

Mullein came to fight erosion, exists as threat to silversword, other plants

Kia'i Moku

By Joylynn Paman



The slopes of Haleakalā are the only home for some of

the rarest plants and animals in the world. Among them, `āhinahina, the Haleakalā silversword grows for up to 50 years before flowering and casting its seeds for the next generation.

To protect these and other native species the Maui Invasive Species Committee (MISC) partners, including Haleakalā National Park, are on the lookout for invasive plants and animals that could threaten this delicate environment of the Haleakalā Crater.

Common mullein (*Verbascum thapsus*) is one such invader. It was first introduced to the Island of Hawai'i for erosion control in the early 1900's and has since become well established on Big Island volcanic slopes.

Scientists have observed that mullein outcompetes other plants and grows to an abnormally large size, particularly at higher elevations on Hawai'i. This has raised concern that mullein would quickly invade and outcompete native plants in the higher elevation habitats on Haleakalā.

This Eurasian plant has become a widely established weed throughout temperate areas of the world. Its gray-green, felt-like leaves range from 4-12 inches long and 1-5 inches wide. Mullein grows in a low rosette for the first year or two and at maturity

sprouts up an erect stalk with yellow flowers. This pest grows up to 10 feet tall and can invade elevations from sea level to above 10,000 feet.

Several characteristics make mullein all too successful as an invasive plant. Although noted for the ability to quickly colonize disturbed areas, it does not require disturbance to rapidly invade the loose volcanic cinders and `a`a lava in Hawai'i. This weed grows in dense thickets displacing slower growing and longer maturing native species, such as the silversword. Like the silversword, protective hairs on the leaves of mullein reflect the intense alpine sunlight, pre-adapting this weed for the arid conditions on Haleakalā.

Unlike the silversword, mullein produces large quantities of seed, which remain viable for long periods of time. Each mature mullein plant sprouts a flowering stalk, which develops up to 150,000 seeds. Seeds may remain dormant for over 100 years, waiting for favorable environmental conditions or dispersal into suitable habitats.

With silverswords taking up to 50 years to seed compared to just two or three years for mullein, it is easy to imagine how mullein might displace `āhinahina. Because of these invasive characteristics and the high risk to native species, mullein was declared a Hawai'i State Noxious Weed in 1992.

In the late 1980's, two immature mullein plants were found in Haleakalā National Park along the roadside leading up to the summit and were immediately destroyed. None have been found in the park since.



The common mullein is an invasive alien plant that is spreading in high-elevation areas on the Big Island. Mullein would pose a threat if it were introduced on Haleakalā, where it could squeeze the habitat for the Haleakalā silversword.

Photo by Forest & Kim Starr/USGS.

Soon after that first incident, it was discovered that an upcountry nursery raised mullein and sold it to a number of homes. When informed by park staff of the ecological threat, the nursery agreed to halt sales and destroy the remaining stock. This cooperation sparked an article in The Maui News urging mullein purchasers to destroy their plants.

It is difficult to know if everyone destroyed their plants and there's always the possibility that there are new locations. Just this summer, a new site was discovered Upcountry. MISC was notified and responded immediately. The plant was killed and the seeds were collected. The cooperative landowner is now monitoring the property for additional plants

that may sprout in the future.

Today, early detection of mullein is critical to keeping Maui Nui free of this pest. Do your part to stop the spread of this and other invasive species. Do not purchase, sell or import unknown plants. Learn how to identify mullein and report possible locations to the Maui Invasive Species Committee at 573-6472.

• "Kia'i Moku" (or "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. Joylynn Paman, is public relations and education specialist with the MISC.