

HABITAT UTILIZATION AND NICHE COMPONENTS
IN SOME HAWAIIAN ENDANGERED FOREST BIRDS*

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In the native forests on the island of Hawai'i there is a species assemblage of 10 common passerine birds. Two of them are introduced, and six of the remainder are honeycreepers (three of these are endangered). All species except one are primarily insectivores. Four species utilize nectar sources to some extent and four utilize fruit.

Detailed observations of habitat use and foraging behaviors coupled with indices of abundance of flowering and fruiting, as well as population estimates of the birds, provide a preliminary estimate of a wide variety of niche components. Introduced species appear to have a somewhat broader foraging niche than native species in the same guild. Competitive interactions seem to play a role in limiting populations of one of the endangered species, while another appears to be limited by its rather narrow niche.

Interrelationships between phenology, abundance, and spatial distribution of food plants are all critical factors in determining habitat utilization by the birds. Interspecific interactions appear to play a secondary role at most times.