

Butterfly Bush

Buddleja davidii Franch.



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Introduction:

Native to China, butterfly bush has been introduced to many parts of the world as a garden ornamental. Its fragrant, showy flowerheads come in a variety of colors and are known to attract butterflies.

Butterfly bush was added to the Washington State Class C Noxious Weed List in 2005. This shrub is also listed as a Class B Noxious Weed and Quarantine Plant in Oregon. It is considered one of the top twenty invasive plants in Britain, and is highly problematic in New Zealand and Australia.

In the United States, butterfly bush has naturalized in California, Oregon, and Washington in the west, and in the mid-Atlantic and Great Lakes states in the east. In Washington State, butterfly bush has spread into natural areas in at least Clallam, Whatcom, Skagit, Snohomish, King, Thurston, Lewis, Cowlitz, Skamania, and Clark Counties.

Identification:

A member of the butterfly bush family, Buddlejaceae, this invasive plant is a deciduous shrub with showy flower spikes and arching branches that can reach a height of 15 feet. Although young stems are green, mature stems develop scraggly, peeling, gray-brown bark.

The leaves are lance- or egg-shaped and oppositely arranged, usually between 4–10 inches long and 1–3 inches wide. The leaf edges are either finely or coarsely toothed. The upper leaf surfaces are deep green or blue-gray, while the undersides appear whitish due to a dense covering of short, fuzzy hair. Leaf stalks are short and hairy, with leaves sometimes attached directly to the stem (sessile).

The four-parted, bell-shaped flowers occur in dense clusters in flowerheads at the tips of branches. They are typically purple with orange centers, giving the shrub the common name “orange-eye.” However, cultivars have been developed with a range of flower colors, including red, pink, magenta, blue, orange, yellow, and white. The flowerheads are either erect or nodding, reaching a length between 4–10 inches. The fragrant flowers bloom between mid-summer and the first frost in Washington State. Fruits are valved capsules that split in two to release winged seeds.

Biology and Ecology:

Butterfly bush reproduces by producing copious amounts of extremely lightweight, winged seeds that are easily dispersed to distant areas by wind and water. A study at Longwood Gardens in Pennsylvania determined that in one butterfly bush cultivar, a single flowerhead produced an estimated 40,000 seeds. Moreover, the germination rate of several cultivars was greater than 80%, with one cultivar producing 92% viable seeds. Quick to mature, a butterfly bush can begin producing seed during its first year. Adapted to survive along streambanks where sediment deposition is a common disturbance, butterfly bush can also develop adventitious roots on branches that have been buried or broken off.

Although deliberately planted in yards and gardens as an ornamental plant, butterfly bush can colonize both disturbed and natural areas, including roadsides, abandoned railroad tracks, pastures, riverbanks, and recently logged or burned forests. It is particularly problematic along riverbanks and gravel bars where it forms dense thickets that crowd out native vegetation and disrupts natural succession patterns. It may also alter soil nutrient concentrations of phosphorus and nitrogen, at least in the short term.

Studies in New Zealand indicate that initial densities of butterfly bush seedlings in streambeds can be quite high—several million seedlings per hectare in one example. The population thins itself in about 10 years to about 2,500 adult plants per hectare.

Once established, this shrub is difficult to eradicate from an area. The seeds, so easily dispersed, can remain in a seedbank for 3–5 years. Butterfly bush can resprout from the rootstock after it has been cut down to its base, and the cut stems can grow into new plants if not disposed of properly.



Control Options:

If you have butterfly bush on your property and are reluctant to remove it, you should take measures to prevent the invasive plant from establishing elsewhere. Deadhead flowerheads before they develop fruits; if the flowers have already dried on the shrub, bag the flowerheads from the top down to prevent the winged seeds from escaping. Carefully dispose of cut branches by bagging and putting them in the trash since they can sprout roots. According to the Washington Invasive Species Coalition, there are many non-invasive, showy, butterfly-attracting alternatives to butterfly bush in the Pacific Northwest, such as California lilac, red-flowering currant, Chilean potato vine, chaste tree, orange-ball butterfly bush, weyeriana hybrid butterfly bush, or fallowiana butterfly bush.

Butterfly bush seedlings can be handpicked, and adult shrubs can be dug up. However, the plant thrives in recently disturbed areas, so be aware of new seedlings that begin to emerge. You may want to plant a ground cover that will compete with the seedlings.

Herbicidal treatment has proven effective. It is best to cut the stems off at the base, dispose of them properly, and apply the appropriate herbicide, such as glyphosate, to the cut stump. Please refer to the Pacific Northwest Weed Management Handbook (MISC0049) for more specific instructions, or contact your County Noxious Weed Coordinator.



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Use pesticides with care. Apply them only to plants, animals, or sites listed on the label. When mixing and applying pesticides, follow all label precautions to protect yourself and others around you. It is a violation of the law to disregard label directions. If pesticides are spilled on skin or clothing, remove clothing and wash skin thoroughly. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock.

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