

THREE BIRDS AND THEIR PREY: COMPARATIVE DIET OF THREE TROPICAL SEABIRDS BREEDING ON LEHUA ISLET, KAUAI HAWAII: THE RED-TAILED TROPICBIRD (*Phaethon rubicauda*), THE BROWN BOOBY (*Sula leucogaster*) AND THE RED-FOOTED BOOBY (*Sula sula*)

Sarah E. Donahue\*<sup>1</sup>,

<sup>1</sup>Hawai'i Pacific University, Oceanic Institute, 41-202 Kalaniana'ole Hwy, Waimanalo, HI 96795. [sarah.donahue93@gmail.com](mailto:sarah.donahue93@gmail.com)

The diet was described from 160 regurgitations, Red-tailed Tropicbirds (*Phaethon rubicauda*, n=32), the Brown Booby (*Sula Leucogaster*, n=50) and Red-footed Boobies (*Sula sula*, n=78), collected opportunistically at Lehua Islet, Kaua'i, over two years: 2014 (5/10-7/19) and 2015 (5/26-7/4). This study is the first to described diet of these species from Lehua. A total of 759 prey items were sorted into 3 categories: fish, squid and other, including extremely digested tissue ("mush") and parasitic isopods. The average number of prey items per sample varied by species based on bird size (larger > smaller). We first ranked the prey items on a freshness scale: 1 (perfect condition), 2 (superficial digestion but good condition), and 3 (incomplete). Then, we took length and mass measurements for the complete prey items, which ranged widely in size, from 2.8 to 13.6 cm. Three exploratory analyses, involving %PSIRI, WAF and other statistics, showed that mush mass contributes to the integrity of a sample and its freshness. Overall, the diet composition did not vary significantly between the two study years but between species. Fish was found to be the most important prey category for each species with the Red-footed Boobies consuming more squid than the other two species.