ESTABLISHING BLOOD BIOCHEMISTRY REFERENCE VALUES FOR NICOBAR PIGEONS (*CALOENAS NICOBARICA*) USING THE I-STAT ALINITY V®

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Abstract

Blood biochemistry and hematologic values in exotic avian species are not extensively documented and it is critical that zoo veterinarians and nutritionists have up-to-date reference values for birds using modern handheld point-of-care analyzers. Nicobar pigeons (*Caloenas nicobarica*) are considered near threatened by the International Union for Conservation of Nature due to poaching and habitat destruction, thus those housed in zoos serve as important assurance populations. We sampled blood from the wing veins of Nicobar pigeons (n = 21) within the large successful breeding population at Sylvan Heights Bird Park in Scotland Neck, North Carolina, between February 17-19 of 2023, utilizing the iSTAT Alinity v® portable blood analyzer. We calculated descriptive statistics and present novel reference intervals for sodium (139-152 mmol/L), potassium (3.2-5.9 mmol/L), ionized calcium (1.00-1.35 mmol/L), and total CO2 (9-24 mmol/L) and updated the published reference intervals for the following parameters: chloride, blood urea nitrogen, creatinine, glucose, hematocrit, and hemoglobin. These data can be used as a benchmark for studies investigating the health, physiology, and diet suitability of this threatened species and will aid in establishing appropriate care protocols for managing zoo populations, contributing to their overall welfare and conservation.