

'Gambinos' of the plant world must be stopped

Kia'i Moku

By Wendy Swee



Although not on "most wanted" posters, Asian melastome and red melastome are

members of Maui's most notorious crime family: the "Gambinos" of the plant world. Melastomes have a bad name in Hawaii beyond the meaning of their name, "black mouth," which results from eating the berries. Asian and red melastomes aren't the black sheep of the family. The whole melastome family has invasive potential in Hawaii. Of fifteen *Melastomataceae* species naturalized in Hawaii, nine are on the Hawaii State noxious weed list. Officials fear they can invade our forests, crowding out native plants and threatening our water supply. The others are not benign; the listing process just hasn't caught up with them yet.

Perhaps the best-known melastome is miconia, or "green cancer," one of the worst weeds in Hawaii. Clidemia, or Koster's curse, is another notable melastome. Tibouchina, with its flattering nicknames of "princess flower" and "glory bush," has infiltrated native rain forests on the Big Island, and on Maui has invaded areas along the Hana Highway and in Iao Valley.

Asian melastome (*Melastoma candidum*) was introduced to Kauai in 1916 and red melastome (*Melastoma sanguineum*) to Hawaii Island before 1957. They look similar, growing from 5 to 15 feet tall, with pink or purple flowers and distinct leaves characteristic to the family with five to seven parallel veins. Currently, Asian and red melastomes have escaped cultivation and become abundant on Kauai, Oahu, and Hawaii, especially in wet areas up to 3000 feet.

Hawaii botanist Otto Degener wrote of Asian melastome on Kauai in 1973, "It has already replaced nearly all other vegetation in Kilohana Crater



Forest and Kim Starr photos

Asian and red melastome flowers are pink or purple, and their leaves have five to seven distinct arching veins.



and is rapidly spreading from that locality into neighboring regions, smothering to death the more interesting native plants that stand in its way. The crater is now a devastated thicket of worthless shrubs through which neither man nor beast can penetrate for any distance."

Maui officials believe they have eradicated Asian and red melastomes. The Maui Invasive Species Committee (MISC) removed Asian melastome plants in Makawao in 2002 and in Haiku in 2006, and red melastome in Pukalani in 2004. The phrase "a stitch in time saves nine" applies, considering

the massive cost of keeping miconia out of Maui watersheds.

The rest of the melastome family encompasses about 3,000 species in tropical America, 240 in Africa, 230 on Madagascar, and about 1,000 in Asia. Hawaiian rain forests have open canopies with light-loving species, making them vulnerable to invaders like the melastomes, which shade out the native plants.

Since all melastome species in Hawaii are non-native and considered weeds with no commercial potential, biological control (tested natural enemies to contain out-of-control weeds)

has little risk of affecting either native or useful non-native species. For Hawaii melastomes that are beyond chemical or manual control, the release of natural enemies is probably the only option for slowing their spread.

Readers should examine the "most wanted" photos in case Asian and red melastomes return to Maui, and should become familiar with other family members. To report sightings of the Asian melastome or red melastome, call 573-MISC. Keep our plant communities safe.

- Wendy Swee is education/outreach and data associate for the Maui Invasive Species Committee. She previously worked for the Hawai'i Natural History Association at Haleakalā National Park. "Kia'i Moku," (*Guarding the Island*) is prepared by the Maui Invasive Species Committee to provide information on protecting the island from invasive plants and animals that can threaten the island's environment, economy and quality of life.