**Melastoma candidum**

**System:** Terrestrial

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**Common name**
Malabar melastome (English, Hawaii), Indian rhododendron (English, Hawaii), Asian melastome (English)

**Synonym**
*Melastoma septemnervium*

**Similar species**
*Melastoma malabathricum, Melastoma sanguineum, Tibouchina urvilleana*

**Summary**
*Melastoma candidum* (Asian melastome) is an invasive shrub that can spread rapidly and may form dense monotypic thickets in a variety of habitats such as: open land, grassland, shrubland and native forest. It originates from southeast Asia and was introduced to Hawaii as an ornamental shrub. All species of the genus *Melastoma* have a notoriously weedy history and noxious weed status but are still cultivated in Hawaii and elsewhere.

[view this species on IUCN Red List](http://www.iucngisd.org/gisd/species.php?sc=1053)

**Species Description**

*Melastoma candidum* are "Erect shrubs or small trees 1.5-5m tall, branches and petioles are densely covered with a mixture of short, appressed, laciniate scales 0.5-1mm long and longer lanceolate scales 1.5-5mm long. Leaves elliptic to elliptic-ovate, 4-11cm long, 1.3-4cm wide, 5(-7) nerved, upper surface strigose to scabrous, lower surface sericeous but with a mixture of scales on the nerves like those of the young branches, margins entire, apex acute, base obtuse to rounded, petioles 5-12mm long. Inflorescences 2-7 flowered, pedicels 10-12mm long in fruit, bracts and bracteoles elliptic, lanceolate, or ovate, 1-2.2cm long, 0.5-1.3cm wide, early deciduous; hypanthium densely covered with imbricate, lanceolate, ciliolate scales; calyx 5-lobed, triangular-lanceolate, 0.7-2cm long; petals usually 5, pink, 2.5-3.2cm long, 1.5-2.3cm wide; anthers of larger stamens 10-11mm long, anthers of smaller stamens 8.5-10mm long. Berries 5-celled, 10-15mm long.″ (Wagner *et al.*, 1999 in Starr *et al.* 2003)

**Notes**
Some *Tibouchina* species may be confused as *Melastoma* species (Starr *et al.* 2003).

**Lifecycle Stages**
Perennial (USDA-NRCS 2006)
Uses
Melastoma spp. are introduced through the horticulture trade and are still cultivated as ornamental shrubs in Hawaii and elsewhere (Starr et al. 2003). Melastoma candidum is also a Chinese medicinal herb of Hong Kong (USDA-GRIN 2006).

Habitat Description
Melastoma candidum grows in light forests, clearings, and grass lands, or on rocky slopes from sea level to 1,500m elevation (Starr et al. 2003). It favours mesic to wet areas and bog margin habitats in Hawaii (Wagner et al. 1999 in PIER 2006).

Reproduction
Melastoma candidum produce berry-like fruits that are dispersed by frugivorous birds (Smith 1985 in PIER 2006). "Many plants in the family Melastomataceae are pollinated by bees. Melastoma spp. can be propagated from seeds." (Meyer 2000 in Starr et al. 2003)

General Impacts
Melastoma candidum can spread rapidly and smother to death vegetation that stand in its way (Degener 1973 in Starr et al.). Both M. candidum and the related similar species M. sanguineum form dense monotypic thickets up to 2m tall (Starr et al. 2003).
Management Info

Preventative measures: A Risk Assessment of Melastoma candidum for Hawaii and other Pacific islands was prepared by Dr. Curtis Daehler (UH Botany) with funding from the Kaulunani Urban Forestry Program and US Forest Service. The alien plant screening system is derived from Pheloung et al. (1999) with minor modifications for use in Pacific islands (Daehler et al. 2004). The result is a score of 13 and a recommendation of: "Reject the plant for import (Australia) or species likely to be of high risk (Pacific)."

Chemical: Asian melastome is "sensitive to hormone type herbicides 2,4-D, dicamba and triclopyr at 1 lb/acre, and to metsulfuron at 0.45 oz/acre. It is sensitive to basal bark and stump bark applications of 2,4-D and triclopyr at 4% in diesel." (Motooka et al., 2002). Cut at the base of the plant and treat with a herbicide. Cut material should be disposed off properly.

Ester formulations of triclopyr may be mixed in oil at 20% concentration or more and applied as in horizontal or vertical streaks on the basal bark to kill stumps (Motooka et al., 2002). These methods will cause less effects on native species that coexist with the target (Starr et al. 2003). Soluble herbicide triclopyr can be drizzled over weeds at the appropriate concentration. However it is uncertain whether foliar spray applications would work, and this would have the most non-target effects and may be unsightly in a garden situation (Starr et al. 2003).

Biological: Several moth species (Lepidoptera) have been introduced as biological control agents for M. candidum in Hawaii (Teramoto and Heu 2000 in Starr et al. 2003).

Physical: Small, cultivated specimens can be pulled up by hand (Starr et al. 2003).

Preventative measures: All species in the genus Melastoma are listed as Hawaii state noxious weeds, making it illegal to possess, sell, and propagate them in Hawaii. The public could be discouraged from using any plants in the family Melastomataceae. The public could also be discouraged from planting hapu'u ferns (Cibotium spp.) or use hapu'u mulch that is harvested from the wild forests of Hawaii as they often harbor noxious weed species such as Melastoma spp. (Starr et al. 2003).

Pathway

Melastoma spp. are spread long distance by humans in the horticulture trade and are still cultivated as an ornamental shrub in Hawaii and elsewhere (Starr et al. 2003). Asian melastome can disperse accidentally as contaminants on hapu'u ferns or hapu'u mulch that is harvested from the wild forests of Hawai'i Island (Starr et al. 2003).

PIER 2006 Melastoma candidum

Compiler: National Biological Information Infrastructure (NBII) & IUCN/SSC Invasive Species Specialist Group (ISSG)


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ALIEN RANGE
UNITED STATES

BIBLIOGRAPHY
7 references found for Melastoma candidum

Management information
Summary: This paper provides detailed biological, distribution and management information for Melastoma spp. control in Hawaii.

PIER (Pacific Island Ecosystems at Risk) 2006. Melastoma candidum D. Don, Melastomataceae.
Summary: PIER provides detailed biological, distribution and management information about invasive plant species occurs around the Pacific region. This page details Melastoma candidum.

General information
Summary: An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.

Summary: This paper discusses the distribution pattern and effects of alien species on the Hawaii Island.

USDA-GRIN (United States Department of Agriculture - Germplasm Resources Information Network). 2006. Melastoma candidum D. Don. National Genetic Resources Program. [Online Database] National Germplasm Resources Laboratory, Beltsville, Maryland, USA.
Summary: The Germplasm Resources Information Network’s (GRIN) mission is to support four projects, the National Plant Germplasm System (NPGS), the National Animal Germplasm System (NAGP), the National Microbial Germplasm Program (NMGP), the National Invertebrate Germplasm Program (NIGRP).
GRIN provides National Genetic Resources Program (NGRP) personnel and germplasm users continuous access to databases for the maintenance of passport, characterization, evaluation, inventory, and distribution data important for the effective management and utilization of national germplasm collections. This page details Melastoma candidum.

Summary: The PLANTS Database provides standardized information about the vascular plants, mosses, liverworts, hornworts, and lichens of the U.S. and its territories. This page details Melastoma candidum.