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FREQUENCY AND EFFECT OF POX-LIKE LESIONS IN GALAPAGOS MOCKINGBIRDS

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Abstract.—Lesions caused by avian poxvirus occurred on 28% of nestling and juvenile Galapagos Mockingbirds (*Nesomimus parvulus parvulus*), but only 7% of adults. Young with the disease were not resighted or recaptured as were healthy young, suggesting a high mortality for those with lesions.

FRECUENCIA Y EFECTO DE LA VIRUELA EN EL SINSONTE DE LAS GALÁPAGOS (*NESSOMIMUS PARVULUS PARVULUS*)

Sinopsis.—Se encontraron lesiones causadas por la viruela avicola en 28% de los pichones y 7% de los adultos del sinsonte de las Galápagos (*Nesomimus p. parvulus*). Muy pocos juveniles con la enfermedad fueron recapturados, contrario a aves sanas, por lo que se sugiere que la viruela causa gran mortalidad a estas aves.

Avian poxvirus is common in a wide variety of bird species, at times infecting the majority of a population (Kirmse, Wildl. Dis. 49:1, 1967). Although poxvirus is generally not lethal in domestic fowl (e.g., Hofstad et al., Diseases of Poultry, Iowa State, Ames, 1972), it has been implicated in the extirpation of much of the land avifauna of the Hawaiian Islands (Warner, Condor 70:101, 1968). Thus pox-like effects on a bird species in the Galapagos, another isolated, oceanic archipelago are of interest. This note reports on the frequency of pox symptoms and apparent mortality in the Galapagos Mockingbird (*Nesomimus parvulus parvulus*) on Isla Santa Cruz, Galapagos Archipelago, Ecuador (00°45'S, 90°12'W).

Data were collected on the grounds of the Charles Darwin Research Station from June 1979 to May 1980. The study site is in the arid coastal zone at an altitude of approximately 20 m. Using mist nets and drop traps, I captured, color-banded, and examined 117 mockingbirds (67 adults and 50 nestlings and juveniles) for cutaneous lesions on their wings, feet, breasts, and about the head. No histological work or isolation of the virus was attempted, but previous histological examination of Darwin's Finches (*Geospiza* spp.) suggested that poxvirus was responsible

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for lesions (F. S. L. Williamson, *in litt.* to R. L. Zusi, 9 April 1971, files of the Charles Darwin Station).

Of the 117 birds examined, 16% (19) had lesions. Fourteen of the birds with lesions were nestlings or fledglings. Thus of the 50 nestlings and juveniles, 28% had lesions whereas only 7% of the 67 adults showed lesions. Young birds are clearly more vulnerable. Five young were apparently infected during brooding by one female. The death of another brooding female, with extensive lesions on face and legs, led to the death of her four young.

Mortality is difficult to estimate once young leave the nest because retrappings and resightings of color-marked birds can not distinguish between mortality and dispersal out of the study area. However, of 14 fledglings with lesions, none was resighted after 2 mo, whereas 13 of 18 apparently healthy fledglings were resighted after this period. The difference is significant ($\chi^2 = 6.34$, $df = 1$, $P < 0.05$) suggesting that pox-like lesions result in increased mortality among juvenile Galapagos Mockingbirds. The high mortality, severity of many lesions, and failure to resight or recapture diseased young indicate that, in this species, pox is an important cause of nesting failure on Isla Santa Cruz.

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