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Title:

Studying the Effect of Parasites on Some Blood and Biochemical Parameters of Cyprinus carpio in Southern Region of Iraq

Abstract:

A total of 339 common carp *C. carpio* was collected from Basrah and Nasiriyah fish farms during the period from October 2015 to June 2016.

The present study showed the existence of 14 species of parasites including two species of protozoans (*Ichthyophthirius multifiliis*, *Trichodina* sp.), 7 species of monogenetic tre *gyrus* sp ,*D. extensus*, , *D. minutus*, , *D. vastator*, *Gyrodactylus* sp, *Diplozoon* sp. *(diporpa*), *Ascocotyle coleostoma*,one species of cestode (*Schyzocotyle acheilognath)*, two specie e (*Hysterothylacium* sp. 3rd larval stage, *Contracaecum* sp. 3rd larval stage) and two species of crustacean (*Paraergasilus inflatus , Lernaea cyprinacea*).

The detection of marine parasite *Hysterothylacium* sp. 3rd larval stage. In present study from Basrah fish farm regarded as a new record in Iraqi freshwaters. The common carp ed as a new host for *Diplozoon* sp. *(*Diporpa) and *Hysterothylacium* sp. 3rd larval stage.

The obtained data show that Nasiriyah province considered as a new locality of the present detected parasites ((*Ichthyophthirius multifiliis*, *Dactylogyrus* sp., *D. extensus*, *D. m*, *Gyrodactylus* sp., *Diplozoon diporpa* , *Ascocotyle coleostoma* , *Schyzocotyle acheilognathi*.

The effects of the parasites on the main blood parameters, haemoglobin concentration (Hb), packed cell volume (PCV), red blood cells counts (RBC counts), total white blood unts (WBC counts) and differential leukocytes count in healthy and single and double infection with these parasites were being investigated. The present results showed ant reduction ($p \leq 0.05$) in Hb, PCV, and RBCs count and a significant increased ($p \leq 0.05$) in WBCs counts in all levels of infections with parasites. Significant differences were ($p \leq 0.05$) in lymphocytes and neutrophils counts between healthy and infected fishes in Basrah and Nasiriyah farms respectively.

Generally, it was found that the blood parameters of male fishes were higher than those of females with no significant differ ences between the sexes ($p \leq 0.05$). The mean of ochemical parameters (total protein, Globulin and albumin) in the serum of common carp infected with *Dactylogueus* spp. was lower than those of healthy fishes in males and in all length groups. Also, the biochemical parameters in mixed infection with both *Dactylogueus* spp. and *Gyrodactylus* sp. were lowest than those of healthy fishes in Basrah iriyah fish farms.