Common Parasites and Diseases of Puerto Rican Freshwater Sport Fishes

A. Crooked back

Red Sore

B. Image of a fish with red sore

C. Close-up image of red sore on fish scales

D. Close-up image of red sore on fish head

E. Microscopic view of parasites

F. Microscopic view of parasites
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A. Crooked back  This condition can be caused by several factors but in Puerto Rico we have found it in Largemouth bass and identified a bacterial infection as the cause. The fish appear deformed with a curved spine. These fish are not very pretty and it is best to discard them as some of these bacteria may harm humans.

B-F. Red Sore - Areas of reddened skin that seem to have something growing on them, characterize this condition. These areas can be found on almost any part of the body (B, side; C, dorsal area; D, operculum) but is often found on the side of the fish. It is caused by a combination of a sessile ciliated protozoan (E, low magnification; F, higher magnification) and bacteria that adhere to the surface of the protozoan. This combination floats around in the water and opportunistically attaches to a scale or bone that has become exposed to the water by some kind of small injury to the fish’s skin. After attachment the bacteria infects the dead skin around the injury and further damages it allowing the protozoan to grow and increase its area of attachment. Sometimes large areas of skin are affected. Fish may die due to the bacterial infection reaching the bloodstream, causing a generalized infection.
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A-B. Ich  This protozoan disease causes small white spots on the skin of the fish (A). It occurs on the skin, eyes and gills. The gills are severely irritated by this protozoan (B, histological section of gill with large Ich parasite embedded) and the fish may suffocate from its effects. It is called “Ich” from the scientific name *Ichthyophtherius*. (Photos courtesy of Ed Noga)

C-D. Saprolegnia Disease  A brown cottony growth on the sides, fins or tail of a fish could be caused by this dangerous organism. Although not a true fungus, it looks like a fungus and microscopically (D) resembles a fungus. It invades the skin of the fish, mostly in the winter. Microscopically, it looks brownish to greenish in color and the linear hyphae do not have separations delimiting individual cells. (Photos courtesy of Ed Noga)

E-F. Tilapia Wasting Disease  Only Mozambique and blue tilapias are affected by this true fungal disease. The fish become very emaciated and lethargic. The head may appear large compared with the body size, the skin may be rough. Internally, the organs are riddled with numerous cysts (F) produced by the fish to fight this invasive disease. Finally, the whole body may be infected and the fish dies.

G. Eye Loss in Tilapia and Largemouth Bass  The cause of this malady is unknown. Many organisms are associated but none as yet seems to be the primary cause of the disease. We continue to study this disease.