

Effect of Seasonal Variation on Two Introduced Columbiformes in Awba Dam Tourism Centre, University of Ibadan, Ibadan

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Abstract : Two Columbiformes species were recently introduced to the newly established Awba Dam Tourism Centre [ADTC], hence there is need to investigate the effect of seasonal variation on these species with respect to hematological composition. Blood samples were obtained from superficial ulna vein of the 128 apparently healthy *C. livia* and *C. guinea* into tubes containing EDTA as anticoagulant. Thin blood smears (TBS) were prepared, stained and viewed under microscope. Values of Red Blood Cell (RBC) count, White Blood Cell (WBC) count, cholesterol (CH), Uric Acid (UA), Protein (PR), Mean Corpuscular Volume (MCV), Haemoglobin Content (HB), Blood Volume (BV), Plasma Glucose (PG) and Length/Width (L/W) ratio of red blood cells were assessed. The procedure was carried out on a seasonal basis (wet and dry seasons of 2013-2014). Data was analyzed using descriptive and inferential statistics. Lymphocyte count for *C. livia* was $F_3, 161 = 13.15$, while for *C. guinea* was $F_3, 178 = 13.15$. Heterophil, H/L ratio and Muscle score values for both species were ($r_s = -0.38$, $r_s = -0.44$), ($r_s = 0.51$, $r_s = 0.31$) (4, 3) respectively. Analyses also demonstrated a low WBC to RBC ratio (0.004: 25.3) in both species during the wet season compared to dry season, respectively. L/W varied significantly among sampling seasons i.e. wet (19.1% of BV, 12.6% of BV, 0.1% of BV) and dry (18.9% of BV, 12.7% of BV, 0.08% of BV). The level of HB in wet season (19.20 ± 8.46108) is lower compared to dry season (19.70 ± 8.48762). T-test also showed (wet=15.625, 0.111), (dry=12.125, 0.146) respectively, hence there is no association between species and haematological parameters. Species introduced were found to be haematologically stable. Although there were slight differences in seasonal composition, however this can be attributed to seasonal variation; suggesting little or no effect of seasons on their blood composition.

Keywords : seasonal variation, Columbiformes, Awba Dam tourism centre, University of Ibadan, Ibadan

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