Pickerel weed (Pontederia cordata)

Pickerel weed is a long-lived aquatic plant that is cultivated as an ornamental in garden ponds and water features in Australia. This native of eastern USA, Mexico, Central America and South America is also known as Pickerel rush. It has spread from cultivation and become naturalised along slow-moving waterways, in wetlands, and in other damp sites in Australia.

Distribution
This plant has come in and out of vogue as an ornamental pond plant over the years. There are older records from Koo Wee Rup and the Wartook Reservoir in southern Victoria; from near Mount Schanck in the south-eastern corner of South Australia; from along an urban waterway in Perth; and from some inland parts of southern New South Wales.

Pickerel weed is currently very popular in cultivation and this has facilitated its further spread into natural wetlands and waterways. Most of the recent records are from the coastal districts of south-eastern Queensland. For example, an infestation of Pickerel weed was reported from a melaleuca wetland at Waterford in Logan City in February 2010, and a small population was found in a roadside drain at Tallebudgera on the Gold Coast in October 2010.

Description
This long-lived water plant is usually rooted in the mud and forms clumps of upright leaves that emerge up to 1 m above the water surface. These clumps of leaves are connected to each other by short underground stems that spread under the mud surface. The leaves are borne on very long stalks up to 60 cm long with sheath-like bases. These glossy green leaves (6-22 cm long and up to 12 cm wide) are usually somewhat heart-shaped with entire margins and pointed tips.

The upright flowering stems (up to 1.2 m tall) are rounded and bear an elongated spike-like flower cluster (2-15 cm long) at their tips. These flowering stems also have a pair of leafy bracts, the lower one closely resembling one of the heart-shaped leaves and the upper one being much smaller and narrower. The flower clusters contain numerous small flowers (1-2 cm long) that are usually blue in colour, but may be mauve or white in some forms. These flowers have six ‘petals’, one of which is usually slightly larger with a yellow spot. The small ridged fruit (4-10 mm long) usually remain hidden inside the old flower parts.

Quick Facts
> A long-lived aquatic plant growing up to 1 m tall
> Usually grows along waterways and in other damp sites
> Heart-shaped leaves borne on long upright stalks.
> Upright flowering stems bearing dense clusters of blue, mauve or white flowers

Habitat
Pickerel weed grows along slow-moving waterways and around the margins of lakes and other bodies of freshwater. It may also invade wetlands, drainage ditches and other damp sites.
Reproduction and Dispersal
Plants are probably most often spread by the dumping of garden waste into waterways. Once present in natural areas, clumps, seeds or segments of the underground stems can be spread downstream during floods.

Why is it an Emerging Threat?
While this plant is not as invasive as some other water weeds, it has the capacity to form large and dense clumps in natural wetlands and waterways. If left uncontrolled, these clumps may eventually replace native species and restrict water movement.

Control Methods
Individual plants or small infestations can be removed manually, taking care to ensure that no stem and root material remains in the substrate. Once collected, all plant material should be removed from the site and disposed of in a sanitary manner. Prevent further spread of the weed to other areas of the water body by avoiding fragmentation of stem material which usually results from the use of mechanical equipment.

In the case of larger infestations, or where access is more difficult, the use of herbicides may be necessary. While there are no herbicides currently registered for the control of Pickerel weed within Australia, the control of environmental weeds such as Pontederia cordata in non-crop situations is allowed in Queensland via off-label permit 11463 (http://permits.apvma.gov.au/PER11463.PDF). Under this permit, the use of aquatically registered formulations of Glyphosate 360 (e.g. Round-up Biactive and Weedmaster Duo) is permitted for the spot spraying of perennial weeds in aquatic and wetland areas. For control within other state boundaries, see the relevant permits or government legislation.

Look a-likes
Pickerel weed is closely related to the native water plant monochoria (Monochoria cyanea). However, monochoria has leaves borne on spreading stems and the bases of its leaf blades are usually rounded. The flower clusters of monochoria are also less dense and only contain several flowers.

Top. Spreading habit of monochoria.
Bottom. Monochoria leaf with rounded base.