

First report of *Lernaea cyprinacea* L., 1758 in Uruguay, introduced by goldfish *Carassius auratus* (L., 1758) and affecting axolotl *Ambystoma mexicanum* (Shaw, 1798).

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Abstract

Lernaea cyprinacea was isolated from the skin of goldfish *Carassius auratus* illegally introduced in Uruguay from Brazil. These infested fish induced an epizooty of lerneosis in commercially bred axolotl *Ambystoma mexicanum*. The present report constitutes the first diagnosis of lerneosis in Uruguay.

Lernaea cyprinacea L., 1758 was reported in several countries affecting freshwater fishes (Noga, 1996; Paperna, 1980; Eiras, 1994) and also frog tadpoles in Europe (Hoffman, 1976; Eiras, 1994). In Brazil, it was introduced through Hungarian common carp and found in several of both farmed and wild fishes (Yamaguchi *et al.*, 2000; Tavares-Dias *et al.*, 2000). In the last years it was cited for tadpoles of *Rana catesbeiana* bred in Brazil (Boeger, 2000).

As a part of a study aimed to detect pathologies of ornamental fish bred in Uruguay, the authors examined a batch of 20 goldfish *Carassius auratus* (L., 1758) var. ryukin for skin parasites. In all of them the female of the copepod *Lernaea cyprinacea* was found in low numbers (3 to 5 parasites per fish). These fish were illegally introduced in Uruguay from the south of Brazil. Clinical symptoms observed were: hemorrhages and fibrosis in the site of attachment and skin ulcers.

These infested fish induced an epizooty of lerneosis in axolotl *Ambystoma mexicanum* (Shaw, 1798) at their larval stage, commercially bred on the same ornamental fish farm. In this case, they showed a heavier infestation (average 38.5 parasites per amphibian) and 32 % mortality. Weakening, hemorrhages and fibrosis in the site of attachment, ulcerative skin, hemorrhages in the gills, pale liver, ascites and petechial hemorrhages in internal organs were the predominant clinical symptoms and pathological findings.

Both groups of animals were treated with trichlorfon (dimethyl-2,2-trichloro-1-hydroxyethylphosphonate) commercial formulation Neguvon[®], at 1 ppm for one day, which controlled the epizooties.

The present report is the first diagnosis of *Lernaea cyprinacea* in Uruguay. The implications of this parasitosis for farmed ornamental fish and wild fish in Uruguay are not

known. Probably this is the first diagnosis of *Lernaea cyprinacea* in axolotl.

This report serves to emphasize the singular importance of the illegal market of ornamental fish with reference to the introduction of pathogens into new countries.

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