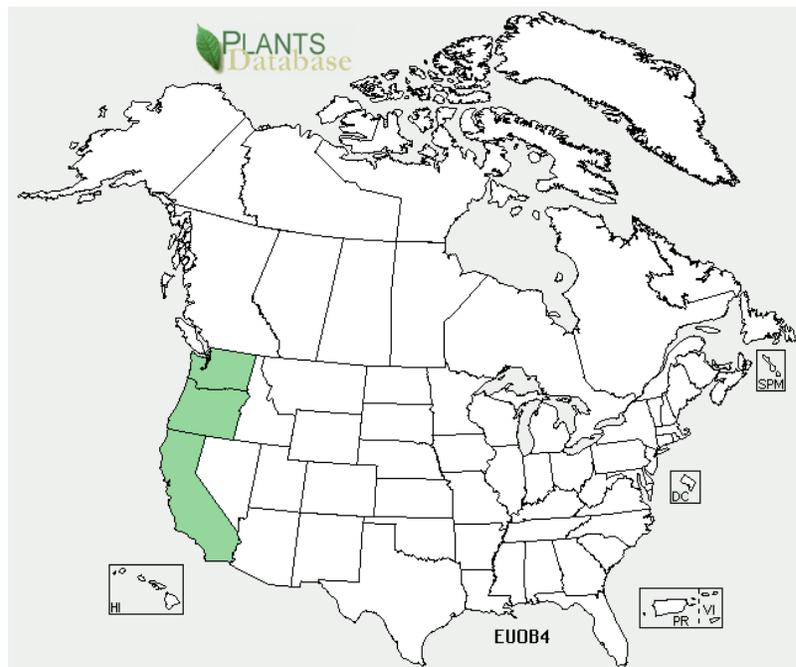
*Oblong spurge, photo by Eric Coombs, ODA*

**Growth Habits, Reproduction, and Spread:** Oblong spurge is an exotic perennial herb that produces up to 20 stems on a woody rootstalk with the plants reaching nearly three feet in height. The alternate, oblong leaves are glabrous (smooth and hairless) with finely toothed margins. Leaves and stems exude a milky sap when cut; skin contact should be avoided. Numerous yellowish-green bracts and flowers typical to most spurges develop at terminal tips. Seedpods have a waxy appearance, and when mature, ripened pods forcefully eject their seeds for localized dispersal. In western Oregon it thrives in moist grassy bottomland with significant competition. In other states, infestations appear to be spreading more aggressively, perhaps the result of it establishing on drier sites with less competition.

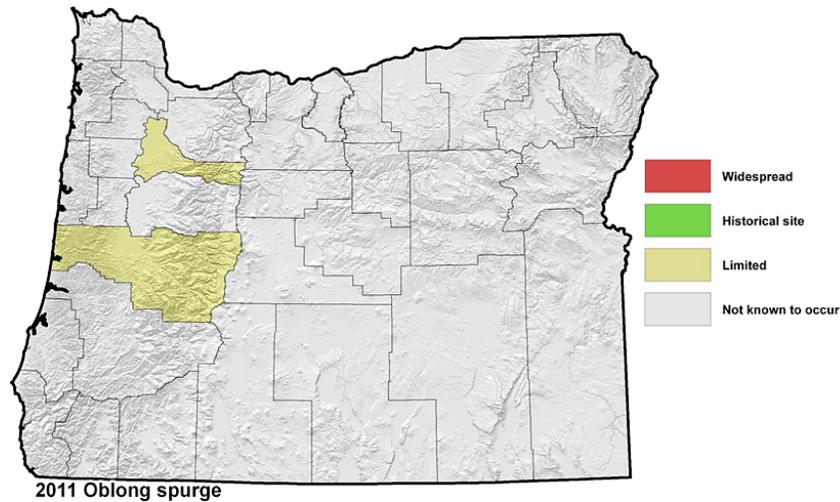
Oblong spurge reproduces both sexually by seed and asexually through root fragments. Water, animals, machinery and human activities often disperse this species. The Oregon infestation has expanded along a drainage ditch through water movement. The biggest dispersal factor could be the unregulated garden plant sales and exchanges that occur in many urban areas. It is a showy plant and could be an attractive addition to many gardeners.

**Native Range:** Macedonia, Albania, Aegean Islands, Western Turkey, and Greece. Found at elevations from 650 – 2600 ft. (Turner 1995).

**Distribution in North America:** Oblong spurge occurs in scattered locations in several counties in western California and has had a B pest rating since at least 1968. The weed has only been found at two sites in Washington, on San Juan Island, where it appears to be an escaped ornamental. In Washington, it is a Class A weed, and has been a subject for eradication. Oblong spurge was discovered in Marion County, Oregon on August 30, 1991 (Halse and Coombs). It was found in Salem, at a pond and its drainage ditch on the state penitentiary grounds (State Street and Hawthorne Street). The ditch leads into the Mill Creek drainage, and several small sites have been found downstream. There is probably less than one acre known in Oregon.



*US distribution of oblong spurge on Plants Database*



*Oregon's distribution of oblong spurge on WeedMapper*

**Economic Impact:** Significant impacts to the livestock industry could result from the toxic content of the sap, which will irritate soft tissues of the mouth, throat and internal organs of cattle and horses. Affected animals have difficulty eating and may not gain weight at the desired rate. Hay products may also be rendered less valuable if contaminated with oblong spurge in addition to seed crops, which may be devalued when contaminated by spurge seeds.

**Ecological Impacts:** In California, oblong spurge is primarily a weed of waste areas and rangeland. Impacts can include reductions in native plant diversity, invasion of riparian areas, reductions of desirable wildlife forage and overall degradation of the land base. Currently, oblong spurge infestations are rare and impacts are minimal.

**Biological Factors Effecting Growth and Establishment:** Oblong spurge experiences no herbivory in Oregon and is unaffected by insects. It expresses its full biological and reproductive potential.

**Dispersal Factors:** Water availability is the key factor in oblong spurge success. The species thrives best in moist soil environments but is not limited to these habitats. It is adaptable to a wide range of habitats and could prove to be invasive throughout eastern Oregon should it establish there.

**Probability of Detection:** Probability of detection is high to its showy nature and its rarity. Education of gardeners, land managers, recreationalists and botanists both public and private have produced an effective scouting program that would bring the plant to the attention of weed professionals.

**Hardiness Zones:** Oblong spurge can thrive in three or more hardiness zones.

**Control:** Mowing or cutting is ineffective except to remove seed production; stems quickly grow back after cutting. Because of the large root mass, pulling is very difficult and largely ineffective though digging may help remove small infestations. Herbicides can be an excellent tool but are not a perfect solution. Repeat applications may be needed for several years. Because oblong spurge is so invasive and difficult to control, it should be given a high priority for prevention, control, and containment when encountered.

# Noxious Weed Qualitative Risk Assessment

## Oregon Department of Agriculture

Common name: Oblong spurge  
Scientific name: *Euphorbia oblongata*  
Family: Spurge, *Euphorbiaceae*

For use with plant species that occur or may occur in Oregon to determine their potential to become serious noxious weeds. For each of the following categories, select the number that best applies. Numerical values are weighted to increase priority categories over less important ones. Choose the best number that applies, intermediate scores can be used.

**Total Score: 58**                      **Risk Category: A**

### GEOGRAPHICAL INFORMATION

**1) 3**                      **Invasive in Other Areas**

- 0 Low- not known to be invasive elsewhere.
- 2 Known to be invasive in climates dissimilar to Oregon's current climates.
- 6 Known to be invasive in geographically similar areas.

Comments: Known to be invasive in dissimilar counties.

**2) 5**                      **Habitat Availability:** Are there susceptible habitats for this species and how common or widespread are they in Oregon?

- 1 *Low* – Habitat is very limited, usually restricted to a small watershed or part of a watershed (e.g., tree fern in southern Curry County).
- 3 *Medium* – Habitat encompasses 1/4 or less of Oregon (e.g., oak woodlands, coastal dunes, eastern Oregon wetlands, Columbia Gorge).
- 6 *High* – Habitat covers large regions or multiple counties, or is limited to a few locations of high economic or ecological value (e.g., threatened and endangered species habitat).

Comments: Habitat includes western Oregon.

**3) 0**                      **Proximity to Oregon:** What is the current distribution of the species?

- 0 *Present* – Occurs within Oregon.
- 1 *Distant* – Occurs only in distant US regions or foreign countries.
- 3 *Regional* – Occurs in Western regions of US but not adjacent to Oregon border.
- 6 *Adjacent* – Weedy populations occur adjacent (<50 miles) to Oregon border.

Comments: Occurs within Oregon.

**4) 10**                      **Current Distribution:** What is the current distribution of escaped populations in Oregon?

- 0 *Not present* – Not known to occur in Oregon.
- 1 *Widespread* – Throughout much of Oregon (e.g., cheatgrass).
- 5 *Regional* – Abundant (i.e., occurs in eastern, western, central, coastal, areas of Oregon) (e.g., gorse, tansy ragwort).
- 10 *Limited* – Limited to one or a few infestations in state (e.g., kudzu).

Comments: Limited to one or a few infestations in state.

## BIOLOGICAL INFORMATION

- 5) 4 **Environmental Factors:** Do abiotic (non-living) factors in the environment effect establishment and spread of the species? (e.g., precipitation, drought, temperature, nutrient availability, soil type, slope, aspect, soil moisture, standing or moving water).
- 1 *Low* – Severely confined by abiotic factors.
  - 2 *Medium* – Moderately confined by environmental factors
  - 4 *High* – Highly adapted to a variety of environmental conditions (e.g., tansy ragwort, Scotch broom).

Comments: Adapted to a variety of environmental conditions.

- 6) 6 **Reproductive Traits:** How does this species reproduce? Traits that may allow rapid population increase both on and off site.
- 0 *Negligible* – Not self-fertile, or is dioecious and opposite sex not present.
  - 1 *Low* – Reproduction is only by seed, produces few seeds, or seed viability and longevity are low.
  - 3 *Medium* – Reproduction is vegetative (e.g., by root fragments, rhizomes, bulbs, stolons).
  - 3 *Medium* – Produces many seeds, and/or seeds of short longevity (< 5 years).
  - 5 *High* – Produces many seeds and/or seeds of moderate longevity (5-10 years) (e.g., tansy ragwort).
  - 6 *Very high* – Has two or more reproductive traits (e.g., seeds are long-lived >10 years and spreads by rhizomes).

Comments: Has two or more reproductive traits.

- 7) 4 **Biological Factors:** Do biotic (living) factors restrict or aid establishment and spread of the species? (What is the interaction of plant competition, natural enemies, native herbivores, pollinators, and pathogens with species?)
- 0 *Negligible* – Host plant not present for parasitic species.
  - 1 *Low* – Biotic factors highly suppress reproduction or heavily damage plant for an extended period (e.g., biocontrol agent on tansy ragwort).
  - 2 *Medium* – Biotic factors partially restrict or moderately impact growth and reproduction, impacts sporadic or short-lived.
  - 4 *High* – Few biotic interactions restrict growth and reproduction. Species expresses full growth and reproductive potential.

Comments: Few biotic interactions restrict growth and reproduction.

- 8) 3 **Reproductive Potential and Spread After Establishment - Non-human Factors:** How well can the species spread by natural means?
- 0 *Negligible* – No potential for natural spread in Oregon (e.g., ornamental plants outside of climate zone).
  - 1 *Low* – Low potential for local spread within a year, has moderate reproductive potential or some mobility of propagules (e.g., propagules transported locally by animals, water movement in lakes or ponds, not wind blown).
  - 3 *Medium* - Moderate potential for natural spread with either high reproductive potential or highly mobile propagules (e.g., propagules spread by moving water, or dispersed over longer distances by animals) (e.g., perennial pepperweed).
  - 5 *High* – Potential for rapid natural spread throughout the susceptible range, high reproductive capacity and highly mobile propagules. Seeds are wind dispersed over large areas (e.g., rush skeletonweed).

Comments: Moderate potential for spread. Moves by water or animals.

- 9) 3 **Potential of Species to be Spread by Humans.** What human activities contribute to spread of species? Examples include: interstate or international commerce; contaminated commodities; packing materials or products; vehicles, boats, or equipment movement; logging or farming; road maintenance; intentional introductions of ornamental and horticultural species, or biofuel production.
- 1 *Low* – Potential for introduction or movement minimal (e.g., species not traded or sold, or species not found in agricultural commodities, gravel or other commercial products).
  - 3 *Medium* – Potential for introduction or off-site movement moderate (e.g., not widely propagated, not highly popular, with limited market potential; may be a localized contaminant of gravel, landscape products, or other commercial products) (e.g., lesser celandine, Canada thistle).
  - 5 *High* – Potential to be introduced or moved within state high (e.g., species widely propagated and sold; propagules common contaminant of agricultural commodities or commercial products; high potential for movement by contaminated vehicles and equipment, or by recreational activities) (e.g., butterfly bush, spotted knapweed, Eurasian watermilfoil).

Comments: Localized movement as a contaminant possible.

#### IMPACT INFORMATION

- 10) 5 **Economic Impact:** What impact does/can the species have on Oregon's agriculture and economy?
- 0 *Negligible* – Causes few, if any, economic impacts.
  - 1 *Low* - Potential to, or causes low economic impact to agriculture; may impact urban areas (e.g., puncture vine, pokeweed).
  - 5 *Medium* – Potential to, or causes moderate impacts to urban areas, right-of-way maintenance, property values, recreational activities, reduces rangeland productivity (e.g., English ivy, Himalayan blackberry, cheatgrass).
  - 10 *High* – Potential to, or causes high impacts in agricultural, livestock, fisheries, or timber production by reducing yield, commodity value, or increasing production costs (e.g., gorse, rush skeleton weed, leafy spurge).

Comments: May impact forage and livestock production.

- 11) 4 **Environmental Impact:** What risks or harm to the environment does this species pose? Plant may cause negative impacts on ecosystem function, structure, and biodiversity of plant or fish and wildlife habitat; may put desired species at risk.
- 0 *Negligible* – None of the above impacts probable.
  - 1 *Low* – Can or does cause few or minor environmental impacts, or impacts occur in degraded or highly disturbed habitats.
  - 4 *Medium* – Species can or does cause moderate impacts in less critical habitats (e.g., urban areas, sagebrush/ juniper stands).
  - 6 *High* – Species can or does cause significant impacts in several of the above categories. Plant causes severe impacts to limited or priority habitats (e.g., aquatic, riparian zones, salt marsh; or T&E species sites).

Comments: Can become problematic in riparian areas.

- 12) 2 **Impact on Health:** What is the impact of this species on human, animal, and livestock health? (e.g., poisonous if ingested, contact dermatitis, acute and chronic toxicity to livestock, toxic sap, injurious spines or prickles, causes allergy symptoms).
- 0 *Negligible* – Has no impact on human or animal health.
  - 2 *Low* – May cause minor health problems of short duration, minor allergy symptoms (e.g., leafy spurge).
  - 4 *Medium* – May cause severe allergy problems, death or severe health problems through chronic toxicity, spines or toxic sap may cause significant injury. (e.g., giant hogweed, tansy ragwort).
  - 6 *High* – Causes death from ingestion of small amounts, acute toxicity (e.g. poison hemlock).

Comments: Sap may be a human skin irritant.

#### CONTROL INFORMATION

- 13) 5 **Probability of Detection at Point of Introduction:** How likely is detection of species after introduction and naturalization in Oregon?
- 1 *Low* – Grows where probability of early detection is high, showy and easily recognized by public; access to habitat not restricted (e.g., giant hogweed).
  - 5 *Medium* – Easily identified by weed professionals, ranchers, botanists; some survey and detection infrastructure in place. General public may not recognize or report species (e.g., leafy spurge).
  - 10 *High* – Probability of initial detection by weed professionals low. Plant shape and form obscure, not showy for much of growing season, introduction probable at remote locations with limited access (e.g., weedy grasses, hawkweeds, skeletonweed).

Comments: Easy to identify.

- 14) 4 **Control Efficacy:** What level of control of this species can be expected with proper timing, herbicides, equipment, and biological control agents?
- 1 *Negligible* – Easily controlled by common non-chemical control measures (e.g., mowing, tillage, pulling, and cutting; biocontrol is very effective at reducing seed production and plant density) (e.g., tansy ragwort).
  - 2 *Low* – Somewhat difficult to control, generally requires herbicide treatment (e.g., mechanical control measures effective at preventing flowering and but not reducing plant density; herbicide applications provide a high rate of control in a single application; biocontrol provides partial control).
  - 4 *Medium* – Treatment options marginally effective or costly. Tillage and mowing increase plant density (e.g., causes tillering, rapid regrowth, spread from root fragments). Chemical control is marginally effective. Crop damage occurs or significant non-target impacts result from maximum control rates. Biocontrol agents ineffective.
  - 6 *High* – No effective treatments known or control costs very expensive. Species may occur in large water bodies or river systems where containment and complete control are not achievable. Political or legal issues may prevent effective control.

Comments: Tillage increases plant density; herbicide treatments may offer partial control.

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Category Scores:

**18** Geographic score (Add scores 1-4)

**20** Biological Score (Add lines 5-9)

**11** Impact Score (Add lines 10-12)

**09** Control Score (Add Lines 13-14)

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**58 Total Score** (Add scores 1-14 and list on front of form)

**Risk Category:**      55-89+ = **A**      24-54 = **B**      < 24 = unlisted.

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This Risk Assessment was modified by ODA from the USDA-APHIS Risk Assessment for the introduction of new plant species.

2013 v.3.8

Oregon Department of Agriculture  
Noxious Weed Rating System

Common Name: Oblong spurge  
Scientific Name: *Euphorbia oblongata*

**Point Total: 18**                      **Rating: A**

- 1) **3**                      **Detrimental Effects:** Circle all that apply, enter number of circles.  
1. *Health:* causes poisoning or injury to humans or animals  
2. *Competition:* strongly competitive with crops, forage, or native flora  
3. *Host:* host of pathogens and/or pests of crops or forage  
4. *Contamination:* causes economic loss as a contaminate in seeds and/or feeds  
5. *Interference:* interferes with recreation, transportation, harvest, land value, or wildlife and livestock movement
- 2) **3**                      **Reproduction & Capacity for Spread:** Circle the number that best describes, enter that number.  
1. Few seeds, not wind blown, spreads slowly  
2. Many seeds, slow spread  
3. Many seeds, spreads quickly by vehicles or animals  
4. Windblown seed, or spreading rhizomes, or water borne  
5. Many wind-blown seeds, high seed longevity, spreading rhizomes, perennials
- 3) **4**                      **Difficulty to Control:** Circle the number that best describes, enter that number.  
1. Easily controlled with tillage or by competitive plants  
2. Requires moderate control, tillage, competition or herbicides  
3. Herbicides generally required, or intensive management practices  
4. Intensive management generally gives marginal control  
5. No management works well, spreading out of control
- 4) **6**                      **Distribution:** Circle the number that best describes, enter that number.  
1. Widely distributed throughout the state in susceptible habitat  
2. Regionally abundant, 5 or more counties, more than 1/2 of a county  
3. Abundant throughout 1- 4 counties, or 1/4 of a county, or several watersheds  
4. Contained in only 1 watershed, or less than 5 square miles gross infestation  
5. Isolated infestation less than 640 acres, more than 10 acres  
6. Occurs in less than 10 acres, or not present, but imminent from adjacent state
- 5) **2**                      **Ecological Impact:** Circle the number that best describes, enter that number.  
1. Occurs in most disturbed habitats with little competition  
2. Occurs in disturbed habitats with competition  
3. Invades undisturbed habitats and crowds out native species  
4. Invades restricted habitats (i.e. riparian) and crowds out native species

**18 TOTAL POINTS**

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*Note:* Noxious weeds are non-native plants with scores of 11 points or higher. Any plants in 4.1, 4.2, and 4.3 should not be classified as “A” rated weeds. *Ratings:* 16+ = A, 15 – 11= B  
ODA Weed Rating System 8/30/2012 v.3.2

RA produced by Eric Coombs, ODA

References:

Halse, R.R. and E.M. Coombs. 1992. *Euphorbia oblongata* Griseb. Euphorbiaceae. Noteworthy Collections. Madrono. 39: 243.

Hickman, J.C. 1993. The Jepson Manual of Higher Plants of California. Univ. Calif. Press. P. 573-574.

Turner, R. 1995. Euphorbia's, A gardener's guide. Timber Press, Portland, OR.

[PLANTS Profile for \*Euphorbia oblongata\* \(eggleaf spurge\) | USDA PLANTS](http://plants.usda.gov/java/profile?symbol=EUOB4)  
[plants.usda.gov/java/profile?symbol=EUOB4](http://plants.usda.gov/java/profile?symbol=EUOB4)

Attachment A

