

# Rauvolfia vomitoria: a growing problem

## KIA'I MOKU

By Lissa Fox



In Western Africa, a medicinal plant teeters on the brink of extinction. Poison devil's pepper, or Rauvolfia

vomitoria, has been overharvested by local people using the plant to treat ailments ranging from psychoses to indigestion. Some healers claim the plant's chemicals protect the spirit of the patient against witchcraft. However, in Hawaii, *R. vomitoria* is responsible for an ailment of our natural areas - invading forests with amazing speed. The shrubby tree with an awful name could be at least as invasive, if not more so, than miconia.

Native to subtropical regions of Western Africa, *R. vomitoria* can live at elevations from sea-level to 5,000 feet. It reaches reproductive maturity within two years and, in Hawaii, flowers and produces fruit year-round. The numerous seeds are contained in an orange fruit eaten and are spread by birds. The plant grows extremely fast: Within five years a seedling will be 12-18 inches across and 30 feet tall.

Mowing or cutting doesn't discourage this plant; a patch of *R. vomitoria* on Hawaii Island was 3 to 4 feet tall two months after mowing. "Ralph," as the plant is unaffectionately called by field crews frantically working to contain this plant, has invaded gulches, pastures and waterways across 2,000 to 3,000 acres in Kohala. This



superweed has spread into the mixed ohia forest at 1,600 feet elevation but could expand much farther, becoming a serious pest in agricultural and natural areas. Perhaps most disturbing is *R. vomitoria*'s ability to outcompete some of the most invasive plant species of tropical forests, gaining a foothold amid eucalyptus and strawberry guava despite a lack of sunlight under the canopy.

Named in part to honor a 16th-century German physician, Leonhart Rauwolf, who collected medicinal plants throughout the world, *R. vomitoria* causes vomiting when ingested. Although the reason for introducing the plant to Hawaii is still unclear, the species could have been introduced as early as 1957. Resource managers working in Kohala first noted its invasive nature in 2000. In Hawaii, *R. vomitoria* is known only from Kohala on Hawaii island and a botanical garden on Oahu.

Above: A medicinal plant, Rauvolfia vomitoria, is on the brink of extinction in its native Western Africa but is invading forests in Hawaii. Inset: A close-up view of the Rauvolfia vomitoria plant. Left: The plant has an orange fruit that is eaten by birds, further spreading the invasive plant.

Photos by J.B. Friday



A native species of Rauvolfia is found in Hawaii. Rauvolfia sandwichensis, or hao, looks similar to *R. vomitoria*, but grows in drier areas of the islands. The invasive *R. vomitoria* can be identified by the pattern of smaller veins branching off the main vein that runs down the middle of the elliptical-shaped leaf. *R. vomitoria* also has clusters of bright orange or red fruit, about one-half inch long found at the end of branches. The fragrant white or yellow flowers are tubular and small, less than one-half inch long. Young plants contain a milky white sap and the bark of the tree is smooth and pale brown to grayish brown.

The Maui Invasive Species Committee urges Maui residents to keep their eyes peeled for this plant on the Valley Isle. Anyone who sees Rauvolfia vomitoria should call the committee at 573-6472.

■ Lissa Fox is the public relations and education specialist for the Maui Invasive Species Committee. "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.