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Influence of sex, source, health status and acclimation on the haematology of *Clarias gariepinus* (Burch,1822)

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ABSTRACT

The influence of sex, source (pond and wild) acclimation and health status on some blood parameters of *C. gariepinus* was studied. There were no significant differences between the blood parameters
(haemoglobin (Ht), packed cell volume (PCV), erythrocyte sedimentation rate (ESR), red blood cells (RBC), RBC indices (MCHC;, MCH: and MCV), white blood cells (WBC) and differential counts (neutrophils, lymphocytes, basophils and eosinophils) of the males and females among the apparently healthy and sick group of fish under sex, source and acclimation. Differences in blood parameters in fish before and after acclimation were noted in the WBC ($p<0.001$), neutrophils ($p<0.001$) and lymphocytes ($p<0.001$). Interactions between sex, acclimation and health status did not significantly influence all the parameters studied; however, various degrees of significant differences were produced by the interactions of health status and source of fish in the WBC ($p<0.05$), neutrophils ($p<0.001$), lymphocytes ($p<0.001$) and monocytes ($p<0.05$). Pooled data for males and females, apparently healthy and sick fish, respectively, showed there were significant differences between the WBC, neutrophils and lymphocytes of males and females under acclimation as well as monocytes of apparently healthy and sick fish under source and neutrophils of the same under acclimation. Results from this study suggest that sex, source of fish, and period of acclimation have some degrees of influence on the blood parameters of *C. gariepinus* and hence the need to reckon with them when reporting haematological parameters of this fish species.

Key words:
Sex, source, acclimation, Clarias gariepinus, haematology.