

South America, including southern Brazil, Paraguay, Uruguay, and northeastern Argentina. The variety has been introduced to other areas, including Malaysia, India, Japan, and New Guinea, via discarded aquarium plants (Orgaard 1991). In Washington, fanwort is only known from side channels of the Columbia River, near Longview. However, extensive surveys have not been conducted for this species. Fanwort also occurs in Cullaby Lake, on the northern Oregon Coast (Gibbons et al. 1993).

Habitat: The species grows rooted in the mud of stagnant to slow flowing water, including streams, smaller rivers, lakes, ponds, sloughs, and ditches. In Texas, associated plants include *Nymphaea odorata* and *Brasenia schreberi* (Orgaard 1991).

History: There is no direct evidence of how or when fanwort was introduced to Washington. The species was introduced to other parts of the world via discarded or deliberately scattered aquarium plants (Orgaard 1991), and this was the likely method of introduction in Washington, as well. *Cabomba* is readily available in pet stores for use as an aquarium plant in Washington.

Growth, Development, and Reproduction: Fanwort is an herbaceous perennial that spreads primarily by stem fragments or rhizomes. Erect shoots are upturned extensions of horizontal rhizomes. The species forms large clones as new rhizomes and floating shoots arise as axillary branches. Rhizomes are fragile and easily broken, facilitating vegetative spread (Orgaard 1991) and transport to new water bodies.

Plants flower from May to September (Radford et al. 1968). In the southeastern U.S., fanwort is self-pollinating and seeds readily germinate. Seeds collected from New Jersey failed to germinate, and no seedlings have been observed in the field; therefore, reproduction by seed in New Jersey is of little or no importance (Riemer and Ilnicki 1968). No information is available on seed production and viability in Washington (Gibbons 1993).

Response to Herbicides: According to Westerdahl and Getsinger (1988), Endothall provides excellent control, but it is a contact herbicide only. Fluridone also provides good control. However, some reports indicate that fanwort is less sensitive to herbicides available in Washington than other aquatic plants (Gibbons 1993).

Response to Cultural Methods: In the South, drawdowns have been used to reduce fanwort growth. Extreme drying is required to prevent regrowth from seed (Gibbons et al. 1993).

Biocontrol Potential: Grass carp will eat fanwort, but it is not a preferred food (Gibbons et al. 1993; Hamel, pers. comm.). No research is currently underway on other biocontrol agents.

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- *References available from the Washington State Noxious Weed Control Board Office in Kent.*

Rationale for Listing: Fanwort is an extremely persistent and competitive plant that can form dense stands and crowd out native species. Once established, this plant can clog drainage canals and freshwater streams, preventing recreational activities and normal water flow, and requiring costly control measures. The fanwort invasion in Washington is in a pioneering stage. Listing this species will encourage monitoring and prompt action to prevent further spread, decreasing future management costs and environmental damage.