

BC's Coast Region: Species & Ecosystems of Conservation Concern

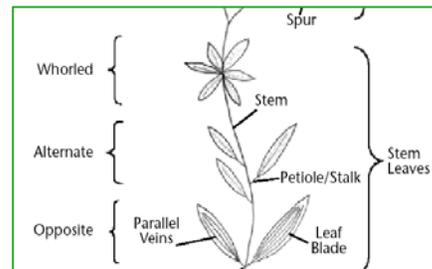
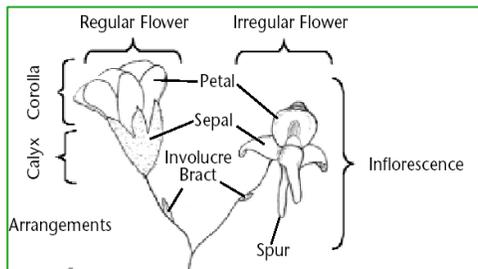
Joe-pye Weed (*Eutrochium maculatum* var. *bruneri*)

Global: G5T4T5Q Provincial: S1 COSEWIC: N/A BC List: Red



Notes on *Eutrochium maculatum* var. *bruneri*: This member of the family Asteraceae (“sunflowers, asters”), has had numerous taxonomic revisions and was formerly known as *Eupatorium maculatum* ssp. *Bruneri*. Though recent studies have shown it less closely related to the genus *Eupatorium* than was previously believed, it is still listed under the previous genus as well as the synonym *Eupatoriadelphus maculatus* var. *bruneri*. This variety is also referred to by the common names “spotted” or “western” Joe-pye weed. Common in many areas of North America, it is only represented by var. *bruneri* in BC.

Plant Anatomy



Description

Height up to 2 m. *Maculatum* means “spotted” and refers to the stems which are often purple-spotted or completely purple. Stems bear narrow, pointed saw-toothed leaves, up to 20 cm long. Leaves occur in whorls of 3 or 4. Both the stems and lower surfaces of the leaves are covered in short curly hairs. The fluffy light pink inflorescence at the top of the stem is a rounded mass of hundreds of tiny flower heads. Each flower head is just over 1 cm long and surrounded at its base by 2 or 3 rows of tiny scale-like bracts (modified or specialized leaf around the flower). The flower head encloses up to 22 tiny disc flowers. When the flower head opens, hair-like stigmas (female reproductive structure) from the disc flowers can be seen protruding from the top of the head. Achenes (seed capsules) are 3-5 mm long containing a single seed. Achenes possess a tuft of hair-like bristles to allow for wind dispersal.

Look's Like?

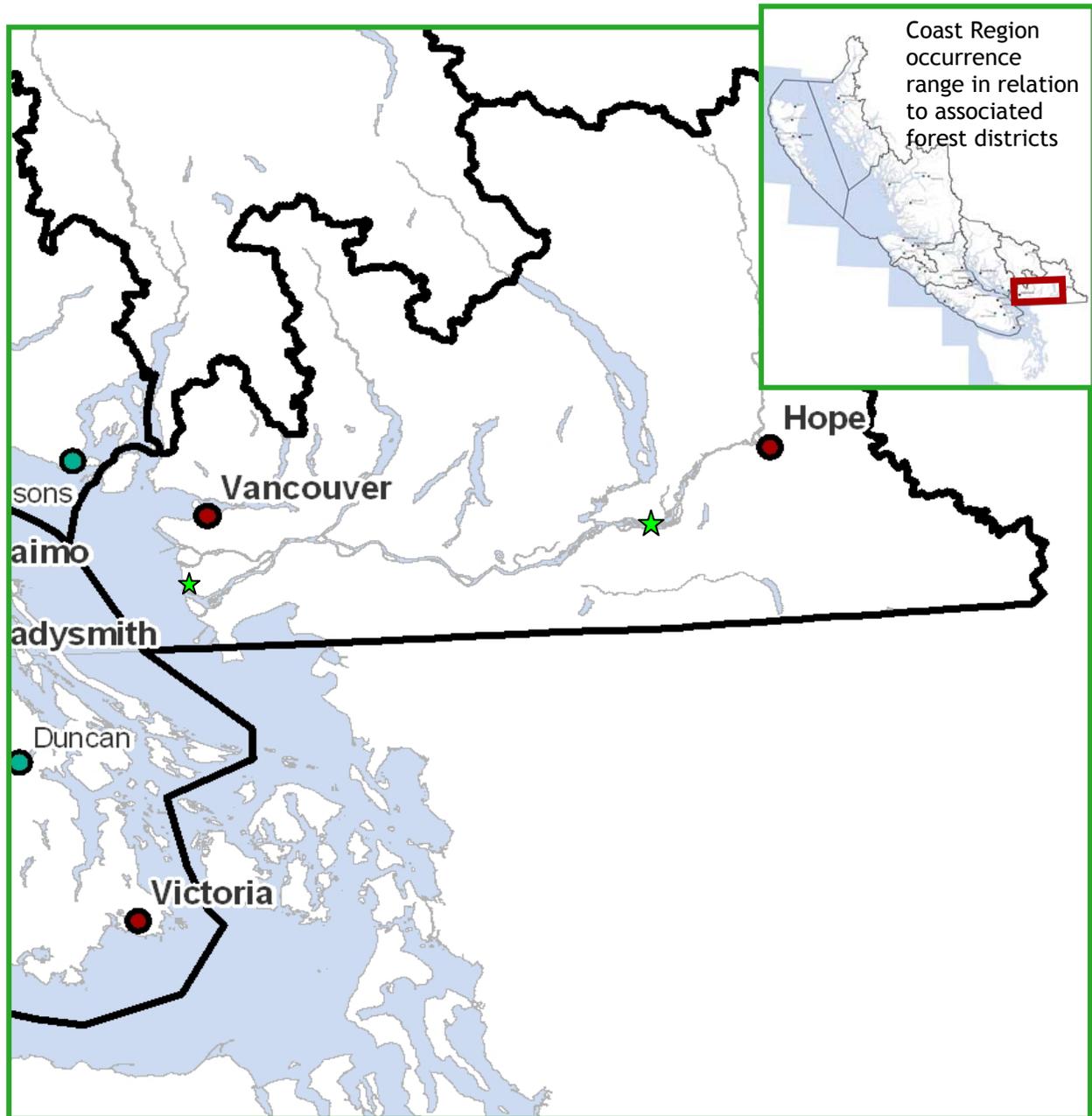
Joe-pye weed may be confused with its close relative, spotted Joe-pye weed (*Eutrochium maculatum* var. *maculatum*), a popular garden plant import from eastern North America, and possible escapee in the Lower Mainland. So far, all populations of Joe-pye weed found in the Lower Mainland are confirmed to be var. *bruneri*. The two varieties look nearly identical but can be distinguished by the location of hairs on the plants. The *bruneri* variety has dense curly hairs on the stems and undersides of the leaves, while the *maculatum* variety generally has hairs only within the inflorescence.



Spotted Joe-pye Weed

Distribution

Though widespread in North America this variety is restricted to a few locals in the Fraser Lowlands on the South Coast. Historically found at several sites along the lower Fraser River in Huntingdon, Delta, Point Grey, Sea Island and Shady Island it was only recently believed to persist at one site, Kirkland Island at Steveston. Recent inventory work related to Oregon Spotted Frog recovery in 2010 has now confirmed populations still persist in the Fraser River Islands northeast of Agassiz and Maria Slough.



Joe-pye weed (*Eutrochium maculatum* var. *bruneri*), known range of population occurrences (green stars) for the Coast Region

Habitat Preferences

Joe-pye weed is associated with open, full sun sites in wet to moist habitats at low elevations such as swamps, artificial wetland edge habitats (e.g. commercial cranberry bogs), sloughs and slow moving streams. It can also be found in forest openings with moist microclimates and saturated soils.

Critical Features

Joe-pye weed is a wetland specialist thriving in calcareous (chalky or calcium carbonate rich mineral soils) and is limited to a few known populations in BC in association with increasingly rare or threatened marshlands, slough and bog habitats.



Joe-pye Weed is strongly associated with mineral soils found in low lying floodplain areas of the Fraser Lowlands.

Seasonal Life Cycle

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Flowering					
						Achene production and dispersal					

The lightly scented flowers are mainly pollinated by bees.

Threats

- ◆ Despite the abundance of flowers and seeds produced, Joe-pye weed is considered to be declining, with more than two thirds of historic populations lost over the past century. Natural recovery from disturbance is limited by low seedling survival.
- ◆ As a wetland dependent plant, Joe-Pye weed is vulnerable to changes in site hydrology and water chemistry.
- ◆ Occurrences are limited in BC and generally in areas with little or no protection and subject to development, recreational pressures and associated habitat loss.
- ◆ The population at Kirkland Island is vulnerable to being out-competed by aggressive invasive wetland species, especially purple loosestrife, reed canary grass and fescue species.

Conservation & Management Objectives

- ◆ Collection activities should be limited and apply practices identified in the Province’s “Voucher Specimen Collection, Preparation, Identification and Storage Protocol: Plants & Fungi.” Inventory activities should consider approaches and references identified in E-Flora’s Protocols For Rare Vascular Plant Surveys.

Specific activities should include:

- ◆ Protection of unprotected sites is urgently needed to prevent the extirpation of this plant in BC. Create buffer zones around populations to minimize access by people and animals (e.g. livestock where they are an issue). Suitable buffer sizes will be dependent on slope, water table movement and adjacent land use.
- ◆ Fencing and or signage about the sensitivity of wetland communities and rare species is essential for education and awareness effectiveness.

- ◆ Based on recent ‘re-discoveries’ of this variety (e.g. Maria Slough area) in the Fraser Lowlands, a targeted inventory is needed to determine if undiscovered populations exist elsewhere within the Coast Region.
- ◆ Research into the specific ecological requirements and population dynamics of this variety are essential for developing a recovery strategy.
- ◆ Avoid draining ponds and lakes, infilling wetlands and other activities that drastically alter water levels and suitable habitat.
- ◆ Avoid activities that can result in trampling of plants. This is especially important in shoreline areas where there are recreational trails.
- ◆ Protect the seed bank by avoiding soil compaction, large-scale digging or dredging.
- ◆ Effective long-term control and reduction in competition from invasive or aggressively spreading vascular plants (e.g. invasive grasses such as introduced reed canary grass species, purple loosestrife) must form part of strategies to protect and recover populations. Disturbance to rare plant species and communities must be minimized during control activities.

This species may be subject to protections and prohibitions under the BC Wildlife Act. Habitat for this species may also be governed under provincial and federal regulations including the Fish Protection Act and Federal Fisheries Act as well as Regional and local municipal bylaws.

Content for this Factsheet has been derived from the following sources

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¹Original accounts prepared by Cindy Sayre.

Every effort has been made to ensure content accuracy. Comments or corrections should be directed to the South Coast Conservation Program: info@sccp.ca. Content updated August 2010.

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