



Frugivorous Bats Monitoring

Network Parks Where Resource Is Monitored

- National Park of American Samoa: Tutuila and Ta'u Islands (NPSA)

Importance: Ecologically and Culturally Significant Species

Some species of frugivorous bats, also known as flying foxes, are indigenous to oceanic islands in the South Pacific. On geographically isolated islands with low biodiversity, fruit bats may be ecologically important in maintaining tropical forest ecosystems through pollination and seed dispersal. In American Samoa, fruit bats or pe'a hold a key position as likely ecological indicators of forest ecosystem health and environmental change. Fruit bats have historically been subjected to commercial hunting, habitat loss, and climatic disturbances leading to population declines. Hunting still occurs in American Samoa (despite a ban in 1991) as the indigenous Fa'asamoa culture regards fruit bats as traditional food. The pe'a is depicted in Samoan folklore and symbolized in cultural art forms as a stylized letter 'W'. This symbol can be found on tapa cloth, pottery, and in tattoos.

Long-Term Monitoring

Two fruit bat species reside in American Samoa: the Samoan fruit bat (*Pteropus samoensis*), listed by USFWS (2005) as a Species of Concern, and the more common white-naped fruit bat (*P. tonganus*). Preliminary surveys suggest that Samoan fruit bats occur in greater numbers in the Tutuila park unit than elsewhere on the island. Monitoring for both species will be conducted primarily in this park unit, although roost sites in the Ta'u park unit will also be included. Long-term monitoring of these species in NPSA is critical to documenting population changes and identifying environmental stressors that affect populations and habitat.

Monitoring Objective

- Determine current status and long-term trends in relative abundance and distribution of fruit bats in NPSA.

Management Applications

- Provide information and decision support about bat populations to park management.
- Identify negative trends in population abundance and distribution, and assess needs for enhanced species protection.
- Improve understanding of fruit bat ecology in the park.

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Resource website: http://science.nature.nps.gov/im/units/pacn/monitoring/vs_frugivorous_bats.cfm



White-naped fruit bat colony at NPSA. This species is called pe'a fanua, or "fruit bat of settled lands", by Samoan's due to this bat's propensity to fly into human settlements and eat agricultural fruits.



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The Samoan fruit bat is known as pe'a vao, or "fruit bat of the forest", as it depends on mature primary forest for foraging and roosting. The pe'a vao tends to roost alone or in small groups whereas the pe'a fanua roosts in colonies.