

which incorporate captive propagation technology include six key elements: 1) information about the birds in the wild, 2) knowledge about the cause of decline in the wild and ongoing programs to reverse the trend, 3) captive propagation technology 4) release technology 5) practical considerations and 6) acceptable release sites where there is minimal risk from threats. This paper presents a review of applied restoration techniques for endangered bird projects worldwide and their application to current and future programs for endangered forest birds in Hawaii.

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RESTORATION OF KAHO'OLAWE ISLAND. From December 8, 1941 through October 22, 1990, the island of Kaho'olawe was used for live ordnance training by the U.S. military. On May 7, 1994 the U.S. Navy returned the island of Kaho'olawe to the people of Hawai'i. Under state law, the island, including the ocean out to 2 miles, is designated as a Hawaiian cultural reserve in which there will be no commercial activities. The state is to hold the island as a trust for a future Hawaiian sovereign entity upon its re-establishment and recognition by the state and federal governments. Under the Presidential executive order which set the island aside, the U.S. government is obligated to clean up the island to a condition safe for human habitation. The U.S. Congress has authorized up to \$400 million to be spent to surface clear the entire island of ordnance and restore 25 percent of the island to be safe for human activities. In approaching the land use plan to guide the clean up of Kaho'olawe, the Kaho'olawe Island Reserve Commission is working with the following vision statement:

The kino of Kanaloa is restored. Forests and shrublands of native plants and other biota clothe its slopes and valleys. Pristine ocean waters and healthy reef ecosystems are the foundation that supports and surrounds the island.

Na Hawai'i care for the land in a manner which recognizes the island and ocean of Kanaloa as a living spiritual entity. Kanaloa is a pu'u honua and wahi pana where Native Hawaiian cultural practices flourish.

The piko of Kanaloa is the crossroads of past and future generations from which the Native Hawaiian lifestyle spreads throughout the islands.

The presentation will discuss planning principles and project land use designations and include maps.

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INVASION BY *Miconia* AND ITS IMPACT ON NATIVE BIOTA IN TAHITI. *Miconia calvescens*, a melastome tree (up to 15 m) native to tropical America, was first introduced to Tahiti (French Polynesia) in 1937 as an ornamental because of its large leaves with a purple undersurface. In less than 50 years, this alien plant has spread over two-thirds of Tahiti (ca. 75,000 ha), and has reached the neighboring islands of Moorea and Raiatea. *Miconia* forms monospecific stands in mesic and wet habitats (>2,000 mm/yr) up to 1,300 m elevation, progressively overwhelming the low statured native forests. Dense covers of *Miconia* cause: a dramatic decrease in the light regime (0.4% of the solar radiation reaching the ground in a "Miconia forest" compared to 3.6% in a primary *Metrosideros* - *Cyathea* forest; an accumulation of *Miconia* litter leaves (up to 7.4 kg/m²/year in a "Miconia forest"); and certainly a change in the water regime and the nutrient cycling. Moreover, because of a superficial root system, *Miconia* stands are suspected of inducing landslides. An almost complete disappearance of the shrubby and herbaceous strata is commonly observed in "Miconia forests". At least 40-50 plant species of the 107 endemics restricted to Tahiti are endangered, especially species of the genus *Cyrtandra* (8 species), *Opiorrhiza* (7 species), *Myrsine* (5 species) and *Sclerotheca* (3 species). *Miconia calvescens* appears to be a potential danger for the native forests of any high tropical

