

ABSTRACT

Bocconia frutescens, or plume poppy, is a large erect shrub listed as a noxious weed by the State of Hawai`i. Surveying was conducted in 2003 to document the distribution and population densities in Wood Valley (Ka`ū District), Honomolino and Manukā (South Kona District). Ground surveying was conducted along 80 transects in addition to roadside and aerial surveying. *Bocconia* was distributed across 1,522 ha in Wood Valley, 82 ha in Honomolino, and 34 ha in Manukā. *Bocconia* was a severe pest within young (5 to 10-m tall) *Eucalyptus* plantations in Wood Valley, with fruiting individuals observed in all sampled parcels. Lower plant densities were observed in interiors of mature *Eucalyptus* forest adjacent to severely infested plantations, principally in gaps and streambeds, suggesting an affinity for high light levels and soil disturbance. Cane lands harbored mature *Bocconia*, although at a much lower density than *Eucalyptus* plantations, with less than 100 individuals/ha versus greater than 500 individuals/ha. Higher densities were observed along roadsides within cane lands. *Bocconia* was not observed within native, closed-canopy `ōhi`a and koa forests in the adjacent Ka`ū Forest Reserve, except along one jeep trail. *Bocconia* populations in Honomolino occur in a mosaic of habitats including rangelands, `ōhi`a forest and woodlands and residential areas. *Bocconia* at Manukā occurs primarily in `ōhi`a-dominated native mesic forest.