

Blessed milk thistle serious threat

Kia'i Moku

By Lissa Fox



Invasive plants arrive unannounced. They persist under the radar and we may be

driving by them every day, not noticing or realizing that they pose a threat, even dismissing them as something familiar. By the time we realize the potential impact these weeds could have, it's possible that it could be too late to keep the plant off the island.

Take, for instance, *Silybum marianum*, or blessed milk thistle. This plant has been intentionally cultivated on Maui. It's unknown whether the plant escaped cultivation or was unintentionally vectored in contaminated soil or feed. But the plant was spotted growing along Makawao Avenue by weed spotter extraordinaire, Bob Hobdy, retired State Forester. He brought this unusual plant to the Maui Invasive Species Committee for identification.

Milk thistle was quickly put through the Hawaii Pacific Weed Risk Assessment, a screening process that provides an indication of a plant's invasiveness. Internet searches turned up many references to this plant, which until Hobdy reported it, was unknown to botanists in the state. It turns out that *Silybum marianum* poses a serious threat to Hawaii. It smothers pastures throughout the world and caused one of the worst cases of livestock poisoning in northwestern Tasmania.

Despite the name "blessed milk thistle," *Silybum marianum* is anything but a blessing, particularly for ranchers. When ruminant animals such as cattle or sheep eat the plant, the potassium nitrate found in the plant reacts with bacteria in the stomach forming a compound that blocks oxygen absorption in the bloodstream. When enough of the compound builds up in the blood stream, the animal essentially suffocates.

The green and white thistle suffocates pasture land as well. The plant makes a tremendous amount of seed. When raised agriculturally, one acre of plants produces 446 pounds of seed per acre. Between the sheer amount of seed produced and the size of the leaves, milk thistle, once

established, can out-compete other plants, creating thickets of nothing but thistle. By 1833, when Charles Darwin was exploring South America, the Mediterranean native had taken over vast areas of pastureland.

In one of the first ecological descriptions of the devastation caused by an invasive plant, Darwin described riding through areas of Argentina where there was little pasture "owing the land being covered by beds either of an acrid clover, or of the great thistle." The thistles were *Silybum marianum*. "When the thistles are full grown, the great beds are impenetrable, except by a few tracts, as intricate as those in a labyrinth. These are only known to the robbers, who at this season inhabit them, and sally forth at night to rob and cut throats with impunity."

While murderous robbers may not always find shelter in the thistles, the spines alone are menacing enough to warrant caution. This nasty plant can, however, be beneficial. An Internet search on the plant name reveals that it is the main ingredient in herbal remedies to support liver function. The seeds of the plant have been used medicinally for thousands of years, even as a tonic to relieve anger, though one must wonder if the Argentinean robbers and murderers lurking in the thistles were any less angry.

The compound purported to bring health benefits is also found in other plants in the same family, namely artichokes, a non-invasive plant that will happily grow in your garden and not escape to take over the neighbor's pasture.

There is still a chance that Maui will be free of blessed milk thistle. The Maui Invasive Species Committee selects target plants based upon a combination of their invasive potential (milk thistle qualifies!) and the level of distribution. In the case of milk thistle, efforts are ongoing to determine the current distribution to see if eradication is feasible. Crews are doing surveys in areas near the known infestation and it has been added to a list of species for the roadside surveys currently underway. Your help is needed to determine the size of the infestation on Maui.

Identifying milk thistle can be tricky. There are already several species of thistle established on Maui that resemble milk thistle. The plant's variegated leaves are perhaps the most notable characteristic, but it closely resembles the leaves another



Maui Invasive Species Committee, field crew member Dave McPherson (*above*) surveys and infestation of blessed milk thistle. The plant smothers pastures worldwide and can be harmful to livestock. The thistle was observed by Charles Darwin, the father of the theory of evolution, in South America in 1833. There are several thistle species on the island that resemble the blessed milk thistle with its purple flower (*below left*), including the Mexican poppy (*below right*).



non-native plant, Mexican poppy, *Argemone mexicana*. Unlike Mexican poppy, milk thistle has a purple flower, but the flower closely resembles that of the bull thistle or *Cirsium vulgare*. To identify milk thistle look for a thistle with deeply lobed variegated leaves and a large purple flower.

If you know of a location with milk thistle, please contact the Maui Invasive Species Committee at 573-6472. Our islands exemplify many things Charles Darwin would have found fascinating, but let's hope it's not an infestation of milk thistle.

• *Lissa Fox is the public relations and education specialist representing the Maui Invasive Species Committee, or MISC. "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.*