



University of the Philippines Los Baños
University Knowledge Digital
Repository

Undergraduate Theses

Theses and Dissertations

2021

Hematologic profiles associated with hemoparasite and gastrointestinal parasite infection in captive *Varanus* spp.

Katya B. Milad

University of the Philippines Los Baños

Follow this and additional works at: <https://www.ukdr.uplb.edu.ph/etd-undergrad>



Part of the [Veterinary Medicine Commons](#)

Recommended Citation

Milad, Katya B., "Hematologic profiles associated with hemoparasite and gastrointestinal parasite infection in captive *Varanus* spp." (2021). *Undergraduate Theses*. 4481.

<https://www.ukdr.uplb.edu.ph/etd-undergrad/4481>

**HEMATOLOGIC PROFILES ASSOCIATED WITH HEMOPARASITE AND
GASTROINTESTINAL PARASITE INFECTION IN CAPTIVE *Varanus* spp.**

Katya B. Milad^{1*}

¹Department of Veterinary Clinical Sciences, College of Veterinary Medicine, University of the
Philippines Los Baños, Laguna, 4031, Philippines

***FOR CORRESPONDENCE:**

Email address: kbmilad@up.edu.ph

ABSTRACT

Parasitic infections can lead to serious diseases in captive wildlife making them a serious concern in captive environments. Wildlife serves as major reservoirs of zoonotic agents and parasites are among them. This study was conducted to detect the presence of hemoparasites and gastrointestinal parasites in captive *Varanus* spp. and to describe their association with hematologic characteristics. Blood and fecal samples of *Varanus* spp. from the Biodiversity Management Bureau (BMB), Quezon City, Philippines were examined for hemoparasites and gastrointestinal parasites using light microscopy. Blood cell morphology was assessed using light microscopy while complete blood count was measured using light microscopy, Natt and Herrick method, and centrifugation. Mild anisocytosis and basophilic stippling were observed. No hemoparasites were found but *Strongyloides* sp. and ascarid eggs were detected. The association of parasitic infection to hematologic changes was not determined because only two samples are with parasites. Instead, the complete blood counts of the samples with and without parasites were assessed and the morphologic abnormalities of red blood cells were described. There was no consistent pattern in the hematologic changes observed in the samples with parasites. The detection of *Strongyloides* sp. should prompt further research on species identification due to its zoonotic potential.

Keywords: *Ascarididae*, *hematology*, *microscopy*, *morphology*, *parasites*, *Strongylus*, *varanus*,