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Preliminary study on hematological values of two endangered turtle species: *Indotestudo travancorica* and *Batagur kachuga*.

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The Indian subcontinent is incredibly rich in biodiversity and is home to many species of herpetological and conservation interest. The aim of this study was to provide a first assessment of hematological values in Travancore tortoise (*Indotestudo travancorica*) and red-crowned roofed turtle (*Batagur kachuga*), two endangered species on which medical literature is still lacking. Between May and June 2017, 19 healthy specimens of *I. travancorica* and 17 of *B. kachuga* were sampled. Both populations were housed by the Madras Crocodile Bank Trust – Centre for Herpetology (Tamil Nadu, India). For each animal, physical examination and fecal analysis were performed. Blood samples (0.5 mL) were obtained from the dorsal coccygeal vein, stored in a lithium-heparin test tube (Bielli et al., 2015) at 10°C (50°F) and processed within three hours. Regarding *I. travancorica*, from each sample was performed a complete red and white blood cell count (RBC and WBC) with the Natt & Herrik method using a Neubauer chamber, and hematocrit values were assessed using microcapillaries (Nardini et al., 2013). Mean Corpuscular Volume (MCV) was calculated from PCV and RBC. Regarding *B. kachuga*, complete RBC and WBC count with the same method was performed. Due to the insufficient numerosity of both populations, only descriptive statistic was applied (Friedrichs et al., 2012) (Table 1). Obtained values were compared with known references of species with similar ecological and biological characteristics with results consistent with those of *Geochelone elegans* (Klaphake et al., 2018) and *Mauremys sinensis* (Chung et al., 2009). This is the first study on hematological values of *I. travancorica* and *B. kachuga*. Further studies will be necessary to assess actual reference values and to investigate other parameters such as WBC differential and erythrocytic indexes.

Table 1: Median values (\pm SD=Standard deviation) and range of hematological parameters in *I. travancorica* (19 specimens) and *B. kachuga* (17). RBC and WBC counts were obtained by the Natt & Herrik method using a Neubauer chamber. PVC was assessed by centrifugation of microcapillaries. MCV was calculated from PCV and RBC.

	Median (\pm SD)	Range
<i>I. travancorica</i>		
RBC ($10^6/\mu\text{L}$)	0.597 (\pm 0.56)	0.16-1.97
WBC ($10^3/\mu\text{L}$)	5.38 (\pm 1.39)	3.91-7.82
PCV (%)	22 (\pm 8.73)	13.7-43.8
MCV (fL)	345.18 (\pm 176.59)	148.27-728.72
<i>B. kachuga</i>		
RBC ($10^3/\mu\text{L}$)	0.78 (\pm 0.34)	0.1-1.36
WBC ($10^3/\mu\text{L}$)	6.84 (\pm 5.03)	2.93-19.8

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