An Inventory of Forest Birds Along the ?Aiea Loop Trail, O?ahu, Hawai?i

Apuna, Kellen (School: Kamehameha Schools Kapalama Campus)

Of the original 11 native forest bird species known from the island of O?ahu in the Hawaiian island chain, only 3 remain today. They are the O?ahu ?Amakihi (Chlorodrepanis flava), ?Apapane (Himatione sanguinea), and O?ahu ?Elepaio (Chasiempis ibidis). Understanding the composition and abundances of members of O?ahu's forest bird community will offer insight into some of the most prominent issues facing Hawaii's these few remaining native forest bird species. I chose to conduct a survey along the Aiea Loop Trail. Using a point count survey method, nine stations were established, at which I recorded all species in the direct area within a 5-minute period. I found that the native species, primarily the O?ahu ?Amakihi and ?Apapane were significantly outnumbered by the introduced residents, only encompassing about 23% of all birds. The ?Apapane demonstrated a fairly significant range restriction, only being detected from 385 m above sea level and higher. This is, anecdotally, attributed to their reliance on specific flowering trees, like the ?Ohi?a Lehua (Metrosideros polymorpha), or perhaps an attempt to avoid avian malaria-carrying mosquitos, which may be more prevalent at lower elevations. In contrast, the O?ahu ?Amakihi could be readily detected at all stations. This is attributed to their generalist diet, which allows them to draw food from multiple different sources, and their newly developing resistance to avian malaria. Finally, two introduced species, the House Finch (Haemorhous mexicanus) and Warbling White-eye (Zosterops japonicus), both recognized as carriers of Plasmodium relictum, the disease responsible for avian malaria, collectively made up 51% of all birds detected across the survey. This confirms their overlap with our native species.

Awards Won:

Third Award of $1,000