National Park Service
U.S. Department of the Interior

Do You Want to See Polynesian Birds? American Samoa Won't Disappoint.

The National Park of American Samoa (NPSA) contains the only paleotropical rainforest in the U. S. National Park System. The forest's native birds (and fruit bats) are major pollinators and seed dispersers that drive ecological processes throughout the Samoan Archipelago. Their importance to these forests is profound.

Agriculture, hunting, logging, development, and the introduction of numerous alien species have had negative effects on bird populations. The birds have also suffered periodic declines as a result of the high frequency of very destructive hurricanes in the archipelago. Protection of large sections of native rainforest, such as in NPSA, has been a great benefit to Samoa's native birds.

Our landbird monitoring team surveyed NPSA's forests for birds and habitat characteristics from June through August, 2011. The survey area was comprised of the terrestrial portions of the Ta'u and Tutuila Units of the park. Point-transect distance sampling was used to estimate bird abundance.

We detected a total of 2,516 birds and 13 species in the park. All species are either endemic or indigenous to American Samoa. Nearly every species detected was broadly distributed in the predominantly native forests of NPSA. For seven species, a sufficient number of detections were made to allow us to make density estimations for those species (how many birds per hectare). Encouragingly, bird population estimates from our surveys were similar to or higher than previous island-wide surveys on both Tutuila and Ta'u islands.

Collared kingfisher

The wattled honeyeater (*Foulehaio carunculata*) was the most conspicuous, widespread, and abundant species in both units with an estimated population of almost 150,000 birds. A generalist and aggressive forager, this species has taken advantage of NPSA's numerous flowering plants and perhaps forces other birds, such as the cardinal honeyeater (*Myzomela cardinalis*), to forage in areas closer to villages.

In both park units, the Polynesian starling (*Aplonis tabuensis*), Samoan starling (*Aplonis atrifusca*), collared kingfisher (*Halcyon chloris*), Pacific pigeon(*Ducula pacifica*) and purple-capped fruit-dove (*Ptilinopus porphyraceus*) occurred in modest to high densities (see sidebar). The banded rail (*Gallirallus philippensis*) and purple swamphen (*Porphyrio porphyrio*) occurred in low densities (14 and 7 detections, respectively). Both of these species, which travel and forage on the forest floor, may be vulnerable to attacks by cats and dogs.

Unique to the Manu'a Islands (a group of islands that inlcude Ta'u Island), the blue-crowned lorikeet (*Vini australis*) occurred in modest densities, about 9,400, within the boundaries of NPSA on Ta'u. It is also worth noting that only 15 Fiji shrikebills (*Clytorhynchus vitiensis*) were detected on Ta'u. In addition, there were no detections of the spotless crake (*Porzana tabuensis*), perhaps the rarest landbird in American Samoa.

As we surveyed, we were reminded that the archipelago is under constant threat from destructive hurricanes, which have caused significant periodic declines of every landbird species. Hurricane Tusi in 1987, Hurricane Ofa in 1990, and the very severe Hurricane Val in 1991, caused catastrophic losses to human structures, as well as stripped foliage off large areas of native forests. As a result of these storms, there were less than 50 many-colored fruit-doves (*Ptilinopus perousii*) on all of Tutuila Island in 1995 according to the American Samoa Department of Marine and Wildlife Resources (1996). These doves appear to still be struggling. On the other hand, the collared kingfisher, wattled honeyeater, and purple-capped fruit-dove have shown stronger signs of recovery.

13 native species of landbirds

Pacific pigeon

The field team takes a breather after a long morning of bird counts

The wattled honeyeater was the most abundant species detected in the survey. The team estimates nearly 43,000 on Tutuila Island and more than 105,000 individuals on Ta'u. (photo by Emily Weiser).

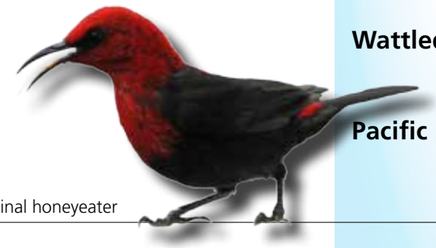
In our surveys, the many-colored fruit-dove was detected in very low numbers; however, this species is known to be patchily distributed. Opportunities to observe and collect distribution information on this species depends on the availability of fruits, especially *Ficus* species. In addition, on Ta'u the dove may have been negatively impacted by the recent Hurricanes Heta in 2004 and Olaf in 2005. Densities of the majority of landbirds detected on Ta'u were lower than estimates from Tutuila, which was not as severely impacted by those hurricanes. In contrast, populations of purple-capped fruit doves appear stable in both units which may be attributed to the species' generalist diet.

We expect the distribution of landbirds in NPSA to fluctuate over time, particularly in areas where birds frequent because of foraging opportunities. Birds tend to follow their food sources, and naturally, the availability of fruit and nectar is dependent on plant distributions and weather events.The bird sampling stations used in the 2011 survey were broadly distributed throughout NPSA, so we consider our estimates to be a good representation of species abundance.

This survey also provides solid baseline information on landbird distribution and density in the park. The survey will be repeated every five years to detect trends for these bird populations. Long-term monitoring of the landbirds and associated habitats of NPSA will help managers ensure that the unique and colorful birds of American Samoa will continue to paint these tropical landscapes.

The National Park of American Samoa offers excellent opportunities to observe Polynesian birds for scientists and visitors alike.

–S. Judge, Wildlife biologist, CESU



Cardinal honeyeater

2011 NPSA Landbird Survey

2,516 bird detections

Banded rail
13 detected

Purple swamphen
7 detected

Many-colored fruit-dove
16 detected

Purple-capped fruit-dove
338 detected

Blue-crowned lorikeet
101 detected

White-rumped swiftlet
87 detected

Collared kingfisher
73 detected

Fiji shrikebill
15 detected

Samoan starling
354 detected

Polynesian starling
187 detected

Cardinal honeyeater
17 detected

Wattled honeyeater
1111 detected

Pacific pigeon
197 detected