

BACKGROUND

Ka'āpahu, Haleakalā National Park (HALE) was acquired by the National Park Service (NPS) in 1999. Flora and fauna researchers and managers at the National Park Service Biological Inventories Workshop held in January 2000 agreed that existing and historic inventories have documented over 90% of the forest bird and mammal species within all Hawai'i parks with the exception of recent land acquisitions. Following the workshop, the steering committee prioritized inventory needs for each park and identified inventories of vegetation, forest birds and non-native mammals at Ka'āpahu as priorities. The researchers and managers developed study plans for each taxonomic group. The objectives identified in the study plans were to document species and distribution along transects. The primary objective of these inventories was to determine the presence or absence and elevation distribution of forest birds and non-native mammals in Ka'āpahu.

Management goals for Ka'āpahu have not been established and are currently being determined through an Environmental Assessment of an amendment to the park's General Management Plan. Although a mammal inventory of Ka'āpahu was not likely to detect species that would add to the park's mammal diversity, results of this inventory can help in guiding management decisions for the area.

This report includes two separate sections: the Forest Bird Report and the Non-native Mammal Report. While the two reports are inventories of the same area, the differences in the methods, results and discussions warrant two separate reports. The intent of these inventories and this report is to provide a checklist and information about distribution of forest birds and non-native mammals as a baseline for species at Ka'āpahu. The inventories were conducted over a limited time period. As such, results and discussion provide information pertinent to these inventories and should only be compared with other reports on these species if methods were comparable.

Site and Transect Description

Ka'āpahu is located on the southern slope of Haleakalā on the eastern side of the island of Maui in the Hāna District. Ka'āpahu is a 598-hectares (1,478 acres), rectangular finger of land that extends from sea level to approximately 1,273 m (4,200 ft) elevation on the eastern portion of HALE (Figure 1). To the north is the Manawainui area of the park that contains recovering native rainforest. The Pacific Ocean is on the southern boundary. The upper portion of the eastern boundary is adjacent to the park's Kīpahulu Scientific Reserve, one of Hawai'i's protected rainforests that is recovering from damage by non-native species (Anderson and Stone 1993). The west and remainder of the eastern boundaries are surrounded by a combination of privately owned and Hawai'i State lands, including Hawai'i State public hunting lands.

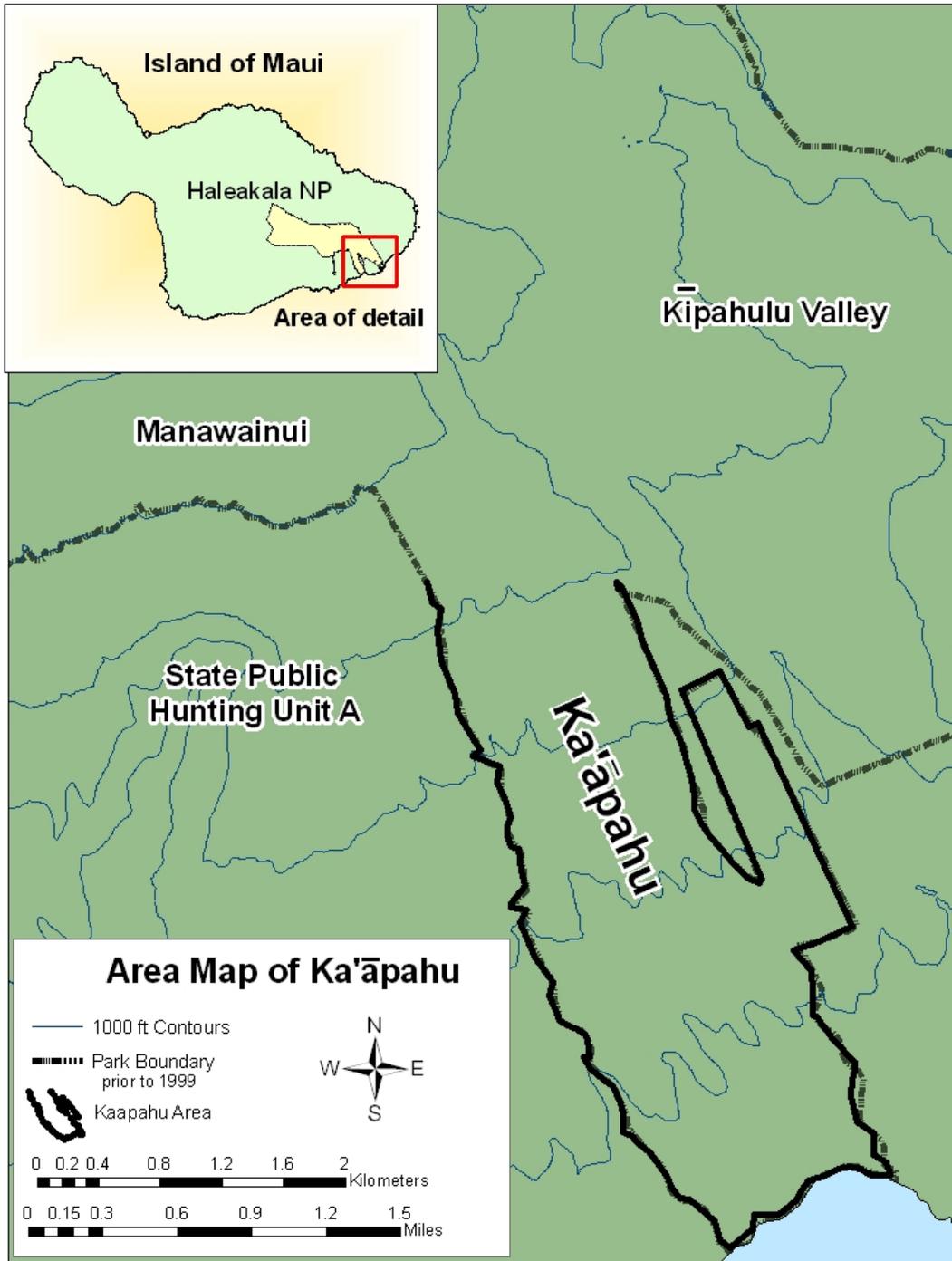


Figure 1. Area map of Ka'āpahu, Haleakalā National Park and vicinity, 2002.

Topographically, Ka'āpahu consists of knife-edge ridges and deep valleys, especially below the 758 m (2,500 ft) contour. The vegetation is diverse and changes with elevation. The upper elevations contain predominately native forest with open koa (*Acacia koa*) canopy, dense native understory and dense native ground cover. The lower elevations consist mainly of non-native vegetation with open koa canopy, open non-native understory, and open non-native ground cover that is highly damaged by feral goats and pigs (Welton and Haus 2005).

Unlike other areas of HALE, Ka'āpahu is not enclosed by a feral animal control fence and is not actively managed for resource protection. NPS is in the process of building a feral animal control fence on the northern boundary of Ka'āpahu and is expected to complete this fence in 2007 (Ron Nagata, pers. comm.).

Transects did not exist in Ka'āpahu prior to these surveys. A single transect was established along which both the forest bird and non-native mammal inventories were conducted (Figure 2). The transect is essentially a line running through the forest. Flagging tape marks the route and is used to indicate distances from the endpoints and between stations. Much of the terrain in Ka'āpahu is dangerous and difficult to traverse. Thus, the process of establishing the transect was laborious and slow, and the transect route was determined by selecting an area safe for human travel.

The transect traverses an elevation gradient in a north-south direction from approximately 1,180 m (3,880 ft) elevation to sea level. Stations were set and recorded with a Global Positioning System (GPS) using the Universal Transverse Mercator projection, North American Datum 1983, Zone 4N. All data were collected in field notebooks and housed at HALE.

